



PRESS RELEASE

CONSUMER PRICE INDEX: October 2022, annual inflation 9.1%

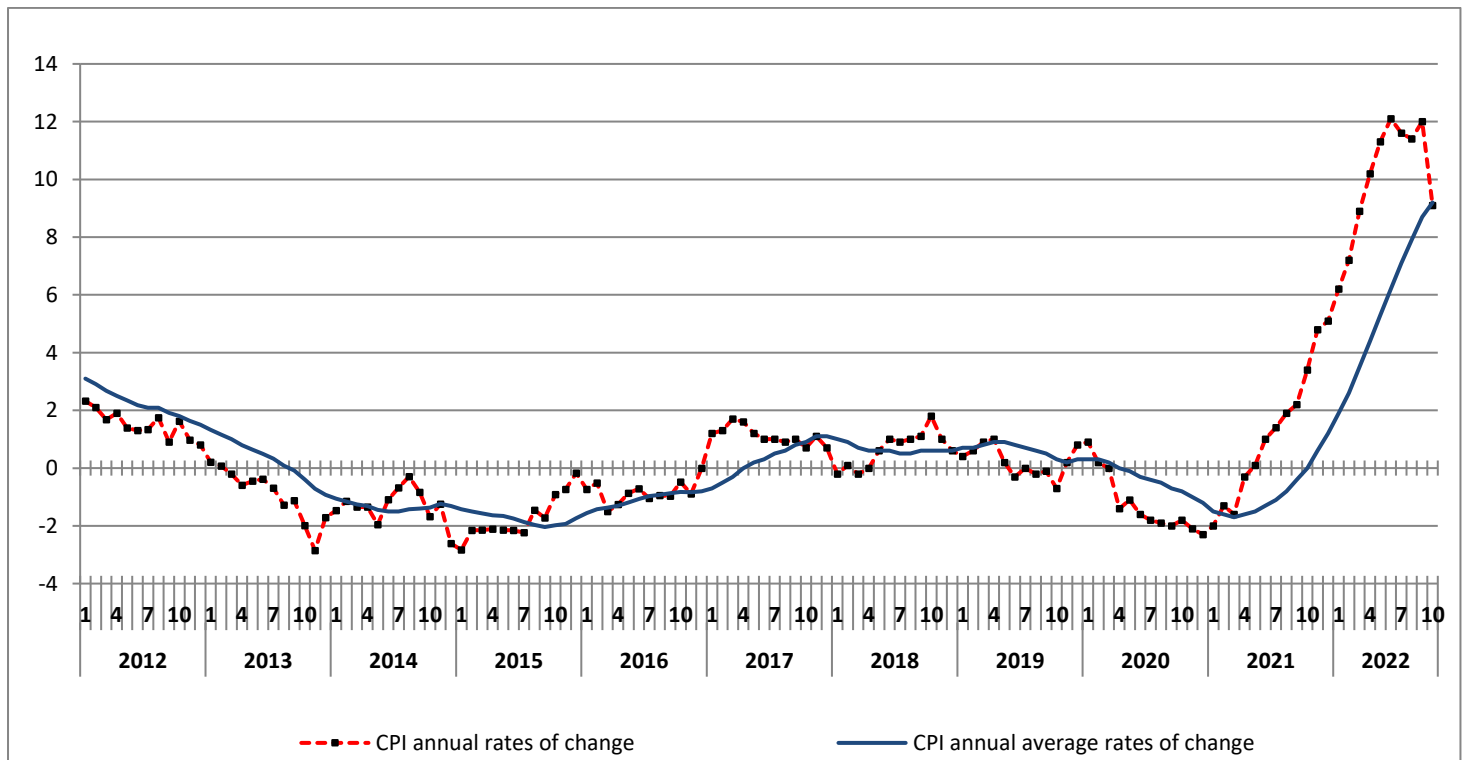
The evolution of the Consumer Price Index (CPI) of October 2022 (reference year 2020=100.0) is depicted as follows:

The CPI in October 2022 compared with October 2021, increased by 9.1%. In October 2021, the annual rate of change of the CPI was 3.4% (Table 2).

The CPI in October 2022 compared with September 2022, decreased by 1.2%. In October 2021, the monthly rate of change of the CPI was 1.5% (Table 1).

The average CPI for the twelve - month period from November 2021 to October 2022, compared with the corresponding index for the period November 2020 to October 2021 increased by 9.2%. The annual rate of change of the average CPI between the twelve - month period November 2020 to October 2021 in comparison to the period November 2019 to October 2020 remained unchanged (Table 3).

Graph 1. Annual and annual average rates of change (%) of CPI



Information on methodological issues:
Population, Employment and
Cost of Living Statistics Division
Section of Retail Price Indices
Acting Head of Section: A. Kourtaki
Tel: +30 213 135 2128
email: a.kourtaki@statistics.gr

Information for data provision:
Tel: +30 213 135 2022, 2308, 2310
email: data.dissem@statistics.gr

Analysis of changes of the CPI: October 2022

I. Monthly rates of change: October 2022 compared with September 2022 (Tables 1, 4)

The 1.2% decrease of the Overall CPI in October 2022, compared with the corresponding index in September 2022 is, mainly, due to the changes in the groups of goods and services as follows:

1. A decrease of:

- 11.5% in the group Housing, due to the decrease, mainly, in the prices of: *electricity, natural gas, heating oil*. This decrease was partly offset by the increase, mainly, in the prices of *rentals for dwellings*.
- 0.3% in the group Hotel-Cafés-Restaurants, due to the decrease, mainly, in the prices of *hotels-motels-inns*. This decrease was partly offset by the increase, mainly, in the prices of *restaurants-confectioneries-cafes*.

2. An increase of:

- 1.3% in the group Food and non-alcoholic beverages, due to the increase, mainly, in the prices of: *bread, pasta products and couscous, beef, pork, lamb and goat, fresh whole milk, cheese, olive oil, fresh fruit, fresh vegetables, potatoes*. This increase was partly offset by the decrease, mainly, in the prices of *fresh fish*.
- 3.5% in the group Clothing and footwear, due to the increase in the prices of clothing and footwear.
- 1.6% in the group Household equipment, due to the increase, mainly, in the prices of: *non-durable household articles, domestic services*.
- 2.1% in the group Transport, due to the decrease, mainly, in the prices of: *new motor cars, second hand motor cars, diesel, petrol, tickets for passenger transport by air*.
- 0.4% in the group in the group Miscellaneous goods and services, due to the increase, mainly, in the prices of *hairdressing salons and personal grooming establishments*.

