Economic News Release

Consumer Price Index Summary

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Consumer Price Index - March 2012

The Consumer Price Index for All Urban Consumers (CPI-U) increased 0.3 percent in March on a seasonally adjusted basis, the U.S. Bureau of Labor Statistics reported today. Over the last 12 months, the all items index increased 2.7 percent before seasonal adjustment.

The indexes for food, energy, and all items less food and energy all increased in March. The gasoline index continued to rise, more than offsetting a decline in the household energy index and leading to a 0.9 percent increase in the energy index. The food index rose 0.2 percent as the index for meats, poultry, fish, and eggs increased notably.

The index for all items less food and energy rose 0.2 percent in March after increasing 0.1 percent in February. Most of the major components increased in March, with the indexes for shelter and used cars and trucks accounting for about half the total increase for all items less food and energy. The indexes for medical care, apparel, recreation, new vehicles, and airline fares increased as well, while the indexes for tobacco and household furnishings and operations were among the few to decline in March.

The all items index has risen 2.7 percent over the last 12 months, a decline from last month's 2.9 percent figure. The energy index has risen 4.6 percent and the food index has increased 3.3 percent; both increases are smaller than last month. In contrast, the 12-month change in the index for all items less food and energy, which was 2.2 percent last month, edged up to 2.3 percent in March.

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

	Seasonally adjusted changes from preceding month		Un-

	Sep. 2011	Oct. 2011	Nov. 2011	Dec. 2011	Jan. 2012	Feb. 2012	Mar. 2012	adjusted 12-mos. ended Mar. 2012
All items	.3	.0	.1	.0	.2	.4	.3	2.7
Food	.4	.2	.1	.2	.2	.0	.2	3.3
Food at home	.6	.2	.0	.2	.0	.0	.1	3.6
Food away from home (1)	.2	.2	.3	.2	.4	.1	.2	3.0
Energy	1.5	-1.8	-.5	-1.3	.2	3.2	.9	4.6
Energy commodities	1.9	-2.6	-.6	-2.0	.9	5.7	1.7	8.7
Gasoline (all types)	2.0	-2.8	-.9	-2.1	.9	6.0	1.7	9.0
Fuel oil (1)	-.7	-.5	2.7	-1.0	1.4	2.8	2.7	5.3
Energy services	.8	-.4	-.4	-.2	-.8	-.8	-.4	-1.8
Electricity	.6	.2	.2	-.1	.0	.0	-.8	.6
Utility (piped) gas service	1.5	-2.6	-2.6	-.6	-2.9	-3.4	.9	-9.1
All items less food and energy	.1	.2	.2	.1	.2	.1	.2	2.3
Commodities less food and energy commodities	-.2	.0	.1	-.1	.2	.1	.2	2.1
New vehicles	-.1	-.2	-.2	-.2	.0	.6	.2	2.5
Used cars and trucks	-.5	-.4	-.4	-.7	-1.0	-.2	1.3	3.2
Apparel	-.7	.4	.5	-.1	.9	-.9	.5	4.9
Medical care commodities (1)	.2	.3	.2	.2	.6	.8	.4	3.3
Services less energy services	.2	.2	.2	.2	.2	.1	.2	2.3
Shelter	.1	.2	.2	.2	.2	.2	.2	2.1
Transportation services	.4	.2	.0	.1	.0	-.2	.3	1.4
Medical care services	.2	.5	.4	.4	.2	.0	.3	3.5

1 Not seasonally adjusted.

Consumer Price Index Data for March 2012

Food

The food index rose 0.2 percent in March after being unchanged in February. The index for food at home, unchanged in February, rose 0.1 percent in March. The index for meats, poultry, fish, and eggs rose 0.8 percent, its largest increase since May. The index for other food at home also rose in March, increasing 0.3 percent. The other four major grocery store food groups declined. The fruits and vegetables index fell 0.4 percent, its sixth consecutive decline, as the fresh vegetables index fell 1.6 percent. The index for cereals and bakery products fell 0.2 percent, as did the index for nonalcoholic beverages. The index for dairy and related products fell 0.1 percent, its fourth decline in five months. The food at home index has risen 3.6 percent over the last 12 months; this was its smallest 12-month change since last March. The fruits and vegetables index has declined 3.9 percent over that period, its largest 12-month decline since November 2009. The other five major grocery store food group indexes have increased over the past year, with the dairy group posting the largest increase at 6.3 percent. The index for food away from home rose 0.2 percent in March after a 0.1 percent increase in February and has risen 3.0 percent over the last 12 months.

Energy

The energy index, which rose 3.2 percent in February, increased 0.9 percent in March. The gasoline index rose 1.7 percent following its 6.0 percent February increase. (Before seasonal adjustment, gasoline prices increased 8.1 percent in March.) The fuel oil index also continued to rise, increasing 2.7 percent in March after rising 2.8 percent in February. In contrast, the index for energy services (comprised of electricity and natural gas) fell 0.4 percent. The natural gas index rose 0.9 percent after declining in each of the previous five months. The electricity index, however, fell 0.8 percent, its largest decline since June. Over the last 12 months, the gasoline index has risen 9.0 percent and the fuel oil index has increased 5.3 percent. The electricity index, however, has only increased 0.6 percent and the index for natural gas has declined 9.1 percent.

All items less food and energy

The index for all items less food and energy increased 0.2 percent in March after a 0.1 percent increase in February. The shelter index increased 0.2 percent, the sixth straight such increase, with the indexes for rent and owners' equivalent rent both increasing 0.2 percent. The index for used cars and trucks rose sharply in March, increasing 1.3 percent after declining in each of the previous six months. The medical care index rose 0.3 percent in March, with the index for medical care commodities increasing 0.4 percent and the medical care services index advancing 0.3 percent. The apparel index rose 0.5 percent after declining in February; similarly, the index for recreation rose 0.2 percent after a February decline as the index for recreation services rose 0.4 percent. Other increases in March included the indexes for new vehicles (0.2 percent), airline fares (0.4 percent), and personal care (0.4 percent). In contrast, the index for tobacco fell 0.3 percent in March, and the indexes for household furnishings and operations and for alcoholic beverages both declined 0.2 percent.

