



## PRESS RELEASE

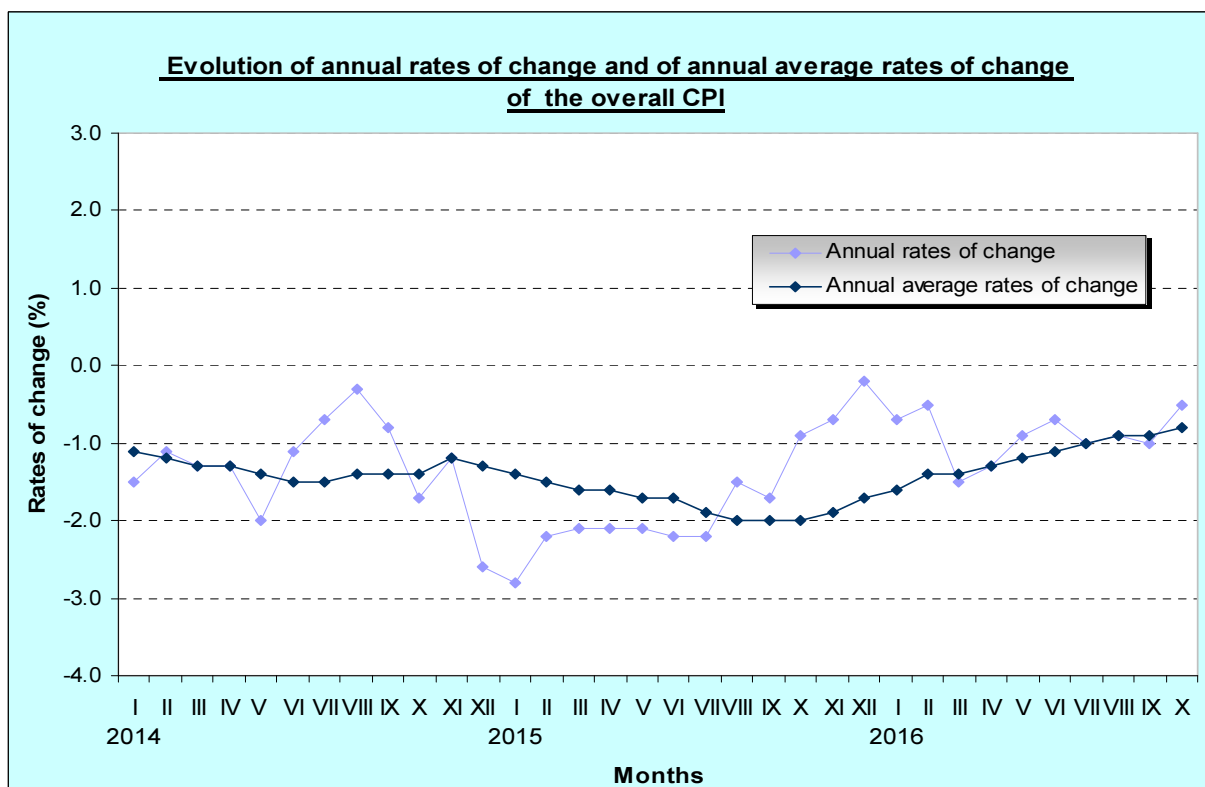
### CONSUMER PRICE INDEX: October 2016

The Consumer Price Index (CPI) in October 2016 compared with October 2015 decreased by 0.5%. In October 2015, the annual rate of change of the CPI was -0.9% (Table 2).

The CPI in October 2016 compared with September 2016 increased by 0.4%. In October 2015, the monthly rate of change of the CPI was -0.1% (Table 1).

In the twelve-month period from November 2015 to October 2016, compared with the period from November 2014 to October 2015, the annual average rate of change of the CPI was -0.8%. The corresponding annual average rate of change of the CPI in the previous year (November 2014 to October 2015) was -2.0% (Table 3).