II. Annual rates of change: October 2022 compared with October 2021 (Tables 2, 5)

The 9.1% increase of the Overall CPI in October 2022, compared with the corresponding index in October 2021 is, mainly, due to the changes in the groups of goods and services as follows:

1. An increase of:

- 14.8% in the group Food and non-alcoholic beverages due to the increase, mainly, in the prices of: *bread and cereals, meat, fish, milk-cheese and eggs, oils and fats, fruit, vegetables, sugar-chocolates-sweets-ice creams, food n.e.c., coffee-cocoa-tea, mineral water-refreshments-fruit juices.*
- 2.2% in the group Alcoholic beverages and tobacco, due to the increase, mainly, in the prices of *alcoholic beverages (not served).*
- 5.4% in the group Clothing and footwear, due to the increase in the prices of clothing and footwear.
- 11.2% in the group Housing, due to the increase, mainly, in the prices of: *rentals for dwellings, services for the repair and maintenance of the dwelling, co-proprietor charges, electricity, natural gas, heating oil, solid fuels.*
- 10.6% in the group Household equipment, due to the increase, mainly, in the prices of: *furniture and furnishings, household appliances and repair, glassware-tableware and utensils of domestic use, non-durable household articles, domestic services.*
- 2.7% in the group Health, due to the increase, mainly, in the prices of: *pharmaceutical products, medical products, medical-dental and paramedical services, hospital care.*
- 13.8% in the group Transport, due to the increase, mainly, in the prices of: *new motor cars, second hand motor cars, motor cycles, spare parts and accessories for motor cars, fuels and lubricants, maintenance and repair of motor cars-motor cycles, passenger transport by taxi, tickets for passenger transport by air, tickets for passenger transport by sea.*
- 2.5% in the group Recreation and culture, due to the increase, mainly, in the prices of: *major durables for recreation and culture, small recreational items-flowers-pets, cinemas-theatres, stationary and drawing materials, package holidays.* This increase was partly offset by the decrease, mainly, in the prices of *audiovisual and information processing equipment.*
- 2.0% in the group Education, due to the increase, mainly, in the prices of: *fees of primary education, fees of secondary education.*
- 8.6% in the group Hotel-Cafés-Restaurants, due to the increase, mainly, in the prices of: *restaurants-confectioneries-cafes-buffets, hotels-motels-inns.*
- 4.2% in the group Miscellaneous goods and services, due to the increase, mainly, in the prices of: *hairdressing salons and personal grooming establishments, other appliances and articles for personal care.*

2. A decrease of:

- 2.0% in the group Communication, due to the decrease, mainly, in the prices of: *mobile telephone equipment, telephone services.*

Table 1. Monthly rates of change of CPI
(Reference year: 2020=100.0)

Main groups of goods and services	Weights 2022 (%)	2022	2022	Rate of change %	2021	2021	Rate of change %
		October	September		October	September	
1. Food & non-alcoholic beverages	210.62	118.29	116.80	1.3	103.04	102.92	0.1
2. Alcoholic beverages and tobacco	37.28	102.16	102.06	0.1	99.95	100.08	-0.1
3. Clothing and footwear	62.93	118.98	115.01	3.5	112.87	111.16	1.5
4. Housing	161.24	123.34	139.40	-11.5	110.93	102.93	7.8
5. Household equipment	44.99	111.60	109.87	1.6	100.88	100.52	0.4
6. Health	81.02	102.16	102.13	0.0	99.44	99.37	0.1
7. Transport	137.64	122.49	119.98	2.1	107.64	105.08	2.4
8. Communication	39.59	95.18	95.30	-0.1	97.17	97.34	-0.2
9. Recreation and culture	33.67	101.84	101.49	0.4	99.36	99.39	0.0
10. Education	30.59	102.97	102.71	0.3	100.92	100.86	0.1
11. Hotels-Cafés-Restaurants	95.39	109.25	109.58	-0.3	100.59	100.40	0.2
12. Miscellaneous goods and services	65.05	102.48	102.12	0.4	98.39	98.95	-0.6
Overall Index	1000.00	113.16	114.48	-1.2	103.75	102.19	1.5

Note: The indices are rounded up to two decimal figures when published and percentage changes up to one decimal figure when published.

