

12 June 2020

Consumer Price Index  
May 2020

**CPI annual rate of change is -0.7%**

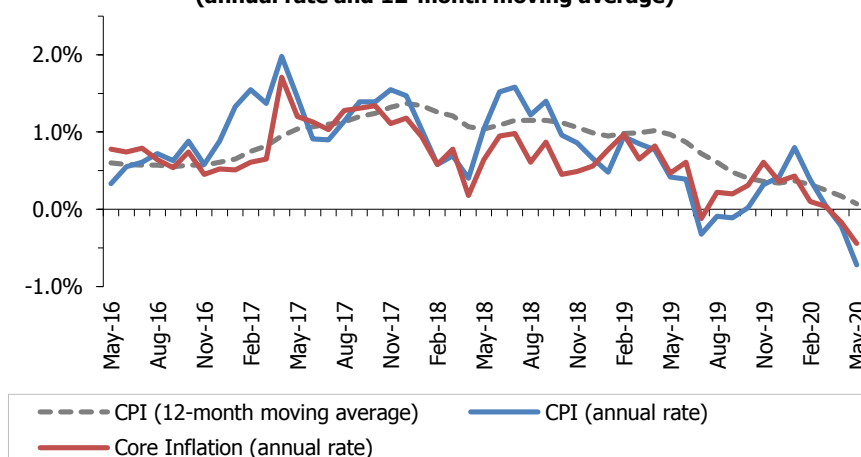
The Consumer Price Index (CPI) annual rate was -0.7% in May 2020 (-0.2% in April). The annual core inflation rate, which excludes energy and unprocessed food products, was -0.4% (-0.2% in the previous month).

The CPI monthly rate was -0.4% (0.3% in the previous month and 0.1% in May 2019), while the CPI 12-month average rate was 0.1% (0.2% in the previous month).

In May 2020, the Portuguese Harmonised Index of Consumer Prices (HICP) annual rate was -0.6% (-0.1% in the previous month). This rate is 0.7 percentage points (p.p.) below the figure estimated by Eurostat for the Euro area (in the previous month, this difference was 0.4 p.p.).

Despite the circumstances determined by the pandemic COVID 19, Statistics Portugal will try to maintain the statistical production and release calendar, although some adjustments might occur associated with the impact of the pandemic in obtaining primary information. For this reason, Statistics Portugal asks for the best collaboration by firms, households and public entities in answering to Statistics Portugal's requests to obtain information, using Internet and telephone as alternative channels to face-to-face contacts. The quality of official statistics, particularly its ability to identify the impacts of the COVID-19 pandemic, depends crucially on this collaboration that Statistics Portugal is grateful for in advance.

**Fig. 1 - Consumer price and core inflation indices (annual rate and 12-month moving average)**



### Consumer Price Index (base 100 = 2012)

In May 2020, the annual inflation rate was -0.7%, 0.5 p.p. below the rate of the previous month (see Fig. 1). When rounded to one decimal place, this figure coincides with the value provided in the flash estimate, which was released on May 29<sup>th</sup> (for further details on the differences between estimated and final CPI figures, see Table 3 on page 5 of this press release).

The annual core inflation rate, which excludes energy and unprocessed food products, was -0.4% (-0.2% in April). The unprocessed food aggregate recorded an annual rate of 5.0% in May (6.5% in April) while energy presented an annual rate of -10.9% (-9.4% in the previous month).

The largest downward contributions to the overall annual rate of change came from changes in the prices of *Transports* and *Clothing and footwear*. Conversely, the main upward contributions came from price increases in *Food and non-alcoholic beverages* and *Restaurants and hotels*.