The index for all items less food and energy has risen 2.3 percent over the last 12 months. The index for shelter has risen 2.1 percent over the period. The apparel index has risen 4.9 percent, the medical care index has increased 3.5 percent, and the index for new vehicles has risen 2.5 percent.

Not seasonally adjusted CPI measures

The Consumer Price Index for All Urban Consumers (CPI-U) increased 2.7 percent over the last 12 months to an index level of 229.392 (1982-84=100). For the month, the index increased 0.8 percent prior to seasonal adjustment.

The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) increased 2.9 percent over the last 12 months to an index level of 226.304 (1982-84=100). For the month, the index increased 0.9 percent prior to seasonal adjustment.

The Chained Consumer Price Index for All Urban Consumers (C-CPI-U) increased 2.4 percent over the last 12 months. For the month, the index increased 0.6 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 April 2012 is scheduled to be released on Tuesday, May 15, 2012, at 8:30 a.m. (EDT).

Redesigning the Consumer Price Index (CPI) Press Release Tables

The format of the tables contained in the CPI news release changed beginning with this CPI news release for March, 2012. News release tables are part of the news release pdf and html files, and are available independently in html format. The new tables are also available in XLS format. In addition, the BLS will begin issuing monthly companion XLS files, which will contain additional index level and CPI-W information.

These tables were made available for public comment during October 2011. In response to the public comments, the BLS will issue XLS files each month, as companions to the news release. There will be CPI-U and CPI-W files, and in addition to the data contained in the news release tables, the Excel files will contain index values.

In August 2009, the Bureau of Labor Statistics (BLS) restructured the text of the CPI news release to focus on the price movements of three broad expenditure categories, namely Food, Energy, and All items less food and energy. Table A within the CPI news release text was also updated in August 2009 to reflect this new structure. Before August 2009, the text of the CPI news release had focused on eight CPI `major groups' (Food and beverages; Housing; Apparel; Transportation; Medical care; Recreation; Education and communication; and Other goods and services).

While the text of the CPI news release was restructured in 2009, seven additional CPI news release tables continued to be published using the eight major groups. BLS has redesigned these news release tables, to reflect the focus on Food, Energy, and All items less food and energy. Within these three broad categories, CPI item series are further divided into commodities and services.

Beyond the redesign in the structure of the CPI news release tables, several other improvements to these tables have been made.

The new Table 1 gives a summary of the index series which typically contribute to changes in the Consumer Price Index for All Urban Consumers (CPI-U).

The new Table 2 shows the full publication stub using the new structure for the CPI-U, including 11 new items series that were created to augment the redesign in the publication structure.

Table 3 shows aggregate item series (e.g., Transportation) that do not fall under the Food, Energy, and All items less food and energy structure.

Table 4 shows the All items indexes at the local, regional, and city-size class levels.

Table 5 shows the Chained Consumer Price Index for All Urban Consumers (C-CPI-U), and presents a history of annual percentage changes in the C-CPI-U compared to the CPI-U.

Table 6 focuses on 1-month seasonally adjusted changes in the CPI-U, while table 7 focuses on 12-month not seasonally adjusted changes. Tables 6 and 7 present three additional pieces of data to help users better interpret index changes. First, these tables show the `effect' each item has on the price change for All items. For example, if the effect of food is 0.4, and the index for All items increased 1.2 percent, it can be said that increases in food prices accounted for

0.4 / 1.2, or 33.3 percent, of the increase in overall prices for that period. Said another way, had food prices been unchanged, the All items index only would have increased 0.8 percent (or 1.2 percent for All items, minus the 0.4 effect for Food). Effects can be negative as well. For example, if the effect of food was a negative 0.1, and the All items index rose 0.5 percent, the All items index actually would have been 0.1 percent higher (or 0.6 percent) had food prices been unchanged.

Second, standard errors for percent changes are shown on tables 6 and 7. Confidence intervals for statistics can be created using standard errors; e.g., roughly 95 percent confidence intervals can be constructed using two standard errors. For example, if an item increased 3.7 percent, and its standard error was 0.6 percent, the 95 percent confidence interval for that price change can be said to be 3.7 percent plus or minus two standard errors, or 3.7 percent plus or minus 1.2 percent.

Finally, each item series in tables 6 and 7 show the last time that item had a price change as large (or as small) as the percent change published that period. For example, if bananas rose 3.7 percent, and that was its largest increase since November 2007, that would be noted in the new tables.

In addition, most of the previous tables showed the `relative importance', or weight, of each item category as of the previous December. The relative importance columns in the new tables are improved in that they are updated monthly to reflect the change in relative prices over time.

Finally, there are no longer any news release tables that focus on the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). That said, the CPI-W All items index level and percent changes will still be noted in the text of the news release, and a companion XLS file with CPI-W information will be available.

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
0.003x100
Equals percent change
0.3

Regions Defined

The states in the four regions are shown 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.

- Table 1. Consumer Price Index for All Urban Consumers (CPI-U): U. S. City Average, by expenditure category
- Table 2. Consumer Price Index for All Urban Consumers (CPI-U): U. S. City Average, by expenditure category
- Table 3. Consumer Price Index for All Urban Consumers (CPI-U): U. S. City Average, by expenditure category
- 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
- Table 7. Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, by expenditure category, 12-month analysis table
- HTML version of the entire news release