Graph 2. Annual and monthly rates of change (%) of CPI

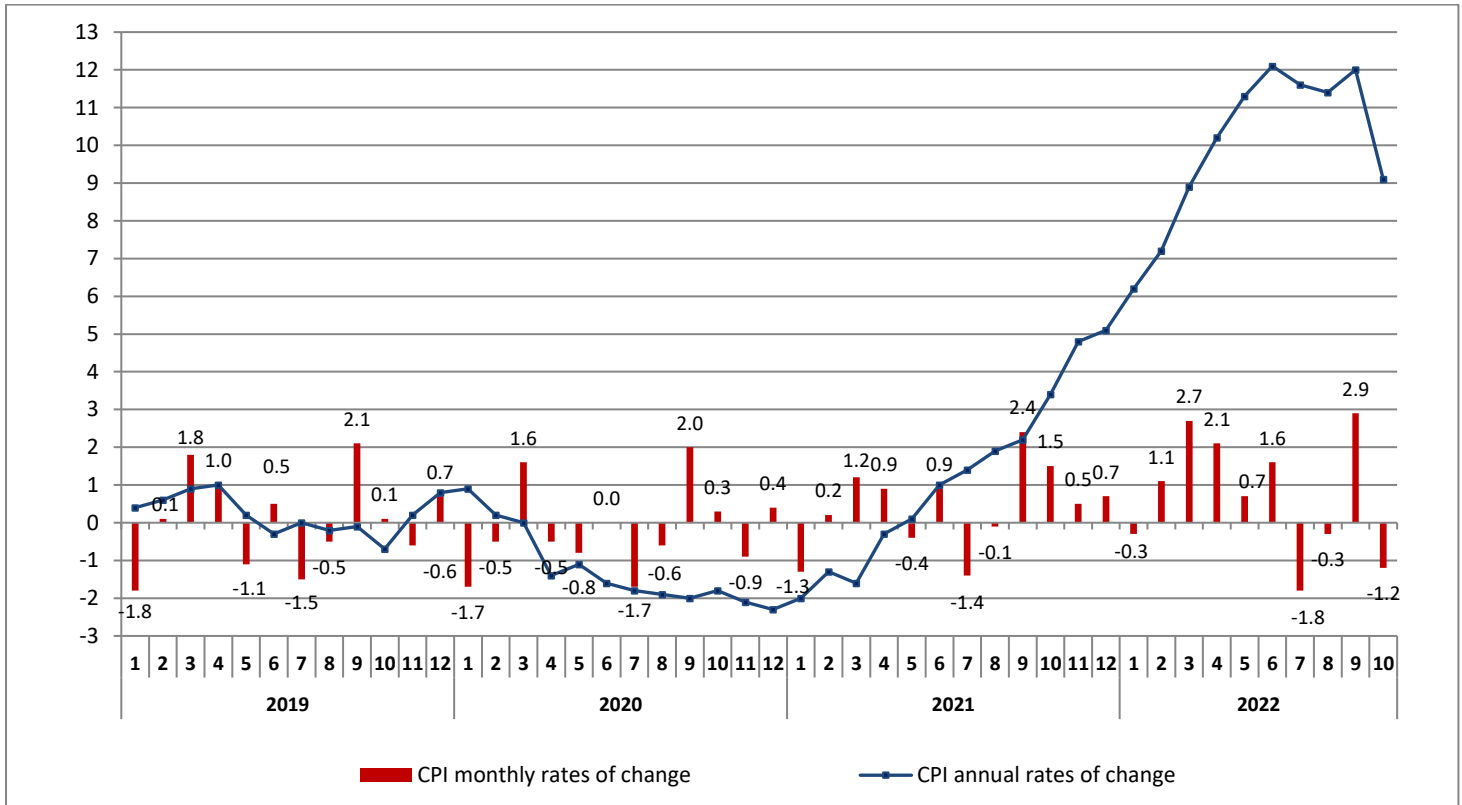


Table 2. Inflation – Annual rates of change of CPI
(Reference year: 2020=100.0)

I: October 2022/2021

Main groups of goods and services	October		Rate of change (%)	Impact
	2022	2021		
1. Food and non-alcoholic beverages	118.29	103.04	14.8	3.1458
2. Alcoholic beverages and tobacco	102.16	99.95	2.2	0.0879
3. Clothing and footwear	118.98	112.87	5.4	0.3453
4. Housing	123.34	110.93	11.2	1.7044
5. Household equipment	111.60	100.88	10.6	0.4824
6. Health	102.16	99.44	2.7	0.2244
7. Transport	122.49	107.64	13.8	1.9058
8. Communication	95.18	97.17	-2.0	-0.0829
9. Recreation and culture	101.84	99.36	2.5	0.0852
10. Education	102.97	100.92	2.0	0.0630
11. Hotels-Cafés-Restaurants	109.25	100.59	8.6	0.8328
12. Miscellaneous goods and services	102.48	98.39	4.2	0.2708
Overall Index	113.16	103.75	9.1	

II: October 2021/2020

Main groups of goods and services	October		Rate of change (%)	Impact
	2021	2020		
1. Food and non-alcoholic beverages	103.04	100.07	3.0	0.7042
2. Alcoholic beverages and tobacco	99.95	99.92	0.0	-0.0019
3. Clothing and footwear	112.87	112.36	0.4	0.0122
4. Housing	110.93	99.29	11.7	1.6432
5. Household equipment	100.88	100.07	0.8	0.0441
6. Health	99.44	99.40	0.0	0.0017
7. Transport	107.64	98.59	9.2	1.1340
8. Communication	97.17	99.65	-2.5	-0.1090
9. Recreation and culture	99.36	99.76	-0.4	-0.0148
10. Education	100.92	99.99	0.9	0.0342
11. Hotels-Cafés-Restaurants	100.59	99.64	0.9	0.0563
12. Miscellaneous goods and services	98.39	99.71	-1.3	-0.0907
Overall Index	103.75	100.33	3.4	

Note: The indices are rounded up to two decimal figures when published and percentage changes up to one decimal figure when published.

**Table 3. Comparisons of the overall CPI
(Reference year: 2020=100.0)**

Year and month	Overall Index	Monthly rates of change %	Annual rates of change Inflation %	Annual average index (moving average)	Annual average rates of change %
2019 : 1	99.63	-1.8	0.4	101.04	0.7
2	99.76	0.1	0.6	101.10	0.7
3	101.58	1.8	0.9	101.17	0.8
4	102.58	1.0	1.0	101.26	0.9
5	101.45	-1.1	0.2	101.28	0.9
6	101.93	0.5	-0.3	101.26	0.8
7	100.44	-1.5	0.0	101.26	0.7
8	99.89	-0.5	-0.2	101.25	0.6
9	102.00	2.1	-0.1	101.24	0.5
10	102.13	0.1	-0.7	101.18	0.3
11	101.55	-0.6	0.2	101.20	0.2
12	102.22	0.7	0.8	101.26	0.3
Annual average	101.26	-	-	101.26	0.3
2020 : 1	100.49	-1.7	0.9	101.34	0.3
2	99.99	-0.5	0.2	101.35	0.3
3	101.57	1.6	0.0	101.35	0.2
4	101.11	-0.5	-1.4	101.23	0.0
5	100.29	-0.8	-1.1	101.13	-0.1
6	100.33	0.0	-1.6	101.00	-0.3
7	98.63	-1.7	-1.8	100.85	-0.4
8	97.99	-0.6	-1.9	100.69	-0.5
9	99.98	2.0	-2.0	100.52	-0.7
10	100.33	0.3	-1.8	100.37	-0.8
11	99.45	-0.9	-2.1	100.20	-1.0
12	99.84	0.4	-2.3	100.00	-1.2
Annual average	100.00	-	-	100.00	-1.2
2021 : 1	98.52	-1.3	-2.0	99.84	-1.5
2	98.72	0.2	-1.3	99.73	-1.6
3	99.91	1.2	-1.6	99.59	-1.7
4	100.82	0.9	-0.3	99.57	-1.6
5	100.43	-0.4	0.1	99.58	-1.5
6	101.36	0.9	1.0	99.66	-1.3
7	99.96	-1.4	1.4	99.78	-1.1
8	99.83	-0.1	1.9	99.93	-0.8
9	102.19	2.4	2.2	100.11	-0.4
10	103.75	1.5	3.4	100.40	0.0
11	104.24	0.5	4.8	100.80	0.6
12	104.95	0.7	5.1	101.22	1.2
Annual average	101.22	-	-	101.22	1.2
2022 : 1	104.68	-0.3	6.2	101.74	1.9
2	105.84	1.1	7.2	102.33	2.6
3	108.75	2.7	8.9	103.07	3.5
4	111.08	2.1	10.2	103.92	4.4
5	111.80	0.7	11.3	104.87	5.3
6	113.62	1.6	12.1	105.89	6.2
7	111.54	-1.8	11.6	106.86	7.1
8	111.21	-0.3	11.4	107.81	7.9
9	114.48	2.9	12.0	108.83	8.7
10	113.16	-1.2	9.1	109.61	9.2

Note: The indices are rounded up to two decimal figures when published and percentage changes up to one decimal figure when published.