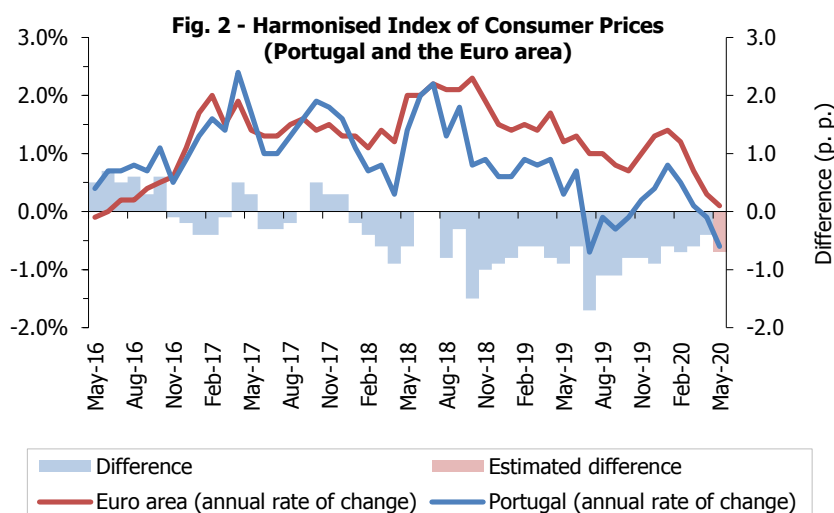
In May 2020, the CPI monthly rate was -0.4% (0.3% in the previous month and 0.1% in May 2019). The main downward contribution to the monthly rate of change came from price changes in *Transports*. Conversely, the major upward contribution was observed for *Restaurants and hotels*.

The CPI 12-month average rate was 0.1% in May (0.2% in the previous month).

### Harmonised Index of Consumer Prices (base 100 = 2015)

In May 2020, the Portuguese HICP annual rate was -0.6% (-0.1% in the previous month) and the monthly rate was -0.2% (0.8% in April and 0.3% in May 2019).

According to the Eurostat's Flash Estimate, in May, the annual rate of change of the Portuguese HICP is estimated to be 0.7 p.p. lower than the Euro area rate. This difference was 0.4 p.p. in April 2020.



The HICP 12-month average rate was 0.1% in May (the same value as in the previous month).

## Housing Rents

In May, the annual change rate of the housing rents for the whole country was 2.7% (3.1% in the previous month). The highest increase was observed in the Lisboa region (3.2%), with all regions displaying positive rates of change.

For the same period, the monthly rate of change of the average value of rents per square meter for the whole country was -0.2% (0.1% in April). The only positive rate of change was observed in Açores (0.3%), and all other regions presented negative rates of change, Madeira presenting the lowest value (-0.8%).

### Impact of the COVID-19 pandemic

The COVID-19 pandemic and the subsequent restrictions forced Statistics Portugal to an unprecedented challenge in the CPI/HICP compilation. In May, the CPI/HICP continued to be produced without in-store price collection. This led to a series of changes needed to compile the CPI/HICP. It must be noted that the CPI takes into account a significant number of prices obtained from administrative data, such as for housing rents, for which price collection was unaffected.

This pandemic has affected all European countries and Eurostat published a set of recommendations to be followed ([https://ec.europa.eu/eurostat/documents/10186/10693286/HICP\\_guidance.pdf](https://ec.europa.eu/eurostat/documents/10186/10693286/HICP_guidance.pdf)) which were applied by Statistics Portugal in the compilation of both the CPI and the HICP. These recommendations cover both price collection and methods for estimation of missing prices.

Prices were collected using alternative data sources, such as web scraping, online price collection and telephone. If such price collection was not possible, prices were estimated based on the change of prices collected for the same product in other stores. These products account for 6% of collected prices and cover 17% of the CPI total weight.

For several items in the CPI basket, price collection was not possible due to the unavailability of products as a whole. In these cases, three approaches were considered, depending on the product type. Prices were either carried-forward (for services and other items that seldom change price), imputed based on the price change of similar products (for prices that usually change frequently without seasonal pattern) or imputed based on the monthly price change for the same month of the previous year (for products whose prices tend to change according to seasonal patterns). These products account for 1% of collected prices and cover 6% of the CPI total weight.

Around 93% of the CPI prices were unaffected, corresponding to around 77% of the CPI total weight, which is an improvement over the previous month.

