

## ESEMPIO DI CALCOLO DELL'INDICE DI RIFERIMENTO PER IL BTP INDICIZZATO ALL'INFLAZIONE

Il nuovo BTP indicizzato all'inflazione europea ha, come valore di riferimento, "l'Indice Armonizzato dei Prezzi al Consumo nell'area dell'euro (IAPC), con esclusione del tabacco". Tale indice è pubblicato mensilmente sul sito dell'Eurostat (in lingua inglese: "HICP – euro-zone"), al seguente indirizzo internet:

[http://europa.eu.int/comm/eurostat/newcronos/queen/display.do?screen=detail&language=en&product=YES&root=YES\\_copy\\_539019591709/shorties\\_copy\\_282760044706/euro\\_cp\\_copy\\_734956941240/cp240\\_copy\\_1014186800736](http://europa.eu.int/comm/eurostat/newcronos/queen/display.do?screen=detail&language=en&product=YES&root=YES_copy_539019591709/shorties_copy_282760044706/euro_cp_copy_734956941240/cp240_copy_1014186800736)

Se ad esempio si desidera calcolare l'indice di riferimento per il giorno **15 settembre 2003**, gli indici Eurostat da utilizzare per il calcolo sono quelli relativi ai mesi di giugno e luglio:

MESE DI RIFERIMENTO		INDICE EUROSTAT
<i>(m-3)</i> tre mesi precedenti il mese nel quale si effettua il calcolo	giugno 2003	<b>112,7</b>
<i>(m-2)</i> due mesi precedenti il mese nel quale si effettua il calcolo	luglio 2003	<b>112,5</b>

Benché i giorni trascorsi nel mese di settembre siano 15, non si considera il giorno dal quale cominciano a decorrere gli interessi e il calcolo viene effettuato su **14** giorni; tale valore si divide per il numero di giorni complessivi del mese per cui si effettua il calcolo, ovvero **30**.

L'**indice di riferimento** si ottiene quindi dalla seguente formula:

$$112,7 + (112,5 - 112,7) * \frac{14}{30} = 112,6066666666.$$

L'indice deve essere troncato alla sesta cifra decimale (112,606666) e arrotondato alla quinta cifra: **112,60667**.

Di conseguenza il valore **dell'Indice dell'Inflazione di riferimento** alla data di godimento del BTP indicizzato all'inflazione 15.9.2003/15.9.2008 e cedola reale dell'1,65% annuo è **pari a 112,60667**.

Analogamente è possibile calcolare l'indice di riferimento relativo a ciascun giorno del mese di

settembre 2003:

DATA	INDICE DI RIFERIMENTO	DATA	INDICE DI RIFERIMENTO	DATA	INDICE DI RIFERIMENTO
01/09/2003	112,70000	11/09/2003	112,63333	21/09/2003	112,56667
02/09/2003	112,69333	12/09/2003	112,62667	22/09/2003	112,56000
03/09/2003	112,68667	13/09/2003	112,62000	23/09/2003	112,55333
04/09/2003	112,68000	14/09/2003	112,61333	24/09/2003	112,54667
05/09/2003	112,67333	15/09/2003	112,60667	25/09/2003	112,54000
06/09/2003	112,66667	16/09/2003	112,60000	26/09/2003	112,53333
07/09/2003	112,66000	17/09/2003	112,59333	27/09/2003	112,52667
08/09/2003	112,65333	18/09/2003	112,58667	28/09/2003	112,52000
09/09/2003	112,64667	19/09/2003	112,58000	29/09/2003	112,51333
10/09/2003	112,64000	20/09/2003	112,57333	30/09/2003	112,50667

Per ottenere il **coefficiente di indicizzazione** è necessario dividere l'indice di riferimento di ciascun giorno per il valore assunto al tempo base. Per il BTP indicizzato all'inflazione con scadenza 15 settembre 2008 e cedola reale dell'1,65% annuo, il giorno base è il **15 settembre 2003** e i valori giornalieri del coefficiente d'indicizzazione sono stati resi noti tramite comunicato stampa.

## HICP - All items excluding tobacco - Index (1996=100)

Concept: Harmonised Indices of Consumer Prices (HICPs) are used in the assessment of inflation convergence as required under Article 121 of the Treaty of Amsterdam. They form the basis for the Monetary Union Index of Consumer Prices (MUICP), the European Index of Consumer Prices (EICP) and the European Economic Area Index of Consumer Prices (EEAICP). HICPs are compiled on the basis of a legislated methodology, binding for all Member States. Classification: The common classification for Harmonized Indices of Consumer Prices is the COICOP (Classification Of Individual COnsumption by Purpose). A version of this classification (COICOP/HICP) has been specially adapted for the HICPs. Sub-indices published by Eurostat are based on this classification.