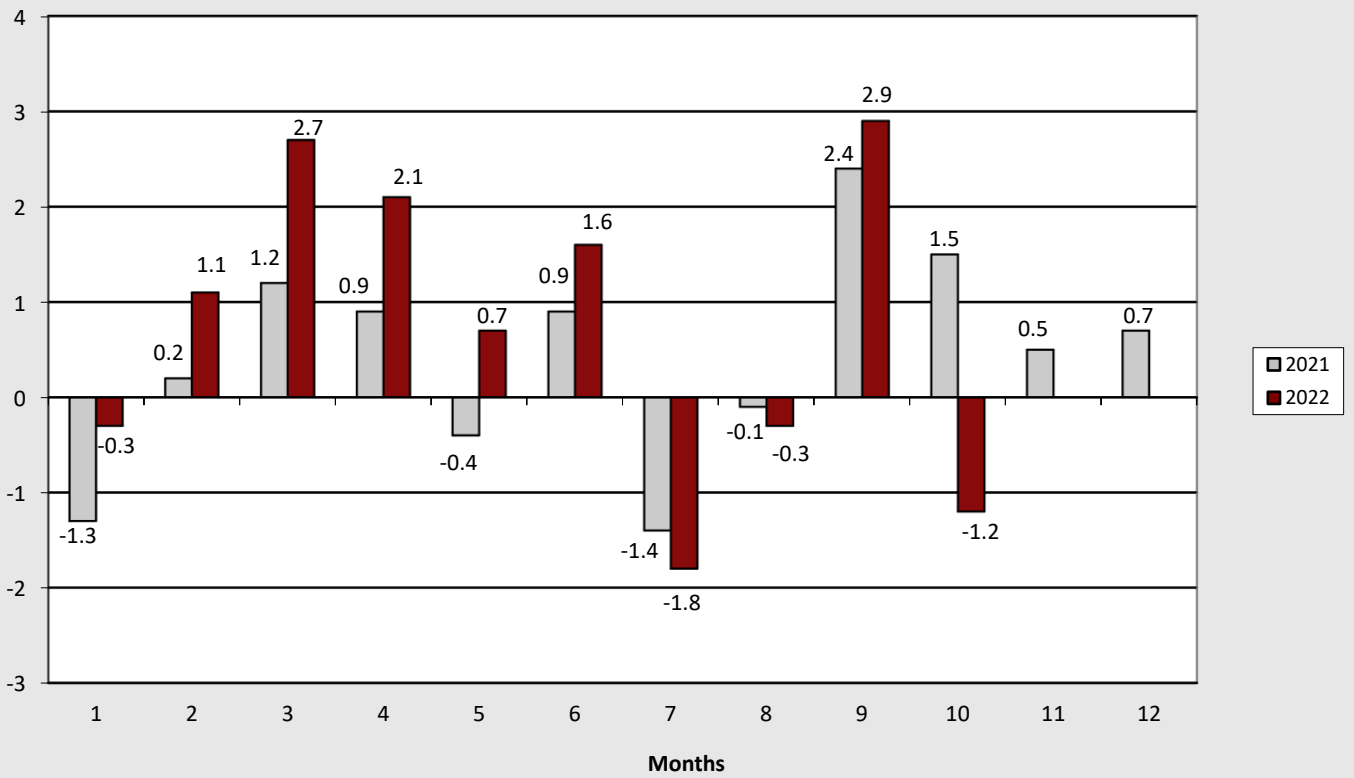
**Table 4. Major price changes from index comparison between
October 2022 and September 2022 and their impact
on the Overall CPI**

Goods and services	Rate of change (%)	Impact
Bread	2.0	0.03
Pasta products and couscous	7.2	0.02
Beef	0.8	0.01
Pork	1.1	0.01
Lamb and goat	2.0	0.01
Fresh whole milk	3.4	0.02
Cheese	1.8	0.03
Olive oil	1.3	0.01
Fresh fruit	1.4	0.02
Fresh vegetables	5.5	0.07
Potatoes	3.5	0.01
Fresh fish	-3.6	-0.04
Clothing and footwear	3.5	0.20
Electricity	-2.9	-0.13
Natural gas	-52.8	-1.60
Heating oil	-11.2	-0.34
Rentals for dwellings	0.5	0.02
Non-durable household articles	1.0	0.02
Domestic services	5.5	0.05
New motor cars	0.8	0.02
Second hand motor cars	3.0	0.05
Diesel	11.2	0.07
Petrol	2.3	0.12
Passenger transport by air	1.7	0.01
Hotels-motels-inns	-7.7	-0.07
Restaurants-confectioneries-cafes	0.5	0.04
Hairdressing salons and personal grooming establishments	1.5	0.01