**Evolution of annual rates of change and of annual average rates of change of the overall CPI**



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**Table 1**  
**Monthly rates of change of the Consumer Price Index – October 2016**  
**(2009=100.0)**

Main groups of goods and services	Weights HBS 2014 (%)	2016	2016	Rate of change %	2015	2015	Rate of change %
		October	September		October	September	
1 Food & non-Alcoholic Beverages	218.10	104.38	104.43	-0.1	105.97	106.11	-0.1
2 Alcoholic Beverages & Tobacco	42.79	136.36	136.65	-0.2	134.30	134.66	-0.3
3 Clothing and Footwear	65.30	105.15	105.06	0.1	107.50	102.78	4.6
4 Housing	129.19	119.46	116.61	2.4	119.47	121.53	-1.7
5 Household Equipment	51.15	92.83	92.61	0.2	94.26	94.37	-0.1
6 Health	75.42	97.88	98.25	-0.4	97.90	97.96	-0.1
7 Transport	122.40	115.64	114.52	1.0	115.14	116.06	-0.8
8 Communication	42.74	99.10	99.11	0.0	98.39	98.39	0.0
9 Recreation and Culture	44.71	90.91	90.88	0.0	91.95	92.18	-0.3
10 Education	33.47	89.03	88.90	0.2	89.90	89.79	0.1
11 Hotels Cafés & Restaurants	103.94	106.31	106.52	-0.2	105.18	105.33	-0.1
12 Miscellaneous Goods & Services	70.79	94.73	94.69	0.0	96.32	96.13	0.2
<b>Overall Index</b>	<b>1000.00</b>	<b>105.80</b>	<b>105.39</b>	<b>0.4</b>	<b>106.32</b>	<b>106.42</b>	<b>-0.1</b>

Note: 1. The indices are calculated with infinite decimal figures and rounded up to two decimal figures when published.

2. Percentage changes are calculated on the basis of indices with infinite decimal figures and rounded up to one decimal figure when published.

**Table 2**  
**Annual rates of change of the Consumer Price Index – October 2016**  
**(2009=100.0)**

**I**

Main groups of goods and services		October		Rate of change (%)	Effect
		2016	2015		
1	Food and non Alcoholic Beverages	104.38	105.97	-1.5	-0.3279
2	Alcoholic Beverages and Tobacco	136.36	134.30	1.5	0.0829
3	Clothing and Footwear	105.15	107.50	-2.2	-0.1443
4	Housing	119.46	119.47	0.0	-0.0009
5	Household Equipment	92.83	94.26	-1.5	-0.0692
6	Health	97.88	97.90	0.0	-0.0013
7	Transport	115.64	115.14	0.4	0.0575
8	Communication	99.10	98.39	0.7	0.0288
9	Recreation and Culture	90.91	91.95	-1.1	-0.0435
10	Education	89.03	89.90	-1.0	-0.0273
11	Hotels Cafés and Restaurants	106.31	105.18	1.1	0.1102
12	Miscellaneous Goods and Services	94.73	96.32	-1.6	-0.1056
<b>Overall Index</b>		<b>105.80</b>	<b>106.32</b>	<b>-0.5</b>	

**II**

Main groups of goods and services		October		Rate of change (%)	Effect
		2015	2014		
1	Food and non Alcoholic Beverages	105.97	102.79	3.1	0.6249
2	Alcoholic Beverages and Tobacco	134.30	131.40	2.2	0.1211
3	Clothing and Footwear	107.50	109.16	-1.5	-0.0974
4	Housing	119.47	125.24	-4.6	-0.7289
5	Household Equipment	94.26	96.62	-2.4	-0.1280
6	Health	97.90	96.39	1.6	0.1052
7	Transport	115.14	122.06	-5.7	-0.7944
8	Communication	98.39	98.42	0.0	-0.0015
9	Recreation and Culture	91.95	93.57	-1.7	-0.0674
10	Education	89.90	90.49	-0.7	-0.0179
11	Hotels Cafés and Restaurants	105.18	103.18	1.9	0.1839
12	Miscellaneous Goods and Services	96.32	99.78	-3.5	-0.2299
<b>Overall Index</b>		<b>106.32</b>	<b>107.30</b>	<b>-0.9</b>	

Note: 1. The indices are calculated with infinite decimal figures and rounded up to two decimal figures when published.