2003m01 2003m02 2003m03 2003m04 2003m05 2003m06 2003m07 2003m08 2003m09 2003m10 2003m11 2003m12

	Index 1996=100											
<b>Euro-zone</b>	111.4	111.9	112.5	112.6	112.6	112.7	112.5	112.7	113.1	113.2 (e)	113.2 (er)	113.6 (p)
<b>EU (15 countries)</b>	111.0 (ei)	111.5 (ei)	112.1 (ei)	112.2 (ei)	112.2 (ei)	112.3 (ei)	112.1 (ei)	112.3 (ei)	112.7 (ei)	112.8 (ei)	112.8 (eir)	113.2 (eip)
<b>Belgium</b>	109.8	112.1	112.4	112.2	111.8	112.1	110.8	112.7	112.9	112.5	112.7	112.7
<b>Denmark</b>	114.5	115.3	116.2	116.2	115.9	115.9	115.1	115.1	116.0	116.0	116.2	116.0
<b>Germany</b>	107.7	108.3	108.4	108.1	107.8	108.1	108.4	108.5	108.3	108.2	108.0	109.0
<b>Greece</b>	125.5	125.2	128.5	128.8	129.4	129.2	126.4	126.2	128.6	:	:	130.1
<b>Spain</b>	117.8	118.0	118.8	119.9	119.7	119.8	119.1	119.7	120.0	120.8	121.2	121.4
<b>France</b>	108.4	109.3	109.8	109.6	109.5	109.7	109.6	109.9	110.4	110.4	110.2	110.3 (p)
<b>Ireland</b>	122.2	123.4	124.3	124.9	124.7	124.7	124.2	125.1	125.3	125.2	125.2	125.5
<b>Italy</b>	115.1	114.6	116.1	116.7	117.0	117.1	116.9	116.6	117.4	117.9	118.2	118.2 (p)
<b>Luxembourg</b>	111.8	113.2	113.7	113.5	113.1	113.0	112.1	113.6	114.4	113.8	114.2	114.3
<b>Netherlands</b>	118.8	119.6	120.7	120.8	120.7	120.1	120.0	120.3	121.3	121.1	120.7	119.9 (p)
<b>Austria</b>	109.3	109.5	109.8	109.7	109.6	109.6	109.5	109.8	110.0	110.0	110.3 (r)	110.6
<b>Portugal</b>	120.4	120.3	120.4	121.4	122.3	122.3	122.2	122.3	122.5	122.9	123.0	123.0
<b>Finland</b>	112.5	113.5	113.8	113.8	113.7	113.5	113.0	113.2	113.7	113.6	113.5	113.7
<b>Sweden</b>	110.4 (ei)	111.5 (ei)	112.2 (ei)	111.8 (ei)	111.6 (ei)	111.4 (ei)	111.2 (ei)	111.2 (ei)	112.1 (ei)	112.1 (ei)	111.9 (ei)	112.0 (ei)
<b>United Kingdom</b>	107.1	107.5	107.9	108.1	108.2	108.0	107.8	108.2	108.6	108.8	108.8	109.0
<b>Czech Republic</b>	108.8	109.0	108.9	109.1	109.1	109.2	109.2	109.0	108.6	108.8	109.1	109.3
<b>Estonia</b>	129.4	129.8	130.1	129.8	129.5	129.0	129.1	129.0	129.3	129.6	129.4	129.2
<b>Cyprus</b>	118.2	118.4	121.2	122.1	121.7	121.1	119.0	119.7	122.1	122.8	122.6	121.3
<b>Latvia</b>	125.1	125.6	126.4	126.8	127.0	127.9	127.4	126.0	126.6	127.7	128.4	128.6
<b>Lithuania</b>	100.9 (i)	100.7 (i)	100.9 (i)	100.9 (i)	100.7 (i)	100.7 (i)	99.9 (i)	99.2 (i)	98.8 (i)	99.0 (i)	99.4 (i)	99.4 (i)
<b>Hungary</b>	113.0	113.9	114.8	114.8	114.8	115.1	115.4	115.0	115.7	116.5	117.3	117.4
<b>Poland</b>	162.3	162.6	163.0	163.3	163.2	163.0	162.2	161.5	162.3	163.3	163.8	164.1
<b>Slovenia</b>	124.5	125.2	126.1	126.8	127.6	128.2	128.8	128.4	128.3	128.5	128.7	128.7
<b>Slovakia</b>	164.1	165.1	165.8	166.0	166.1	166.1	165.8	167.2	168.1	168.4	168.7	168.9
<b>Norway</b>	116.9	117.2	116.5	115.7	115.1	114.8	114.4	114.6 (r)	115.1 (r)	115.1 (r)	115.1 (r)	115.1