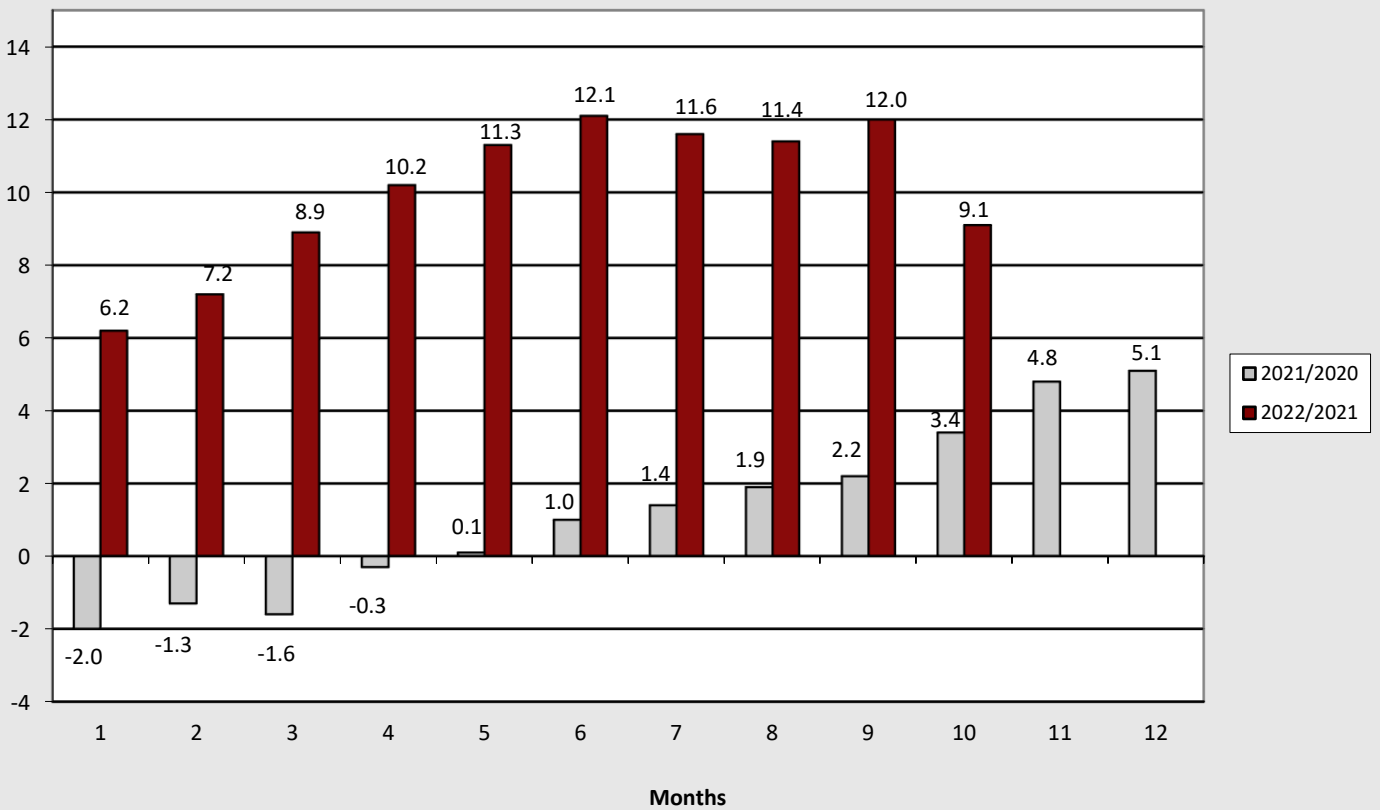
Table 5. Major price changes from index comparison between October 2022 and October 2021 and their impact on the Overall CPI

Goods and services	Rate of change (%)	Impact
Bread and cereals	19.3	0.64
Meat	17.3	0.79
Fish	2.4	0.04
Milk cheese and eggs	24.2	0.79
Oils and fats	16.6	0.22
Fruit	3.9	0.06
Vegetables	13.2	0.37
Sugar-chocolates-sweets-ice creams	6.1	0.07
Food n.e.c.	12.0	0.05
Coffee - cocoa - tea	13.4	0.08
Mineral water-refreshments-fruit juices	6.1	0.04
Alcoholic beverages (not served)	5.4	0.09
Clothing and footwear	5.4	0.35
Rentals for dwellings	1.6	0.06
Services for the repair and maintenance of the dwelling	4.2	0.03
Co-proprietor charges	1.5	0.01
Electricity	7.4	0.34
Natural gas	68.4	0.59
Heating oil	20.8	0.53
Solid fuels	23.3	0.12
Furniture and furnishings	5.7	0.02
Household appliances and repair	5.6	0.03
Glassware-tableware and utensils of domestic use	6.8	0.02
Non-durable household articles	16.1	0.32
Domestic services	8.0	0.07
Pharmaceutical products	5.9	0.16
Medical products	3.2	0.02
Medical-dental and paramedical services	1.4	0.03
Hospital care	0.6	0.02
New motor cars	12.3	0.27
Second hand motor cars	19.4	0.26
Motor cycles	8.4	0.02
Spare parts and accessories of motor cars	10.3	0.04
Fuels and lubricants	17.8	1.10
Maintenance and repair of motor cars-motor cycles	2.8	0.02
Passenger transport by taxi	32.9	0.04
Passenger transport by air	30.6	0.13
Passenger transport by sea	26.7	0.03
Mobile telephone equipment	-9.9	-0.01
Telephone services	-1.9	-0.07
Major durables for recreation and culture	3.9	0.02
Small recreational items-flowers-pets	2.6	0.02
Cinemas-theatres	14.3	0.02
Stationery and drawing materials	9.6	0.02
Package holidays	12.0	0.02
Audiovisual and information processing equipment	-4.7	-0.03
Primary education	2.4	0.01
Secondary education	2.5	0.04
Restaurants-confectioneries-cafes-buffets	7.0	0.62
Hotels-motels-inns	20.2	0.21
Hairdressing salons and personal grooming establishments	2.7	0.02
Other appliances and articles for personal care	8.4	0.22