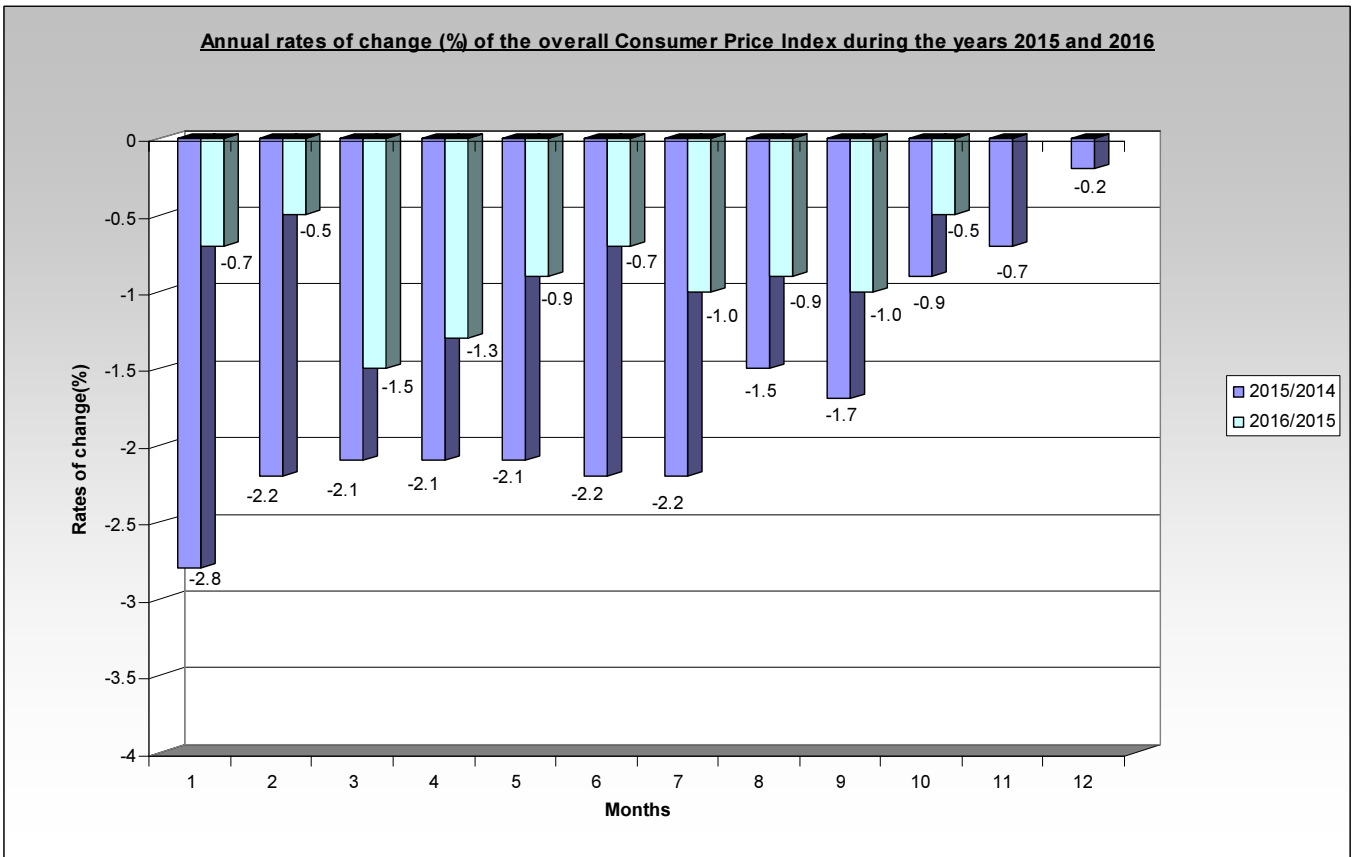
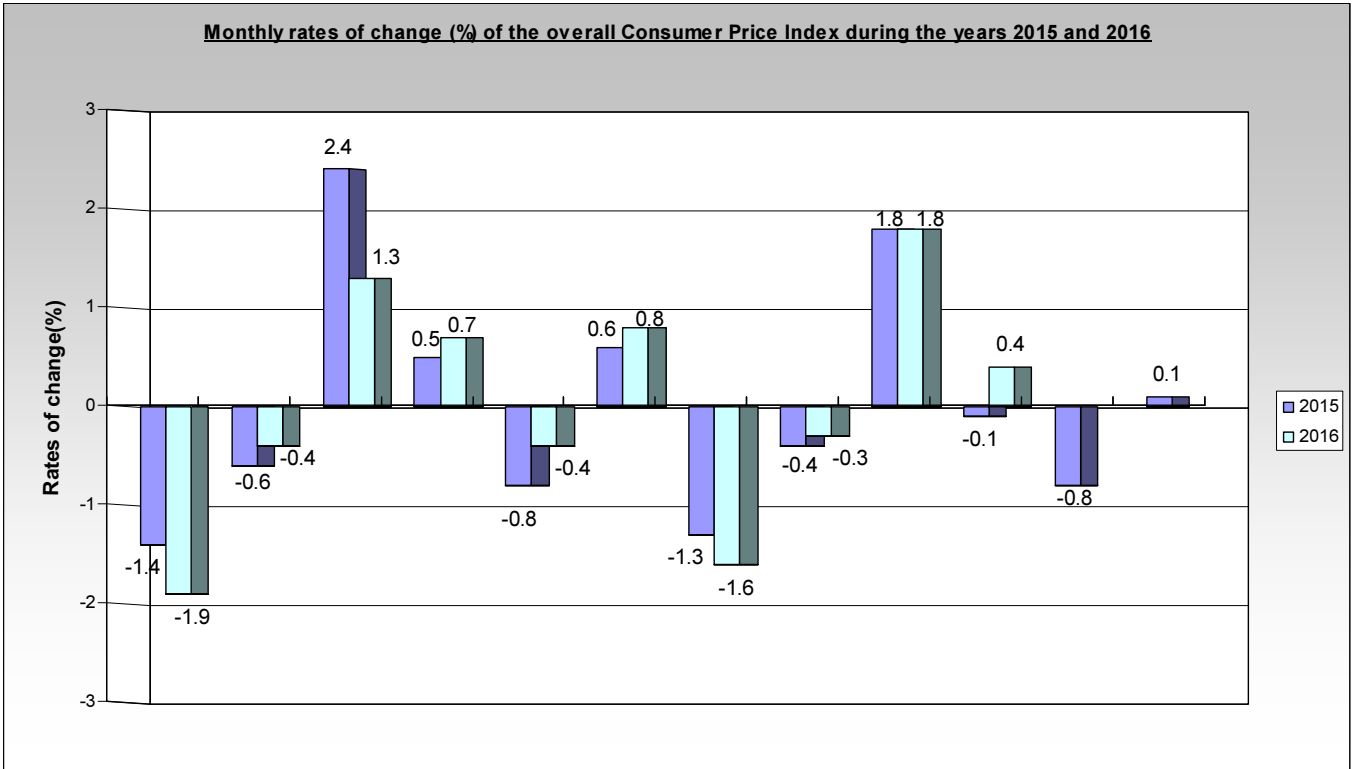
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**Table 3**  
**Comparisons of the overall Consumer Price Index**  
**(2009=100.0)**

