

Economic News Release

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Consumer Price Index Summary

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Consumer Price Index - September 2012

The Consumer Price Index for All Urban Consumers (CPI-U) increased 0.6 percent in September on a seasonally adjusted basis, the U.S. Bureau of Labor Statistics reported today. Over the last 12 months, the all items index increased 2.0 percent before seasonal adjustment.

For the second month in a row, the substantial increase in the all items index was mostly the result of an increase in the gasoline index, which rose 7.0 percent in September after increasing 9.0 percent in August. The other major energy indexes increased in September as well.

The food index increased 0.1 percent in September; the index for food at home was unchanged as major grocery store food indexes continue to be mixed. The index for all items less food and energy rose 0.1 percent for the third month in a row. Indexes for shelter, medical care, apparel, and airline fares were among those that increased, while the indexes for used cars and trucks, new vehicles, personal care, and household furnishings and operations all declined.

The 12-month change in the index for all items was 2.0 percent in September, an increase from the August figure of 1.7 percent and the highest since April. The index for all items less food and energy also rose 2.0 percent for the 12 months ending September; the food index has increased 1.6 percent and the energy index has risen 2.3 percent over that span.

Table A. Percent changes in CPI for All Urban Consumers (CPI-U): U.S. city average

	Seasonally adjusted changes from preceding month							Un- adjusted 12-mos. ended Sep. 2012
	Mar. 2012	Apr. 2012	May 2012	June 2012	July 2012	Aug. 2012	Sep. 2012	
All items.....	.3	.0	-.3	.0	.0	.6	.6	2.0
Food.....	.2	.2	.0	.2	.1	.2	.1	1.6
Food at home.....	.1	.2	-.1	.1	.0	.1	.0	.8
Food away from home (1)...	.2	.3	.2	.2	.2	.3	.2	2.8
Energy.....	.9	-1.7	-4.3	-1.4	-.3	5.6	4.5	2.3
Energy commodities.....	1.7	-2.6	-6.4	-2.3	.2	8.6	6.7	6.4
Gasoline (all types)....	1.7	-2.6	-6.8	-2.0	.3	9.0	7.0	6.8
Fuel oil (1).....	2.7	-1.1	-2.8	-7.9	-.5	4.6	4.1	4.0
Energy services.....	-.4	-.2	-.7	.0	-1.1	.8	.7	-3.8
Electricity.....	-.8	.2	.3	-.5	-1.3	.2	.2	-1.5
Utility (piped) gas service.....	.9	-1.8	-4.1	1.7	-.2	2.8	2.0	-10.7
All items less food and								

energy.....	.2	.2	.2	.2	.1	.1	.1	2.0
Commodities less food and energy commodities....	.2	.2	.2	.2	.0	-.2	-.2	.7
New vehicles.....	.2	.4	.2	.2	-.1	.2	-.1	1.0
Used cars and trucks....	1.3	1.5	1.0	.0	-.5	-.9	-1.4	-1.6
Apparel.....	.5	.4	.4	.5	.2	-.5	.3	2.7
Medical care commodities (1).....	.4	.0	.0	.1	.5	.3	-.1	3.3
Services less energy services.....	.2	.3	.2	.2	.1	.1	.3	2.5
Shelter.....	.2	.2	.2	.1	.1	.2	.2	2.2
Transportation services	.3	.5	.3	-.2	-.2	.0	.5	1.5
Medical care services...	.3	.4	.5	.7	.3	.2	.4	4.4

1 Not seasonally adjusted.

Consumer Price Index Data for September 2012

Food

The food index rose 0.1 percent in September after a 0.2 percent increase in August. The index for food at home was unchanged in September after rising 0.1 percent the previous month. Among major grocery store food groups, the largest increase in September was in the index for nonalcoholic beverages, which rose 0.9 percent in September after declining in July and August. The indexes for dairy and related products and for other food at home also rose in September. The largest decline was for the index for meats, poultry, fish, and eggs, which fell 0.6 percent after rising in each of the three previous months. Also declining was the index for fruits and vegetables, which fell 0.4 percent as the fresh fruits index declined 0.9 percent. The index for cereals and bakery products fell 0.1 percent. The index for food at home has risen 0.8 percent over the last 12 months, the smallest figure since August 2010. The index for food away from home increased 0.2 percent in September and has risen 2.8 percent over the last 12 months.