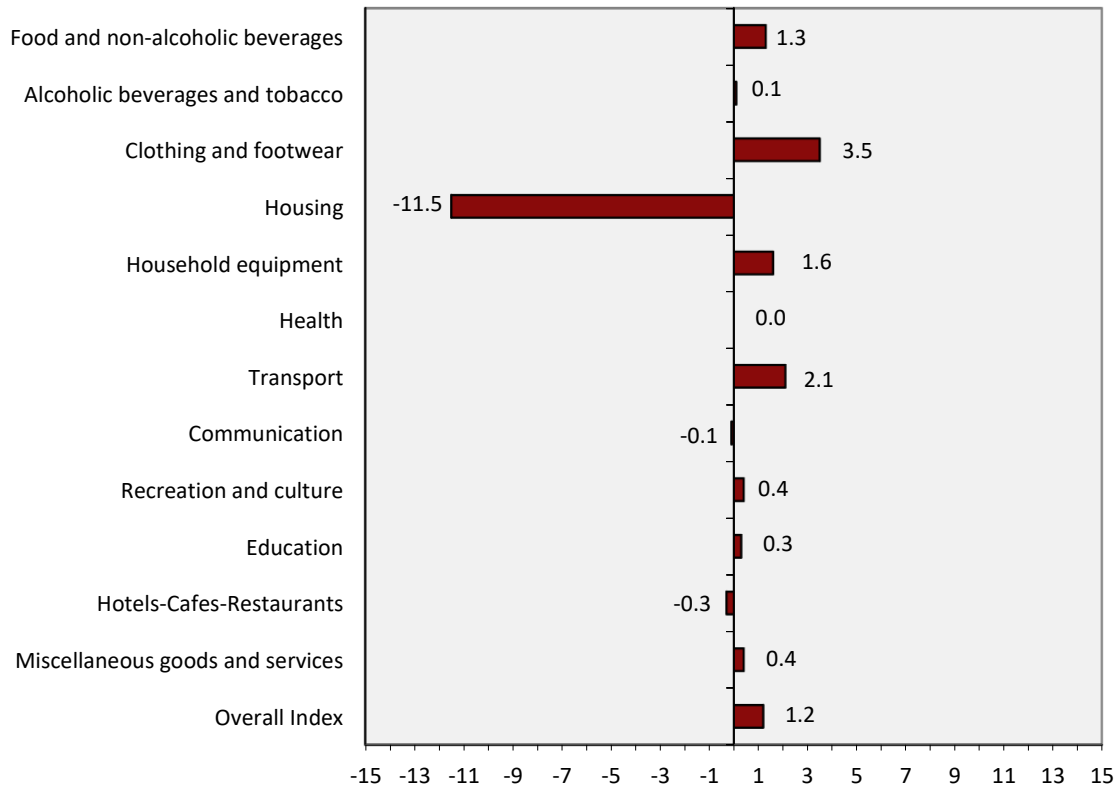
Graph 3. Monthly rates of change (%) of the overall CPI, 2021 and 2022



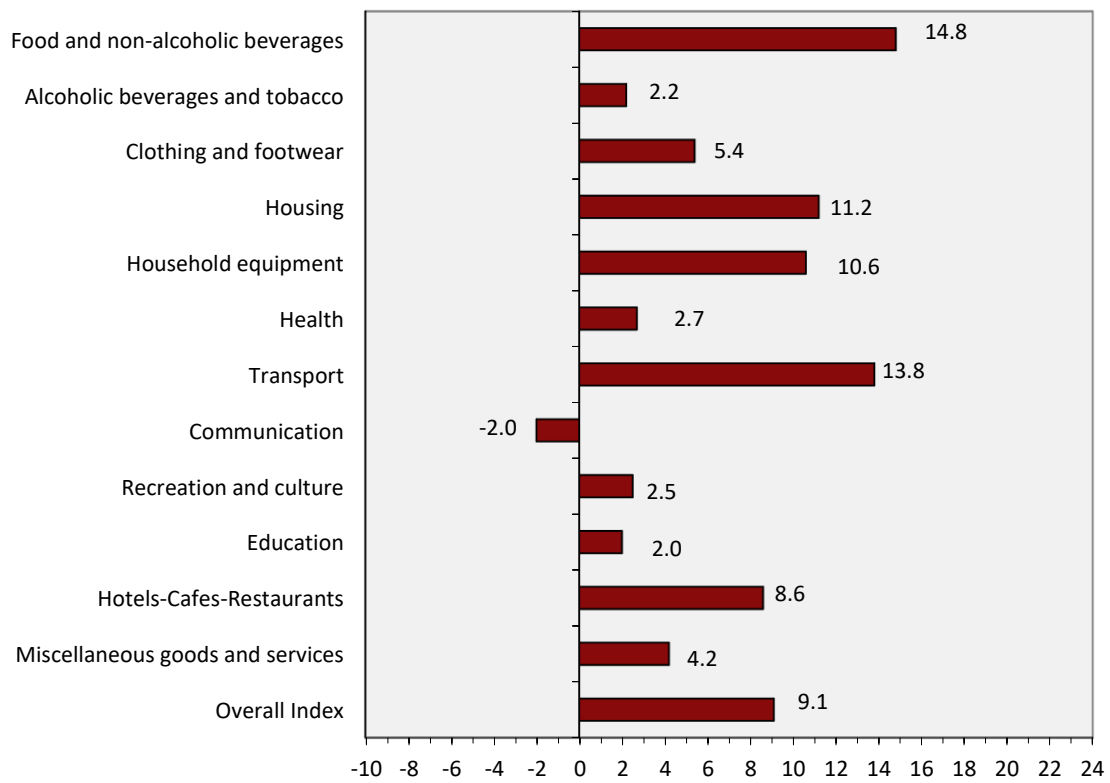
Graph 4. Annual rates of change (%) of the overall CPI, 2021 and 2022



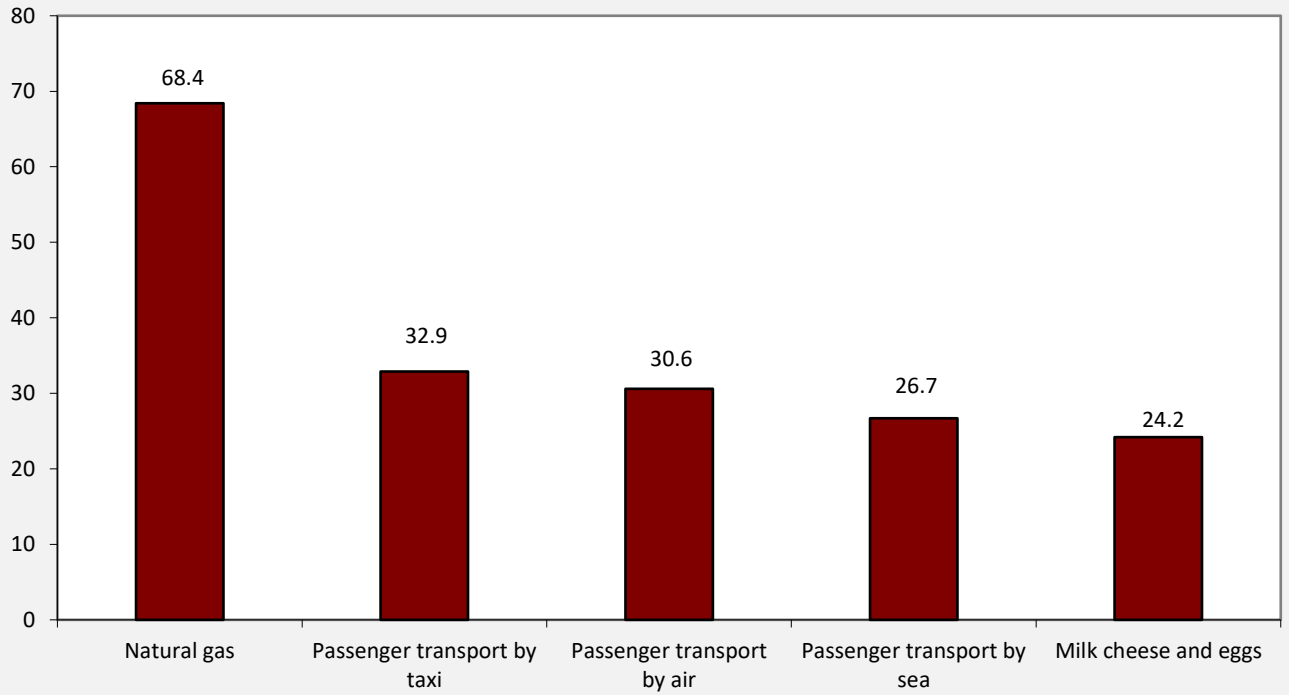
Graph 5. Monthly rates of change (%) of CPI between October 2022 and September 2022