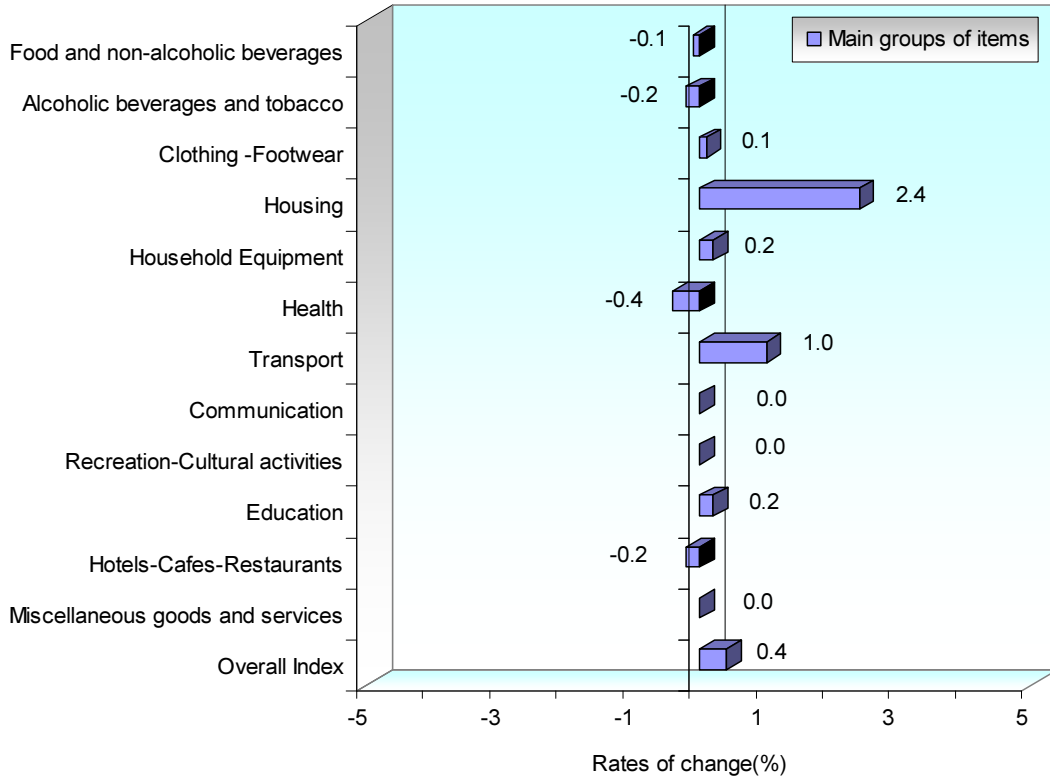
Year and month	Overall index	Monthly rates of change %	Annual rates of change %	Annual average index (moving average)	Annual average rates of change %
2013 : 1	108.97	-1.4	0.2	109.84	1.3
2	107.17	-1.6	0.1	109.85	1.2
3	109.90	2.5	-0.2	109.83	1.0
4	110.41	0.5	-0.6	109.78	0.8
5	110.21	-0.2	-0.4	109.73	0.6
6	109.95	-0.2	-0.4	109.70	0.5
7	108.13	-1.7	-0.7	109.64	0.3
8	106.41	-1.6	-1.3	109.52	0.1
9	109.20	2.6	-1.1	109.42	-0.1
10	109.13	-0.1	-2.0	109.23	-0.4
11	107.64	-1.4	-2.9	108.97	-0.7
12	108.62	0.9	-1.7	108.81	-0.9
<i>Annual average</i>	<i>108.81</i>	-	-	<i>108.81</i>	<i>-0.9</i>
2014 : 1	107.37	-1.2	-1.5	108.68	-1.1
2	105.94	-1.3	-1.1	108.58	-1.2
3	108.42	2.3	-1.3	108.45	-1.3
4	108.92	0.5	-1.3	108.33	-1.3
5	108.05	-0.8	-2.0	108.15	-1.4
6	108.75	0.6	-1.1	108.05	-1.5
7	107.40	-1.2	-0.7	107.99	-1.5
8	106.09	-1.2	-0.3	107.96	-1.4
9	108.29	2.1	-0.8	107.88	-1.4
10	107.30	-0.9	-1.7	107.73	-1.4
11	106.30	-0.9	-1.2	107.62	-1.2
12	105.79	-0.5	-2.6	107.38	-1.3
<i>Annual average</i>	<i>107.38</i>	-	-	<i>107.38</i>	<i>-1.3</i>
2015 : 1	104.32	-1.4	-2.8	107.13	-1.4
2	103.65	-0.6	-2.2	106.94	-1.5
3	106.10	2.4	-2.1	106.75	-1.6
4	106.63	0.5	-2.1	106.56	-1.6
5	105.73	-0.8	-2.1	106.36	-1.7
6	106.40	0.6	-2.2	106.17	-1.7
7	105.00	-1.3	-2.2	105.97	-1.9
8	104.54	-0.4	-1.5	105.84	-2.0
9	106.42	1.8	-1.7	105.68	-2.0
10	106.32	-0.1	-0.9	105.60	-2.0
11	105.51	-0.8	-0.7	105.54	-1.9
12	105.61	0.1	-0.2	105.52	-1.7
<i>Annual average</i>	<i>105.52</i>	-	-	<i>105.52</i>	<i>-1.7</i>
2016 : 1	103.56	-1.9	-0.7	105.46	-1.6
2	103.12	-0.4	-0.5	105.41	-1.4
3	104.51	1.3	-1.5	105.28	-1.4
4	105.28	0.7	-1.3	105.17	-1.3
5	104.81	-0.4	-0.9	105.09	-1.2
6	105.65	0.8	-0.7	105.03	-1.1
7	103.91	-1.6	-1.0	104.94	-1.0
8	103.55	-0.3	-0.9	104.85	-0.9
9	105.39	1.8	-1.0	104.77	-0.9
10	105.80	0.4	-0.5	104.73	-0.8