The level of coverage of collected prices is not homogenous between product categories, thus resulting in an increase in variability for certain detailed levels, as a result of outlet closures.

In the coming months, INE will continue to use alternative price collection methods in order to maximize the number of collected prices.

## Consumer Price Index

The Consumer Price Index (CPI) measures the change over time of the prices of a certain basket of goods and services bought by a “typical” consumer. The CPI has been designed to capture price changes and not to measure price levels.

The CPI is updated every year with the most recent information on prices and quantities. The 2020 CPI weighting structure and the sample of goods and services included in the basket are a result of the combination of three fundamental sources of information: results of the Portuguese National Accounts, complemented with the Household Budget Survey and the Census for more detailed levels of expenditure. Administrative data is also used.

The CPI is compiled through the aggregation of seven regional price indexes and the goods and services included in the index are grouped according to the Classification of individual consumption by purpose (COICOP).

**Table 1: CPI - COICOP Divisions**

01	Food and non-alcoholic beverages	07	Transports
02	Alcoholic beverages and tobacco	08	Communications
03	Clothing and footwear	09	Recreation and culture
04	Housing, water, electricity, gas and other fuels	10	Education
05	Furnishings, household equipment and routine household maintenance	11	Restaurants and hotels
06	Health	12	Miscellaneous goods and services

### Monthly rate

The monthly rate is the change in the index of a certain month compared with the index of the previous month expressed as a percentage. Although up-to-date, this measure can be affected by seasonal and other effects.

### Annual rate

The annual rate is the change in the index of a certain month compared with the index of the same month in the previous year expressed as a percentage. In the presence of a stable seasonal pattern, seasonal effects do not influence this measure.

### 12-month average rate

The 12-month average rate is the change in the average index of one year compared with the average index of the previous year expressed as a percentage. This moving average is less sensitive to transient changes in prices.

### Core inflation index (all items CPI excluding unprocessed food and energy products)

The core inflation index is compiled by excluding the prices of unprocessed food and energy products from the all items CPI. The primary objective of this index is to capture the underlying inflation pressures in the economy.

### Harmonised Index of Consumer Prices

The Harmonised Index of Consumer Prices (HICP) is compiled in each member state of the European Union for the purposes of inflation comparisons across EU countries, as required by the Treaty on European Union<sup>1</sup>. This index plays an important role as a guideline for the achievement of the European System of Central Banks primary objective: price stability. In 1998, the European Central Bank adopted the HICP as “the most appropriate price measure” for its definition of price stability in the Euro area<sup>2</sup>.

<sup>1</sup> Article 109j and protocol on the convergence criteria referred to in that article.

<sup>2</sup> A stability oriented monetary policy strategy for the ESCB”. ECB press notice released on 13 October 1998.

The HICP is produced in each Member State following a harmonized methodology developed by experts in the field of price statistics, under the "Price Statistics Working Group" and related Task Forces. From the methodological point of view, there are no major differences between the HICP and CPI. However, the different scope of coverage leads to differences in the weighting structure, mainly in Restaurants and hotels. This is mostly an effect of the inclusion of non-residents expenditure ("tourists") in the HICP and the corresponding exclusion from the CPI.

Additional information on the methodology of the HICP is available at <http://ec.europa.eu/eurostat/web/hicp>.

**Table 2: CPI and HICP 2020 weighting structures**

COICOP divisions		CPI	HICP
01	Food and non-alcoholic beverages	199.3	190.1
02	Alcoholic beverages and tobacco	37.2	35.7
03	Clothing and footwear	70.8	70.7
04	Housing, water, electricity, gas and other fuels	91.9	84.7
05	Furnishings, household equipment and routine household maintenance	58.6	56.3
06	Health	67.4	63.0
07	Transport	162.7	162.1
08	Communication	29.4	27.1
09	Recreation and culture	67.9	50.7
10	Education	20.0	18.4
11	Restaurants and hotels	90.6	144.2
12	Miscellaneous goods and services	104.2	97.0
00	All items	<b>1000</b>	<b>1000</b>

<sup>1</sup> COICOP – Classification Of Individual Consumption by Purpose

### Presentation of data and rounding rules

Since the release of the January 2013 CPI indices are published with base 100 in the year 2012.