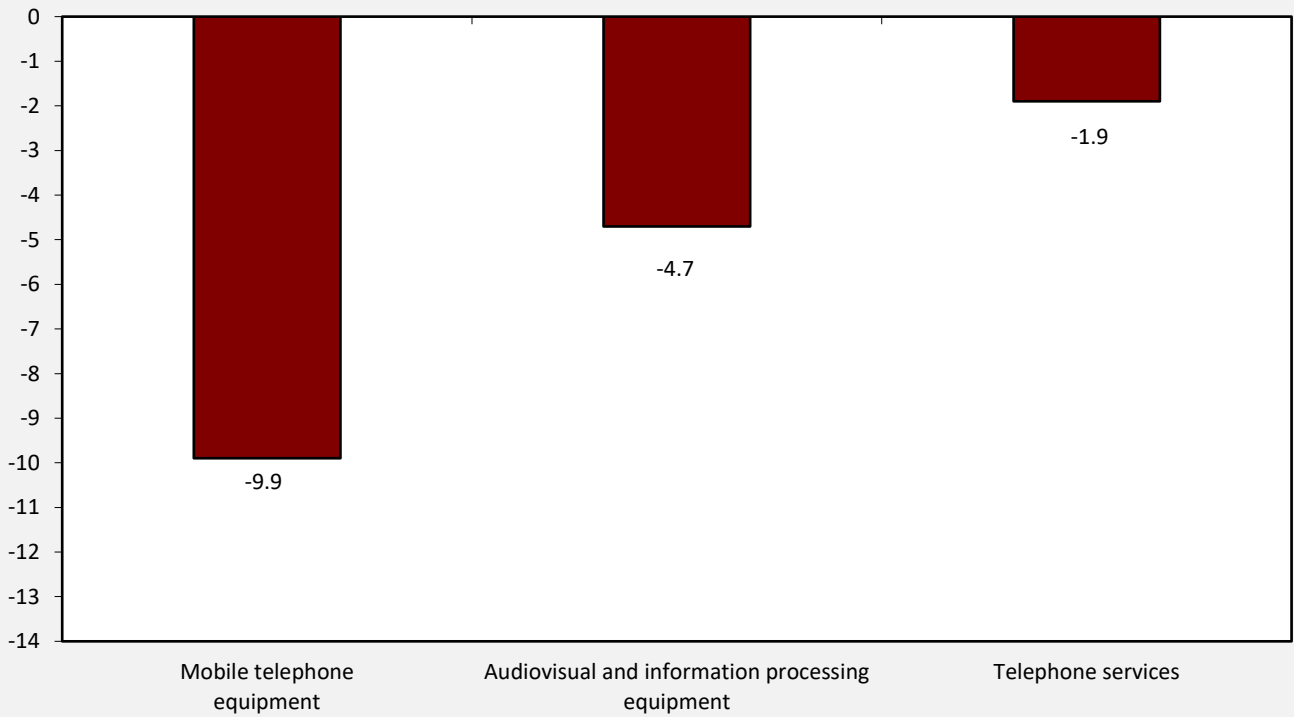
Graph 6. Annual rates of change (%) of CPI between October 2022 and October 2021



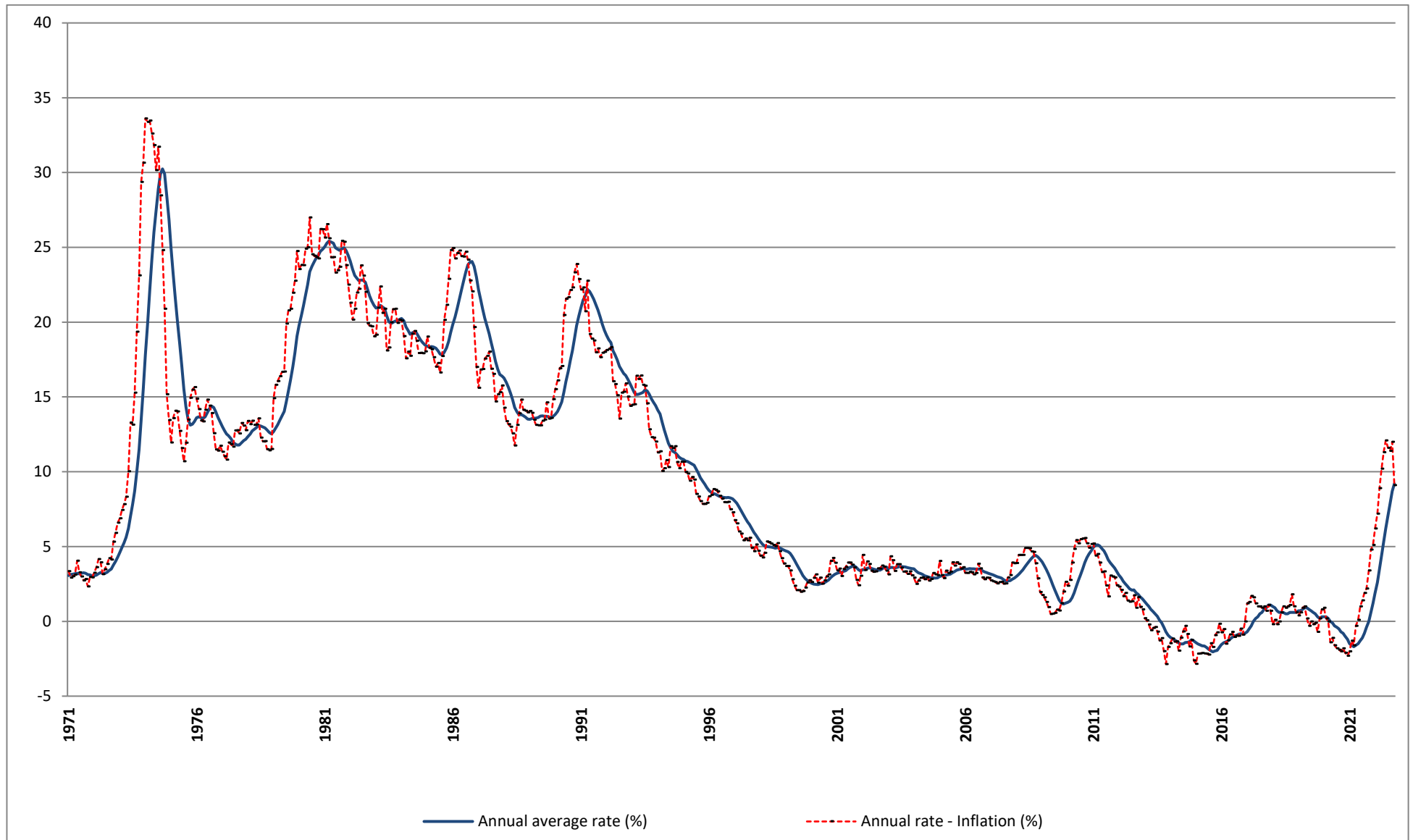
Graph 7. CPI highest annual increases (%)