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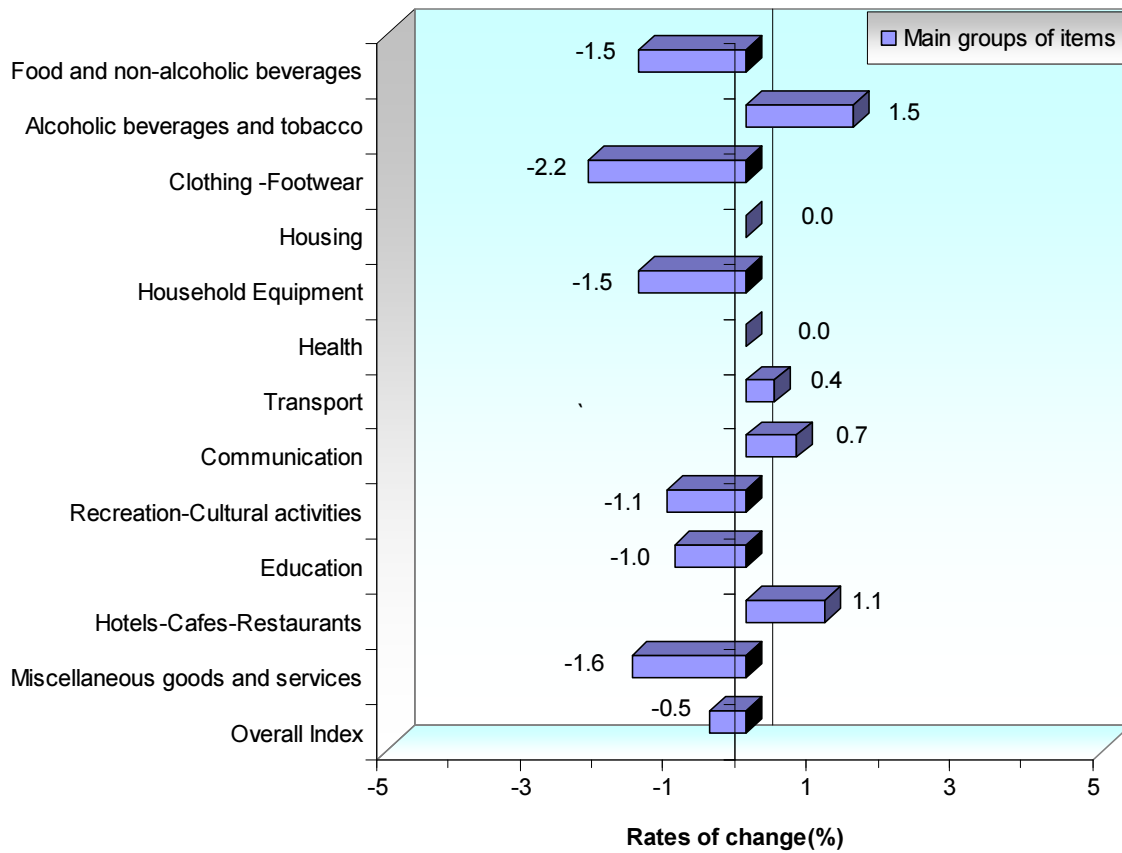
## DIAGRAMS