Due to rounding procedures, those indices may not reproduce exactly the published rates of change. However, it should be noted that the published rates prevail.

In this press release the descriptive analysis is based on rounded values to one decimal.

### Differences between estimated and final values

In Table 3, some descriptive statistics are presented for the differences between the estimated and final values of the annual rate for the last 24 months. The table also includes the differences for the last three months, in p.p..

**Table 3:** Differences between the estimated and final values of the annual rate

	Differences last 24 months (p.p.)			Differences last 3 months (p.p.)		
	Mean	Max	Min	Mar-20	Apr-20	May-20
Total	-0.04	0.04	-0.27	-0.02	-0.27	<b>0.00</b>
All items excluding housing	-0.04	0.03	-0.27	-0.03	-0.27	<b>0.00</b>
All items excl. unproc. food and energy	-0.02	0.04	-0.15	0.03	-0.06	<b>-0.03</b>
Unprocessed food	-0.17	0.05	-1.86	-0.01	-1.86	<b>0.02</b>
Energy	-0.05	0.25	-0.59	-0.59	-0.35	<b>0.25</b>

### Next press releases

The June 2020 flash estimate will be available on June 30<sup>th</sup>, 2020.

The June 2020 CPI/HICP will be released on July 10<sup>th</sup>, 2020.

## Annex:

### CPI rate of change (index division and all-items CPI)

	Index divisions <sup>(1)</sup>												All-items CPI
	01	02	03	04	05	06	07	08	09	10	11	12	
	Annual average rate (%)												
2017	1.53	2.57	-2.39	0.59	-0.45	0.44	3.06	2.60	1.42	0.95	3.73	0.83	1.37
2018	0.74	2.26	-3.47	2.19	-0.41	1.07	3.06	0.43	-0.12	1.22	2.12	0.83	0.99
2019	0.32	2.01	-3.00	0.29	-0.28	0.82	1.14	-2.59	-0.02	0.93	0.97	1.56	0.34
	Annual rate (%)												
2018 May	0.70	2.28	-3.26	2.02	-0.85	1.16	3.80	0.44	-0.70	1.18	2.87	0.25	1.04
June	1.24	2.88	-2.74	2.32	-0.25	1.33	4.06	0.91	-0.03	1.20	3.82	0.56	1.52
July	1.19	2.87	-2.81	2.60	-0.48	1.19	3.98	0.46	0.00	1.24	4.82	0.65	1.58
August	0.90	2.40	-2.46	2.65	-0.31	1.22	4.00	0.42	0.49	1.26	1.11	0.48	1.22
September	0.84	2.15	-3.60	2.66	-0.35	1.19	4.62	0.03	0.35	1.28	3.30	0.57	1.40
October	0.30	3.17	-3.69	2.68	-0.20	0.98	4.84	0.12	-0.52	1.15	-0.64	0.92	0.96
November	0.28	2.22	-3.64	2.71	-0.09	1.01	3.10	0.10	-0.77	1.21	1.30	1.13	0.86
December	0.30	2.61	-3.94	2.47	0.01	0.96	1.45	0.43	-0.13	1.23	1.47	1.20	0.66
2019 January	0.24	2.43	-3.14	0.55	-0.56	1.20	0.66	0.16	0.11	1.36	2.11	1.31	0.48
February	1.26	2.62	-3.29	0.54	-0.16	0.79	2.25	0.02	0.05	1.38	1.72	1.74	0.94
March	1.16	3.03	-2.54	0.78	-0.71	0.75	2.54	0.03	-0.92	1.39	1.21	1.52	0.85
April	-0.17	2.18	-2.97	0.86	-0.19	0.74	2.66	-0.27	0.71	1.42	1.91	1.76	0.77
May	0.16	2.00	-3.12	0.77	0.55	0.96	1.68	-3.37	-0.04	1.44	0.12	1.94	0.42
June	0.39	1.82	-3.79	0.57	0.32	0.96	0.91	-3.76	-0.25	1.44	2.22	1.63	0.39
July	-0.06	2.14	-5.83	0.03	-0.15	0.95	0.54	-4.03	-0.09	1.34	-1.47	1.22	-0.32
August	-0.04	1.66	-5.05	-0.06	-0.08	0.94	0.10	-4.03	0.37	1.38	0.58	1.52	-0.09
September	-0.11	1.88	-1.52	-0.10	-0.43	0.73	0.31	-3.93	-1.37	1.41	-0.58	1.62	-0.11
October	0.51	1.48	-1.83	-0.24	-0.45	0.73	-0.46	-3.92	-0.10	-0.42	0.63	1.55	0.02
November	0.30	2.09	-1.58	-0.26	-0.79	0.53	0.78	-3.87	0.58	-0.47	1.58	1.53	0.32
December	0.16	0.88	-2.03	0.01	-0.71	0.59	1.80	-4.18	0.73	-0.48	1.91	1.34	0.42
2020 January	0.79	1.95	-1.85	1.10	-0.16	0.49	3.00	-4.61	-1.30	-0.60	1.88	1.53	0.80
February	0.83	1.03	-2.88	1.06	-0.44	0.63	0.92	-4.26	-1.61	-0.57	2.31	1.37	0.38
March	1.22	1.18	-1.70	0.82	-0.71	0.66	-1.64	-4.31	-2.00	-0.58	2.11	1.53	0.05
April	3.82	0.51	-6.99	-0.66	-0.27	0.87	-3.29	-4.29	-2.40	-0.59	3.19	0.69	-0.22
May	2.25	-0.26	-7.28	-0.80	-1.14	0.61	-4.18	-1.32	-3.08	-0.62	3.32	0.76	-0.72