	Percentage change t/t-1											
<b>Euro-zone</b>	-0.2	0.4	0.6	0.1	-0.1	0.1	-0.2	0.2	0.3	0.1 (e)	0.0 (er)	0.3 (ep)
<b>EU (15 countries)</b>	-0.2 (ei)	0.4 (ei)	0.6 (ei)	0.1 (ei)	0.0 (ei)	0.1 (ei)	-0.2 (ei)	0.2 (ei)	0.4 (ei)	0.1 (ei)	0.0 (eir)	0.3 (eip)
<b>Belgium</b>	-1.1	2.1	0.3	-0.2	-0.4	0.3	-1.1	1.7	0.1	-0.3	0.2	0.0
<b>Denmark</b>	0.2	0.8	0.8	0.0	-0.2	0.0	-0.6	-0.1	0.9	0.0	0.2	-0.2
<b>Germany</b>	-0.2	0.5	0.1	-0.3	-0.3	0.3	0.3	0.1	-0.1	-0.1	-0.2	1.0
<b>Greece</b>	-0.8	-0.2	2.6	0.2	0.5	-0.1	-2.2	-0.1	1.9	:	:	:
<b>Spain</b>	-0.5	0.2	0.7	0.9	-0.1	0.1	-0.6	0.5	0.3	0.7	0.3	0.2
<b>France</b>	0.0	0.8	0.4	-0.2	-0.1	0.2	-0.1	0.3	0.4	0.1	-0.2	0.1 (p)
<b>Ireland</b>	0.0	1.0	0.7	0.5	-0.2	0.0	-0.4	0.7	0.1	0.0	0.0	0.3
<b>Italy</b>	-0.3	-0.4	1.3	0.5	0.3	0.1	-0.1	-0.3	0.7	0.4	0.3	0.0 (p)
<b>Luxembourg</b>	-0.3	1.3	0.5	-0.2	-0.3	-0.1	-0.8	1.4	0.7	-0.6	0.4	0.0
<b>Netherlands</b>	0.6	0.7	0.9	0.1	-0.1	-0.5	-0.1	0.3	0.8	-0.2	-0.3	-0.6 (p)
<b>Austria</b>	0.2	0.2	0.3	-0.1	-0.1	0.0	-0.1	0.3	0.2	0.0	0.2 (r)	0.3 (r)

<b>Portugal</b>	0.1	-0.1	0.1	0.9	0.7	0.0	-0.1	0.1	0.2	0.3	0.1	0.0
<b>Finland</b>	0.2	0.9	0.3	0.0	-0.1	-0.1	-0.5	0.2	0.5	-0.1	-0.1	0.1
<b>Sweden</b>	0.3 (ei)	1.0 (ei)	0.6 (ei)	-0.3 (ei)	-0.2 (ei)	-0.2 (ei)	-0.2 (ei)	0.0 (ei)	0.8 (ei)	0.1 (ei)	-0.3 (ei)	0.1 (ei)
<b>United Kingdom</b>	-0.7	0.3	0.4	0.2	0.1	-0.2	-0.1	0.4	0.4	0.2	0.0	0.2
<b>Czech Republic</b>	0.5	0.2	-0.1	0.2	0.0	0.1	-0.1	-0.1	-0.4	0.1	0.3	0.2
<b>Estonia</b>	1.0	0.3	0.2	-0.2	-0.3	-0.4	0.1	0.0	0.2	0.2	-0.1	-0.1
<b>Cyprus</b>	-0.8	0.2	2.3	0.8	-0.3	-0.5	-1.8	0.6	2.1	0.6	-0.2	-1.1
<b>Latvia</b>	0.9	0.4	0.6	0.3	0.2	0.7	-0.4	-1.1	0.5	0.9	0.5	0.1
<b>Lithuania</b>	-0.1 (i)	-0.3 (i)	0.2 (i)	0.0 (i)	-0.3 (i)	0.1 (i)	-0.8 (i)	-0.7 (i)	-0.4 (i)	0.1 (i)	0.4 (i)	0.0 (i)
<b>Hungary</b>	1.3	0.8	0.8	0.0	0.0	0.2	0.2	-0.3	0.6	0.7	0.6	0.1
<b>Poland</b>	0.4	0.1	0.3	0.2	-0.1	-0.1	-0.5	-0.5	0.5	0.6	0.3	0.2
<b>Slovenia</b>	1.0	0.6	0.7	0.6	0.6	0.5	0.4	-0.3	-0.1	0.2	0.2	0.0
<b>Slovakia</b>	5.7	0.6	0.4	0.1	0.1	0.0	-0.1	0.8	0.6	0.2	0.2	0.1
<b>Norway</b>	1.7	0.2	-0.6	-0.7	-0.6	-0.3	-0.3	0.2 (r)	0.5 (r)	0.0 (r)	0.0 (r)	0.0 (r)