Energy

The energy index rose 4.5 percent in September after a 5.6 percent increase in August. The gasoline index increased 7.0 percent in September, its third straight increase. (Before seasonal adjustment, gasoline prices increased 4.1 percent in September.) Other energy indexes had increases similar to August: The fuel oil index increased 4.1 percent in September after rising 4.6 percent in August; the index for natural gas rose 2.0 percent in September following a 2.8 percent August increase; and the electricity index repeated its August increase of 0.2 percent. Over the last 12 months, the energy index has risen 2.3 percent (the August 12-month change was a 0.6 percent decline). The gasoline index has risen 6.8 percent over the last 12 months, and the index for fuel oil has increased 4.0 percent. In contrast, the index for natural gas has fallen 10.7 percent and the electricity index has declined 1.5 percent.

All items less food and energy

The index for all items less food and energy increased 0.1 percent in September, the same increase as in July and August. The index for shelter repeated its August increase of 0.2 percent, with the rent index rising 0.3 percent and the index for owners' equivalent rent increasing 0.2 percent. The medical care index rose 0.3 percent in September, with the hospital services index rising 0.6 percent. The index for airline fares rose 1.4 percent in September after declining in each of the three previous months. The apparel index turned up in September, rising 0.3 percent after declining 0.5 percent in August. Similarly, the tobacco index rose 0.2 percent in September after an August decline. In contrast to these increases, the index for used cars and trucks posted its largest decline since February 2009, falling 1.4 percent. The index for new vehicles turned down in September, decreasing 0.1 percent after increasing 0.2 percent in August. The indexes for household furnishings and operations and personal care also declined in September.

The index for all items less food and energy has risen 2.0 percent over the last 12 months, a slight increase from the August figure of 1.9 percent. The index for medical care has risen 4.1 percent over

that span, the apparel index has increased 2.7 percent and the shelter index rose 2.2 percent. The index for airline fares declined 2.6 percent over the last 12 months and the index for used cars and trucks fell 1.6 percent.

Not seasonally adjusted CPI measures

The Consumer Price Index for All Urban Consumers (CPI-U) increased 2.0 percent over the last 12 months to an index level of 231.407 (1982-84=100). For the month, the index increased 0.4 percent prior to seasonal adjustment.

The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) increased 2.0 percent over the last 12 months to an index level of 228.184 (1982-84=100). For the month, the index increased 0.5 percent prior to seasonal adjustment.

The Chained Consumer Price Index for All Urban Consumers (C-CPI-U) increased 1.7 percent over the last 12 months. For the month, the index increased 0.4 percent on a not seasonally adjusted basis. Please note that the indexes for the post-2010 period are subject to revision.

The Consumer Price Index for October 2012 is scheduled to be released on Thursday, November 15, 2012, at 8:30 a.m. (EST).

Facilities for Sensory Impaired

Information from this release will be made available to sensory impaired individuals upon request. Voice phone: 202-691-5200, Federal Relay Services: 1-800-877-8339.

Brief Explanation of the CPI

The Consumer Price Index (CPI) is a measure of the average change in prices over time of goods and services purchased by households. The Bureau of Labor Statistics publishes CPIs for two population groups: (1) the CPI for Urban Wage Earners and Clerical Workers (CPI-W), which covers households of wage earners and clerical workers that comprise approximately 29 percent of the total population and (2) the CPI for All Urban Consumers (CPI-U) and the Chained CPI for All Urban Consumers (C-CPI-U), which cover approximately 88 percent of the total population and include in addition to wage earners and clerical worker households, groups such as professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, and retirees and others not in the labor force.

