

**ANNEXES TO PROPOSAL FOR COMMISSION REGULATION
CONCERNING HARMONISED INDICES OF CONSUMER PRICES:
PRICE INDICES FOR ELEMENTARY AGGREGATES**

- Annex 1** Communication to the European Monetary Institute
- Annex 2** Explanatory Memorandum
- Annex 3** Draft Commission Regulation

COMMUNICATION TO THE EUROPEAN MONETARY INSTITUTE

Reference: Proposed Commission Regulation concerning Harmonised Indices of Consumer Prices: Price Indices for Elementary Aggregates

Justification

1. Under the Treaty establishing the European Community (Article 109j) the European Monetary Institute (EMI) and the Commission are required to report to the Council on the progress made in fulfilment by the Member States of their obligations regarding the achievement of economic and monetary union. One criterion of such progress is a high degree of sustainable convergence in price stability as apparent in the rate of inflation in comparison with the three best performing Member States. Inflation has to be measured by means of the consumer price index on a comparable basis. The CPIs of Member States currently differ in concepts, methods and practices and a programme of harmonisation is therefore necessary to produce comparable indices. CPIs are politically, socially and economically sensitive statistics and cannot be readily changed. It will therefore be necessary to construct distinct CPIs which are comparable. The indices will be referred to as Harmonised Indices of Consumer Prices (HICPs).
2. The harmonisation project is in two steps: first the framework Council Regulation (EC) No. 2494/95 of 23 October 1995 published in the Official Journal No. L 257 on page 1; followed by a series of Commission Regulations containing detailed technical guidelines for progressing implementation in stages from March 1996 to January 1998 and thereafter if necessary. This first Commission Regulation deals with Price Indices for Elementary Aggregates. The fact that national CPIs can differ on account of the formulae used for combining basic price data at the lowest level of aggregation, where there are no weighting data, has long been known, and Member States accept that this is an undisputed source of non-comparability. However, no formula is ideal. Therefore, the Commission Regulation seeks harmonisation by allowing the choice among acceptable formulae, the test of acceptability being that the results do not differ systematically.

Draft Regulation

3. The EMI is invited to give its opinion on the draft Commission Regulation.

EXPLANATORY MEMORANDUM

1. The aim of the draft Commission Regulation is to establish the formulae for combining basic price data at the lowest level of aggregation where there are no weighting data. Restricting the formulae that may be used to compile these price indices of elementary aggregates will ensure the comparability of Harmonised Indices of Consumer Prices (HICPs).
2. The fact that different formulae for compiling elementary aggregate indices can result in different CPIs has long been known and the technical experts of National Statistical Offices accept that this is a source of non-comparability. However, no single formula commands universal support and the Regulation therefore nominates the two most used formulae and formulae not differing systematically from these, and prohibits the use of a formula currently used by a number of Member States which has been shown to give systematically higher results.

COMMISSION REGULATION (EC) No **/96
of [date]
concerning Harmonised Indices of Consumer Prices:
Price Indices for Elementary Aggregates**

The Commission of the European Communities

Having regard to the Council Regulation (EC) No 2494/95¹;

Whereas each Member State is required to produce a Harmonised Index of Consumer Prices starting with the index for January 1997;

Whereas methods of combining prices to form price indices for elementary aggregates differ between Member States to the extent that the resulting Consumer Price Indices fail to meet the comparability requirement of Article 4 of the above Council Regulation;

Whereas implementing measures are necessary for ensuring the comparability of Harmonised Indices of Consumer Prices in accordance with Article 5.3 of the above Council Regulation;

Whereas the envisaged measures are in accordance with the opinion of the Statistical Programme Committee (SPC), established by Council Decision 89/382/EEC²;

Whereas the European Monetary Institute has reached a favourable conclusion on the Commission proposal;

HAS ADOPTED THIS REGULATION :

¹ OJ No L 257, 27.10.1995, p. 1.

² OJ No L 181, 28.6.1989, p. 47.

Article 1 Aim

The aim of this Regulation is to establish the formula for compiling price indices for the elementary aggregates in order to ensure the comparability of Harmonised Indices of Consumer Prices (HICPs).

Article 2 Definition

For the purpose of this Regulation, an "elementary aggregate index" is a price index for an elementary aggregate comprising only price data. An "elementary aggregate" refers to the expenditure (or consumption) covered by the most detailed level of stratification of the HICP and within which reliable expenditure information is not available for weighting purposes.

Article 3 Comparable Formula

HICPs shall be compiled using either of the two formulae given in paragraph 1 of the Annex to this Regulation or an alternative comparable formula which does not result in an index which differs systematically from an index compiled by either of the given formulae by more than one tenth of one percentage point on average over one year against the previous year.

Article 4 Quality Control

Member States shall, where an alternative formula is used, provide the Commission (Eurostat) at its request with information on the effects of using that alternative formula for selected periods and selected elementary aggregates sufficient to evaluate compliance with this Regulation.

Article 5 Entry into Force

This Regulation shall enter into force on the 20th day following its publication in the Official Journal of the European Communities.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Formula to be used in compiling elementary aggregates

1. When compiling price indices for elementary aggregates either the ratio of

$$\text{arithmetic mean prices } \frac{\frac{1}{n} \sum p^t}{\frac{1}{n} \sum p^b} \text{ or the ratio of geometric mean prices } \frac{[\prod p^t]^{\frac{1}{n}}}{[\prod p^b]^{\frac{1}{n}}}$$

where p^t is the current price, p^b the reference price and n the number of such prices in the elementary aggregate, shall be used. An alternative formula may be used provided that it fulfils the comparability requirement laid down in Article 3.

2. The arithmetic mean of price relatives $\frac{1}{n} \sum \frac{P^t}{P^b}$ should not normally be used, as it will in many circumstances result in failure to meet the comparability requirement. It may be used exceptionally where it can be shown not to fail the comparability requirement.

3. The price index for an elementary aggregate may be calculated as a chain index using one of the above two preferred formulae. For example using the ratio of arithmetic means:

$$I^{tb} = \frac{\sum_{i \in s_b} P_i^1}{\sum_{i \in s_b} P_i^b} \cdot \frac{\sum_{i \in s_1} P_i^2}{\sum_{i \in s_1} P_i^1} \dots \frac{\sum_{i \in s_{t-1}} P_i^t}{\sum_{i \in s_{t-1}} P_i^{t-1}}$$

where P_i^t denotes the i^{th} price quotation for a given elementary aggregate in period t and s_t denotes the sample of prices obtained for the elementary aggregate in period t . This sample may in practice be updated monthly or, more usually, when prices cannot be obtained, over longer periods. If between base

period b and period t there is no replenishing at all I^{tb} becomes $I^{tb} = \frac{\sum_{i \in s_b} P_i^t}{\sum_{i \in s_b} P_i^b}$,

the simple ratio of arithmetic means (or similarly with the geometric formula described above). The arithmetic mean of price relatives must not be used where chaining is more frequent than annual.