**Percentage change t/t-12**

<b>Euro-zone</b>	2.0	2.2	2.2	1.9	1.7	1.8	1.8	1.9	2.0	1.9 (e)	1.9 (er)	1.8 (p)
<b>EU (15 countries)</b>	1.9 (ei)	2.1 (ei)	2.1 (ei)	1.8 (ei)	1.6 (ei)	1.7 (ei)	1.7 (ei)	1.8 (ei)	1.9 (ei)	1.7 (ei)	1.8 (eir)	1.7 (eip)
<b>Belgium</b>	1.2	1.6	1.6	1.4	0.8	1.4	1.3	1.6	1.6	1.4	1.7	1.5
<b>Denmark</b>	2.6	2.9	2.9	2.4	2.1	2.1	1.7	1.5	1.8	1.5	1.7	1.5
<b>Germany</b>	0.9	1.1	1.0	0.8	0.4	0.8	0.7	1.0	1.0	1.0	1.2	1.0
<b>Greece</b>	3.2	4.2	3.9	3.4	3.6	3.8	3.6	3.3	3.1	:	:	2.9
<b>Spain</b>	3.7	3.8	3.6	3.2	2.7	2.8	2.9	3.0	2.9	2.6	2.8	2.6
<b>France</b>	1.7	2.4	2.4	1.8	1.5	1.8	1.8	1.8	2.0	1.9	1.8	1.7 (p)
<b>Ireland</b>	4.3	4.6	4.6	4.3	3.5	3.3	3.5	3.6	3.3	2.8	2.8	2.7
<b>Italy</b>	2.8	2.5	3.0	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.5 (p)
<b>Luxembourg</b>	2.8	2.7	3.2	2.2	1.5	1.3	1.3	1.8	2.1	1.1	1.6	1.9
<b>Netherlands</b>	2.7	2.9	2.7	2.1	2.2	2.1	2.1	2.2	2.0	1.9	2.0	1.5 (p)
<b>Austria</b>	1.6	1.6	1.8	1.2	0.9	0.9	1.0	1.1	1.3	1.1	1.3 (r)	1.3
<b>Portugal</b>	3.9	3.9	3.6	3.7	3.6	3.3	2.9	2.9	3.1	2.8	2.3	2.2
<b>Finland</b>	1.5	2.1	1.8	1.4	1.1	1.2	1.0	1.2	1.3	0.9	1.1	1.2
<b>Sweden</b>	2.6 (ei)	3.4 (ei)	3.0 (ei)	2.3 (ei)	1.9 (ei)	2.0 (ei)	2.4 (ei)	2.2 (ei)	2.2 (ei)	1.9 (ei)	2.0 (ei)	1.8 (ei)
<b>United Kingdom</b>	1.3	1.5	1.5	1.2	1.1	1.0	1.1	1.2	1.3	1.2	1.2	1.1
<b>Czech Republic</b>	-0.7	-0.6	-0.6	-0.5	-0.3	0.0	-0.3	-0.2	0.0	0.4	0.9	1.0
<b>Estonia</b>	2.5	2.2	2.1	1.0	0.5	0.3	0.7	1.2	1.2	0.9	0.9	0.9
<b>Cyprus</b>	3.8	4.2	5.8	5.0	4.4	3.5	2.4	2.2	3.1	3.2	3.3	1.8
<b>Latvia</b>	1.4	2.2	2.3	2.5	2.5	3.8	3.8	3.5	3.2	3.4	3.8	3.7
<b>Lithuania</b>	-2.0 (i)	-2.1 (i)	-1.3 (i)	-1.2 (i)	-1.1 (i)	-0.7 (i)	-1.2 (i)	-1.4 (i)	-1.2 (i)	-1.6 (i)	-1.3 (i)	-1.6 (i)
<b>Hungary</b>	4.5	4.3	4.4	3.5	3.0	3.8	4.2	4.3	4.2	4.4	5.2	5.3
<b>Poland</b>	0.4	0.4	0.4	0.1	0.3	0.6	0.6	0.6	0.7	1.0	1.4	1.5
<b>Slovenia</b>	6.4	6.1	6.0	5.0	5.3	5.9	5.8	5.3	4.6	4.6	4.9	4.4
<b>Slovakia</b>	7.4	7.7	8.2	7.9	7.8	8.2	8.4	8.7	8.9	9.0	9.2	8.8
<b>Norway</b>	4.2	4.1	3.1	2.5	1.7	1.4	1.2	1.7 (r)	1.5 (r)	1.3 (r)	0.9 (r)	0.1

- (:) Not available
- (e) Estimated value
- (r) Revised value
- (p) Provisional value

Author: C.Olsson