The CPIs are based on prices of food, clothing, shelter, and fuels, transportation fares, charges for doctors' and dentists' services, drugs, and other goods and services that people buy for day-to-day living. Prices are collected each month in 87 urban areas across the

country from about 4,000 housing units and approximately 26,000 retail establishments—department stores, supermarkets, hospitals, filling stations, and other types of stores and service establishments. All taxes directly associated with the purchase and use of items are included in the index. Prices of fuels and a few other items are obtained every month in all 87 locations. Prices of most other commodities and services are collected every month in the three largest geographic areas and every other month in other areas. Prices of most goods and services are obtained by personal visits or telephone calls of the Bureau's trained representatives.

In calculating the index, price changes for the various items in each location are averaged together with weights, which represent their importance in the spending of the appropriate population group. Local data are then combined to obtain a U.S. city average. For the CPI-U and CPI-W separate indexes are also published by size of city, by region of the country, for cross-classifications of regions and population-size classes, and for 27 local areas. Area indexes do not measure differences in the level of prices among cities; they only measure the average change in prices for each area since the base period. For the C-CPI-U data are issued only at the national level. It is important to note that the CPI-U and CPI-W are considered final when released, but the C-CPI-U is issued in preliminary form and subject to two annual revisions.

The index measures price change from a designed reference date. For the CPI-U and the CPI-W the reference base is 1982-84 equals 100. The reference base for the C-CPI-U is December 1999 equals 100. An increase of 16.5 percent from the reference base, for example, is shown as 116.500. This change can also be expressed in dollars as follows: the price of a base period market basket of goods and services in the CPI has risen from \$10 in 1982-84 to \$11.65.

For further details visit the CPI home page on the Internet at <http://www.bls.gov/cpi/> or contact our CPI Information and Analysis Section on (202) 691-7000.

Note on Sampling Error in the Consumer Price Index

The CPI is a statistical estimate that is subject to sampling error because it is based upon a sample of retail prices and not the complete universe of all prices. BLS calculates and publishes estimates of the 1-month, 2-month, 6-month and 12-month percent change standard errors annually, for the CPI-U. These standard error estimates can be used to construct confidence intervals for hypothesis testing. For example, the estimated standard error of the 1 month percent change is 0.03 percent for the U.S. All Items Consumer Price Index. This means that if we repeatedly sample from the universe of all retail prices using the same methodology, and estimate a percentage change for each sample, then 95% of these estimates would be within 0.06 percent of the 1 month percentage change based on all retail prices. For example, for a 1-month change of 0.2 percent in the All Items CPI for All Urban Consumers, we are 95 percent confident that the actual percent change based on all retail prices would fall between 0.14 and 0.26 percent. For the latest data, including information on how to use the estimates of standard error, see "Variance Estimates for Price Changes in the Consumer Price Index, January-December 2011". These data are available on the CPI home page (<http://www.bls.gov/cpi/>), or by using the following link <http://www.bls.gov/cpi/cpivar2011.pdf>

Calculating Index Changes

Movements of the indexes from one month to another are usually expressed as percent changes rather than changes in index points, because index point changes are affected by the level of the index in relation to its base period while percent changes are not. The example below illustrates the computation of index point and percent changes.

Percent changes for 3-month and 6-month periods are expressed as annual rates and are computed according to the standard formula for compound growth rates. These data indicate what the percent change would be if the current rate were maintained for a 12-month period.

Index Point Change

CPI
202.416

Less previous index
201.800
Equals index point change
.616

Percent Change

Index point difference
.616
Divided by the previous index
201.800
Equals
0.003
Results multiplied by one hundred
 0.003×100
Equals percent change
0.3

Regions Defined

The states in the four regions are listed below.

The Northeast--Connecticut, Maine, Massachusetts, New Hampshire, New York, New Jersey, Pennsylvania, Rhode Island, and Vermont.
The Midwest--Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.
The South--Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia, and the District of Columbia.
The West--Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

A Note on Seasonally Adjusted and Unadjusted Data

Because price data are used for different purposes by different groups, the Bureau of Labor Statistics publishes seasonally adjusted as well as unadjusted changes each month.

For analyzing general price trends in the economy, seasonally adjusted changes are usually preferred since they eliminate the effect of changes that normally occur at the same time and in about the same magnitude every year--such as price movements resulting from changing climatic conditions, production cycles, model changeovers, holidays, and sales.