**Note:** (1) The names of the divisions are given in the explanatory notes.

**Source:** INE - Portugal

## HICP rate of change (international comparison)<sup>(1)</sup>

	EA-19 <sup>(2)</sup>	EICP <sup>(3)</sup>	BE	BG	CZ	DK	DE	EE	EL	ES	FR	HR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE
Annual average rate (%)																													
2017	1.5	1.7	2.2	1.2	2.4	1.1	1.7	3.7	1.1	2.0	1.2	1.3	0.3	1.3	0.7	2.9	3.7	2.1	2.4	1.3	1.3	2.2	1.6	1.6	1.1	1.6	1.4	0.8	1.9
2018	1.8	1.9	2.3	2.6	2.0	0.7	1.9	3.4	0.8	1.7	2.1	1.6	0.7	1.2	0.8	2.6	2.5	2.0	2.9	1.7	1.6	2.1	1.2	1.2	4.1	1.9	2.5	1.2	2.0
2019	1.2	1.5	1.2	2.5	2.6	0.7	1.4	2.3	0.5	0.8	1.3	0.8	0.9	0.6	0.5	2.7	2.2	1.6	3.4	1.5	2.7	1.5	2.1	0.3	3.9	1.7	2.8	1.1	1.7
Annual rate (%)																													
2018 May	2.0	2.0	2.3	2.3	2.0	1.0	2.5	3.1	0.8	2.1	2.3	1.8	0.7	1.0	1.0	2.4	2.9	2.1	2.9	1.7	1.9	2.1	1.2	1.4	4.6	2.2	2.7	1.0	2.0
June	2.0	2.1	2.6	3.0	2.4	1.1	2.1	3.9	1.0	2.3	2.3	2.2	0.7	1.4	1.7	2.7	2.6	2.4	3.2	2.0	1.7	2.3	1.4	2.0	4.7	2.3	2.9	1.2	2.1
July	2.2	2.2	2.7	3.6	2.2	0.9	2.2	3.3	0.8	2.3	2.6	2.2	1.0	1.9	1.4	2.7	2.3	2.5	3.4	2.1	1.9	2.3	1.4	2.2	4.3	2.1	2.6	1.4	2.2
August	2.1	2.2	2.6	3.7	2.4	0.8	2.1	3.5	0.9	2.2	2.6	2.1	0.9	1.6	1.7	2.8	1.8	2.4	3.4	2.4	1.9	2.3	1.4	1.3	4.7	2.0	2.9	1.4	2.1
September	2.1	2.2	2.8	3.6	2.1	0.5	2.2	3.5	1.1	2.3	2.5	1.6	1.2	1.5	1.7	3.3	2.4	2.7	3.7	2.5	1.6	2.1	1.5	1.8	4.7	2.2	2.7	1.4	2.5
October	2.3	2.3	3.2	3.6	2.0	0.7	2.6	4.5	1.8	2.3	2.5	1.7	1.1	1.7	1.9	3.2	2.8	2.8	3.9	2.1	1.9	2.4	1.5	0.8	4.2	2.3	2.5	1.7	2.4
November	1.9	2.0	2.9	3.0	1.6	0.7	2.2	3.2	1.1	1.7	2.2	1.3	0.8	1.6	1.6	2.9	2.4	2.6	3.2	1.4	1.8	2.3	1.1	0.9	3.2	2.1	2.0	1.4	2.1