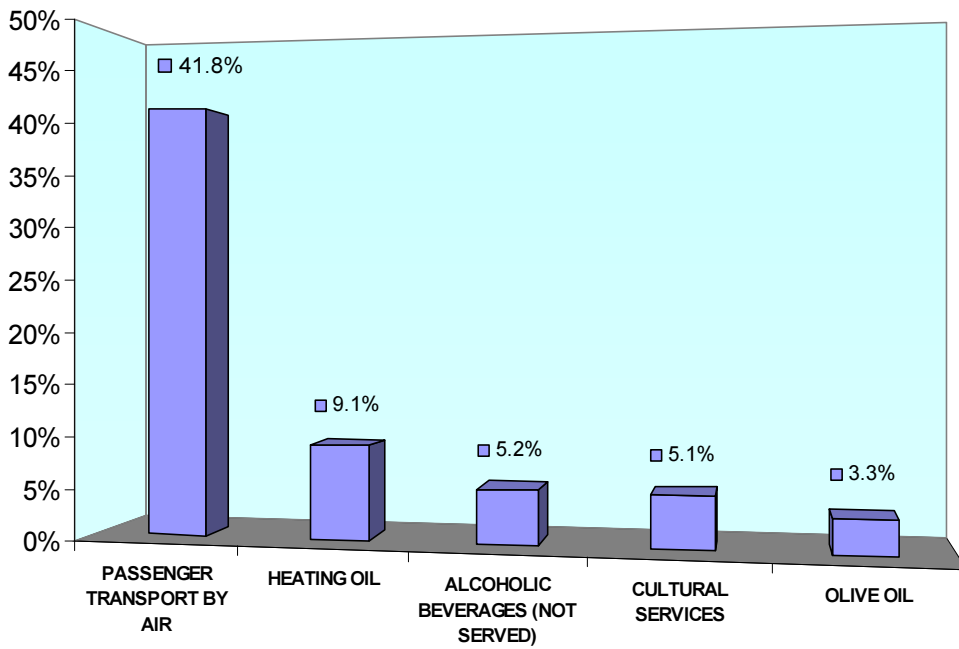
**Monthly rates of change (%) of the CPI between October 2016 and September 2016**