The unadjusted data are of primary interest to consumers concerned about the prices they actually pay. Unadjusted data also are used extensively for escalation purposes. Many collective bargaining contract agreements and pension plans, for example, tie compensation changes to the Consumer Price Index before adjustment for seasonal variation.

Seasonal factors used in computing the seasonally adjusted indexes are derived by the X-12-ARIMA Seasonal Adjustment Method. Seasonally adjusted indexes and seasonal factors are computed annually. Each year, the last 5 years of seasonally adjusted data are revised. Data from January 2007 through December 2011 were replaced in January 2012. Exceptions to the usual revision schedule were: the updated seasonal data at the end of 1977 replaced data from 1967 through 1977; and, in January 2002, dependently seasonally adjusted series were revised for January 1987-December 2001 as a result of a change in the aggregation weights for dependently adjusted series. For further information, please see "Aggregation of Dependently Adjusted Seasonally Adjusted Series," in the October 2001 issue of the CPI Detailed Report.

Effective with the publication of data from January 2006 through December 2010 in January 2011, the Video and audio series and the Information technology, hardware and services series were changed from independently adjusted to dependently adjusted. This resulted in an

increase in the number of seasonal components used in deriving seasonal movement of the All items and 54 other lower level aggregations, from 73 for the publication of January 1998 through December 2005 data to 82 for the publication of seasonally adjusted data for January 2006 and later. Each year the seasonal status of every series is reevaluated based upon certain statistical criteria. If any of the 82 components change their seasonal adjustment status from seasonally adjusted to not seasonally adjusted, not seasonally adjusted data will be used in the aggregation of the dependent series for the last 5 years, but the seasonally adjusted indexes before that period will not be changed. Note: 38 of the 82 components are not seasonally adjusted for 2012.

Seasonally adjusted data, including the all items index levels, are subject to revision for up to five years after their original release. For this reason, BLS advises against the use of these data in escalation agreements.

Effective with the calculation of the seasonal factors for 1990, the Bureau of Labor Statistics has used an enhanced seasonal adjustment procedure called Intervention Analysis Seasonal Adjustment for some CPI series. Intervention Analysis Seasonal Adjustment allows for better estimates of seasonally adjusted data. Extreme values and/or sharp movements which might distort the seasonal pattern are estimated and removed from the data prior to calculation of seasonal factors. Beginning with the calculation of seasonal factors for 1996, X-12-ARIMA software was used for Intervention Analysis Seasonal Adjustment.

For the seasonal factors introduced in January 2012, BLS adjusted 31 series using Intervention Analysis Seasonal Adjustment, including selected food and beverage items, motor fuels, electricity and vehicles. For example, this procedure was used for the Motor fuel series to offset the effects of events such as damage to oil refineries from Hurricane Katrina.

For a complete list of Intervention Analysis Seasonal Adjustment series and explanations, please refer to the article "Intervention Analysis Seasonal Adjustment", located on our website at <http://www.bls.gov/cpi/cpisapage.htm>.

For additional information on seasonal adjustment in the CPI, please write to the Bureau of Labor Statistics, Division of Consumer Prices and Price Indexes, Washington, DC 20212 or contact David Levin at (202) 691-6968, or by e-mail at Levin.David@bls.gov. If you have general questions about the CPI, please call our information staff at (202) 691-7000.

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- [Table 2. Consumer Price Index for All Urban Consumers \(CPI-U\): U. S. city average, by detailed expenditure category](#)
- [Table 3. Consumer Price Index for All Urban Consumers \(CPI-U\): U. S. city average, special aggregate indexes](#)
- [Table 4. Consumer Price Index for All Urban Consumers \(CPI-U\): Selected areas, all items index](#)
- [Table 5. Chained Consumer Price Index for All Urban Consumers \(C-CPI-U\) and the Consumer Price Index for All Urban Consumers \(CPI-U\): U.S. city average, all items index](#)
- [Table 6. Consumer Price Index for All Urban Consumers \(CPI-U\): U.S. city average, by expenditure category, 1-month analysis table](#)
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