December	1.5	1.6	2.2	2.3	1.6	0.7	1.7	3.3	0.6	1.2	1.9	1.0	0.8	1.2	1.0	2.5	1.8	1.9	2.8	1.2	1.8	1.7	0.9	0.6	3.0	1.4	1.9	1.3	2.2
2019 January	1.4	1.5	1.8	2.3	2.0	1.2	1.7	2.8	0.5	1.0	1.4	0.6	0.8	0.9	2.1	2.9	1.6	1.6	2.8	1.0	2.0	1.7	0.6	0.6	3.2	1.2	2.2	1.2	2.0
February	1.5	1.6	2.0	2.4	2.4	1.1	1.7	1.9	0.8	1.1	1.6	0.8	0.7	1.1	0.8	2.8	2.0	2.1	3.2	1.3	2.6	1.4	1.3	0.9	4.0	1.3	2.3	1.3	1.9
March	1.4	1.6	2.2	2.8	2.6	1.2	1.4	2.2	1.0	1.3	1.3	1.1	1.1	1.1	2.7	2.6	2.4	3.8	1.3	2.9	1.7	1.7	0.8	4.2	1.6	2.7	1.1	1.8	
April	1.7	1.9	2.0	3.1	2.4	0.9	2.1	3.2	1.1	1.6	1.5	0.8	1.7	1.1	1.2	3.3	2.7	2.2	3.9	1.7	3.0	1.7	2.1	0.9	4.4	1.8	2.4	1.5	2.1
May	1.2	1.6	1.7	2.9	2.6	0.7	1.3	3.1	0.6	0.9	1.1	1.0	1.0	0.9	0.2	3.5	2.5	2.2	4.0	1.7	2.3	1.7	2.2	0.3	4.4	1.6	2.7	1.3	2.1
June	1.3	1.6	1.3	2.3	2.4	0.5	1.5	2.6	0.2	0.6	1.4	0.5	1.1	0.8	0.3	3.1	2.4	1.5	3.4	1.8	2.7	1.6	2.3	0.7	3.9	1.9	2.7	1.1	1.6
July	1.0	1.4	1.2	2.6	2.6	0.4	1.1	2.0	0.4	0.6	1.3	0.9	0.5	0.3	0.1	3.0	2.5	1.6	3.3	1.8	2.6	1.4	2.5	-0.7	4.1	2.0	3.0	1.0	1.5
August	1.0	1.4	0.9	2.5	2.6	0.5	1.0	2.1	0.1	0.4	1.3	0.6	0.6	0.5	0.6	3.1	2.5	1.4	3.2	1.9	3.1	1.5	2.6	-0.1	4.1	2.4	3.0	1.2	1.3
September	0.8	1.2	0.6	1.6	2.6	0.4	0.9	2.2	0.2	0.2	1.1	0.6	0.6	0.2	-0.5	2.3	2.0	1.1	2.9	1.6	2.7	1.2	2.4	-0.3	3.5	1.7	3.0	1.0	1.3
October	0.7	1.1	0.2	1.6	2.6	0.6	0.9	1.4	-0.3	0.2	0.9	0.6	0.6	0.2	-0.5	2.2	1.5	0.8	3.0	1.4	2.8	1.0	2.3	-0.1	3.2	1.5	2.9	0.9	1.6
November	1.0	1.3	0.4	2.2	3.0	0.6	1.2	1.8	0.5	0.5	1.2	0.8	0.8	0.2	0.5	2.0	1.7	1.0	3.4	1.3	2.6	1.2	2.4	0.2	3.8	1.4	3.2	0.8	1.8
December	1.3	1.6	0.9	3.1	3.2	0.8	1.5	1.8	1.1	0.8	1.6	1.3	1.1	0.5	0.7	2.1	2.7	1.8	4.1	1.3	2.8	1.8	3.0	0.4	4.0	2.0	3.2	1.1	1.7