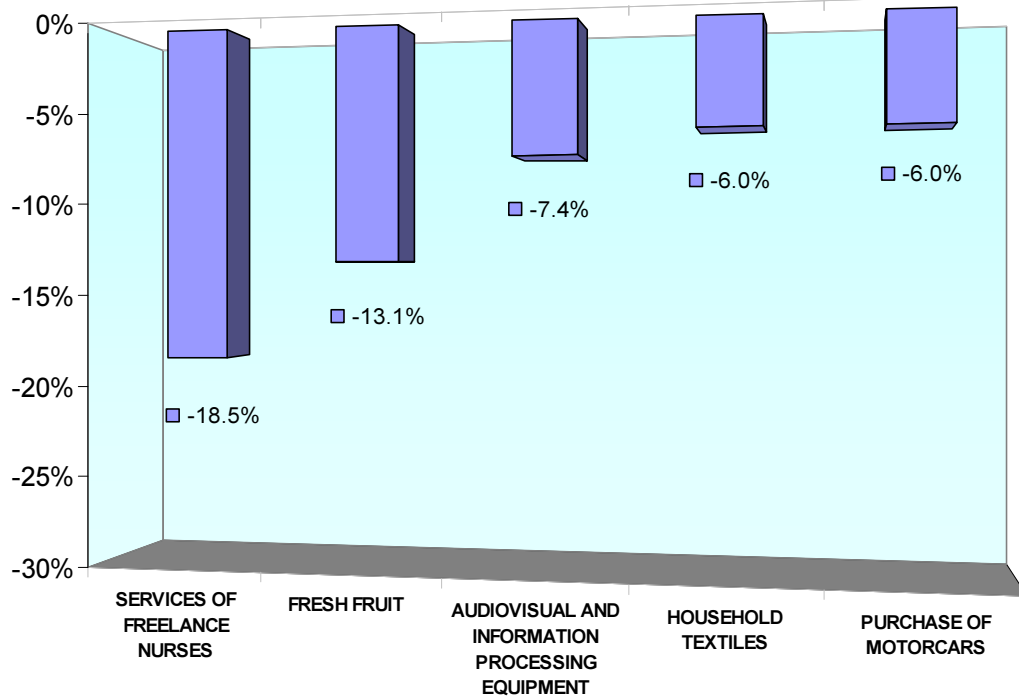
**Annual rates of change (%) of the CPI between October 2016 and October 2015**