Graph 8. CPI highest annual decreases (%)



Graph 9. Historical evolution of CPI, 1971 – 2022



METHODOLOGICAL NOTES

Generally	The Consumer Price Index (CPI) is compiled by the Hellenic Statistical Authority (ELSTAT) since 1959. Until the year 2000, the CPI referred to the urban areas of the Country, while from 2001 onwards it refers to the whole Country covering urban, semi-urban and rural areas.
Purpose of the index	The purpose of the CPI is to measure the general level of prices of goods and services purchased by the average Greek household.
Legal basis	Law 3832/2010 .
Reference period	Month.
Base	December of the previous year.
Reference year	2020=100.0.
Chain linking Index	The CPI index follows the chain linking method, introducing new weights annually and having as a base the December of the previous year. The weights are estimated on the basis of the most recent available data of the Household Budget Survey (HBS), extrapolated to the prices of December. The CPI, adjusted on an annual basis to the most recent consumption expenditure pattern of the private households of the Country, ensures the representativeness of goods and services, which compose the "basket" of purchases of the average household.
Geographical and population coverage of the CPI	The CPI refers to the whole Country and covers the resident households of the territory excluding collective households (hospitals, homes for the elderly, boarding houses, prisons, etc.) and non-resident households (tourists) in the Country.
Classification of items	The classification of the CPI items (goods and services) is based on the international classification COICOP (Classification of Individual Consumption by Purpose) as this has been adapted to the needs of the HICPs of the EU Member States with the COICOP5/HICP classification.
Weights of items	The weights of CPI items are updated every year, on the basis of the most recent available data of HBS. The weights are calculated as the share (%) of the expenditures for each group, subgroup and item (good or service) to the total household expenditure of the average household.
Price collection Cities	The CPI prices are collected in 27 cities with representative markets for the coverage of the 13 Regions of the Country. The selection criteria of the price collection cities are the size and the particularities of their markets, the possibility of continuous price collection, the comparability of the index and the cost of price collection.
Population weights	The calculation of the population weights by regions is based on the population data of the 2011 General Population Census and the expenditure data of the latest available HBS by regions.
Selection of items	The composition of the "household basket" i.e. the selection of goods and services which are included in the calculation of CPI is updated annually, using the results of the latest available HBS, other market research, etc. The chain linking methodology allows the change of items of the household basket on an annual basis, in order to ensure the representativeness of the items involved in the calculation of groups and subgroups of CPI.
Price collection-Outlets	The prices collection outlets are retail stores, enterprises providing services, street markets etc. which are considered representative of the branches of shops, where the households make their purchases in the 27 selected cities. The methodology allows the renewal of price collection sources, annually, in order to maintain their representativeness in the calculation of CPI. Prices are collected by employees of ELSTAT as well as by external price collectors, hired on a temporary basis. They pay a visit to the selected outlets within a specific time period of a month (monthly prices) or on a specific day of the week (weekly prices). The collected prices correspond to the prices actually faced by the consumer.
Specification-Substitution of items	All the collected items are defined by the specification, that is the particular characteristics which determine the quality, the trade show and the identity, in general, of good products (such as brand, weight, package etc), in order to avoid any price variations attributable to differences in the specification. Once a specified item (good or service) is no longer available in the market or has ceased to be important, as regards consumption, it is substituted by a newly specified item, which has taken its place in the market.

Calculation of the Consumer Price Index

The Consumer Price Index is a Laspeyres-type index and it is calculated based on December of the previous year.

Implementation of formula in five-digit level of COICOP5

Specifically, if the five-digit item h includes q price collected items, then its index in month t of year T, $R_h^{t,T}$, is given by the following formula:

$$R_h^{t,T} = R_h^{12,T-1} \left[\frac{\sum_{i=1}^q w_i^T R_i^{t,T} / R_i^{12,T-1}}{\sum_{i=1}^q w_i^T} \right],$$

where:

$R_h^{12,T-1}$ = the index of the five-digit item h, in December of year T-1.

w_i^T = the weight of the price collected item I, in year T.

$R_i^{t,T}$ = the index of the price collected item I, in month t of year T.

$R_i^{12,T-1}$ = the index of the price collected item I, in December of year T-1.

A similar methodology is followed for the calculation of indices in the upper levels (two-digit, three-digit and four-digit) of COICOP5 and the calculation of the overall CPI as well.

Publication of data The published CPI time series (reference year 2020=100.0), covers the period from January 1959 onwards. The CPI data are released each month as scheduled, in accordance with the Press Releases Calendar of ELSTAT, with the [Press Release and the tables](#).

References Further information concerning the methodology and the compilation of the CPI is available in the [Methodological Publication CPI \(2009=100.0\)](#) and the [Single Integrated Metadata Structure \(SIMS\)](#).