2020 January	1.4	1.7	1.4	3.4	3.8	0.8	1.6	1.6	1.1	1.1	1.7	1.8	1.1	0.4	0.7	2.2	3.0	2.5	4.7	1.4	1.7	2.2	3.8	0.8	3.9	2.3	3.2	1.2	1.5
February	1.2	1.6	1.0	3.1	3.7	0.7	1.7	2.0	0.4	0.9	1.6	1.2	0.9	0.2	1.0	2.3	2.8	1.8	4.4	1.1	1.3	2.2	4.1	0.5	2.9	2.0	3.1	1.1	1.3
March	0.7	1.2	0.4	2.4	3.6	0.3	1.3	1.0	0.2	0.1	0.8	0.5	0.5	0.1	0.1	1.4	1.7	0.3	3.9	1.2	1.1	1.6	3.9	0.1	2.7	0.7	2.4	0.9	0.8
April	0.3	0.7	0.0	1.3	3.3	-0.1	0.8	-0.9	-0.9	-0.7	0.4	-0.1	-0.3	0.1	-1.2	-0.1	0.9	-0.8	2.5	1.1	1.0 Po	1.5	2.9	-0.1	2.3	-1.3	2.1	-0.3	-0.2
May	0.1 f	x	-0.2 f	x	x	x	0.5 f	-1.8 f	-0.7 f	-0.9 f	0.2 f	x	-0.9 f	-0.2 f	-1.3 f	-0.9 f	0.1 f	-1.6 f	x	0.9 f	1.0 f	x	x	-0.6	x	-1.4 f	2.0 f	-0.3 f	x

**Symbols:** f estimated Po provisional Rc revised x not available

**Notes:** (1) Rates of change calculated based on indexes rounded up to two decimal places.

(2) Member States belonging to the Euro area: EA-13 until December 2007, EA-15 until December 2008, EA-16 until December 2010, EA-17 until December 2013, EA-18 until December 2014, EA-19 from January 2015 (including Lithuania).

(3) European Index of Consumer Prices: EU-15 until April 2004, EU-25 until December 2006, EU-27 until June 2013, EU-28 until January 2020 and EU-27 onwards

**Source:** INE-Portugal and Eurostat.

**Code abbreviations of the Member States:**

BE	Belgium	EE	Estonia	IT	Italy	HR	Croatia	PL	Poland	FI	Finland
BG	Bulgaria	EL	Greece	CY	Cyprus	HU	Hungary	PT	Portugal	SE	Sweden
CZ	Czechia	ES	Spain	LV	Latvia	MT	Malta	RO	Romania		
DK	Denmark	FR	France	LT	Lithuania	NL	Netherlands	SI	Slovenia		
DE	Germany	IE	Ireland	LU	Luxembourg	AT	Austria	SK	Slovakia		