CPI higher annual increases (%)



CPI higher annual decreases (%)



## METHODOLOGICAL NOTES

<b>Generally</b>	The Consumer Price Index (CPI) is compiled by the Hellenic Statistical Authority (ELSTAT) since 1959. Up to the year 2000, the CPI referred to the urban areas of the country, while from 2001 onwards it refers to the whole country covering the urban, semi urban and rural areas.
<b>Purpose of the index</b>	The purpose of the CPI is to measure the general level of prices of goods and services purchased by the average Greek household.
<b>Legal basis</b>	Law 3832/10.
<b>Reference period</b>	Month.
<b>Base</b>	December of the previous year.
<b>Reference year</b>	2009=100.0.
<b>Chain linking Index</b>	<p>The CPI index follows the chain linking method, where new weights are introduced annually 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), which is conducted on an annual basis, extrapolated in the prices of December.</p> <p>The CPI, adjusted on an annual basis to the latest consumption expenditure pattern of the private households of the country, ensures the representativity of goods and services, which compose the “basket” of purchases of the average household.</p>
<b>Geographical and population coverage of the CPI</b>	The CPI refers to the whole of the country. As regards the population coverage of the Index, the CPI covers the resident households of the territory excluding collective households (hospital homes for the elderly, boarding homes, prisons, etc.) and non-resident households (tourists) in the country.
<b>Classification of items</b>	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.
<b>Weights of items</b>	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.
<b>Price collection Cities</b>	The CPI prices are collected in 27 cities, whose markets are considered representative 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 and the comparability of the index and the cost of price collection.
<b>Population weights</b>	The calculation of the population weights by regions is based on the population data of the General Population Census for the year 2011 and the expenditure data of the latest available HBS by regions.
<b>Selection of items</b>	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 items, which take part 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 price collection 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 private temporary hired price collectors. They visit the selected outlets within a certain time period of a month (monthly prices) or on a certain 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 goods (such as brand, weight, package etc), in order to avoid any price variations attributable to differences in the specification.

When a specified item (good or service) is no longer available in the market or has ceased to be important, as regards consumption, then it is replaced 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 formula below:

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

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 available time series of the Consumer Price Index with the same reference year (2009=100.0) starts back from January 1959 onwards.

The CPI data are released each month as scheduled, in accordance with the Press Releases Calendar of ELSTAT. These data is posted on the ELSTAT website ([www.statistics.gr](http://www.statistics.gr)), under the link "timeseries".

**References** Further information concerning the Consumer Price Index can be found in the Methodological Publication CPI (2009=100.0), and also in the information note for CPI of January 2016, which are posted on the homepage of ELSTAT ([www.statistics.gr](http://www.statistics.gr)).