



FOCUS on Prices and Spending

Consumer Price Index: Fourth Quarter 2010

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Current Price Topics

The So-called "Core" Index: History and Uses of the Index for All Items Less Food and Energy

The Consumer Price Index is, in fact, a large family of indexes with thousands of indexes published each month. The broadest measure of inflation, called the All items CPI, includes all goods and services that consumers purchase. It is the "All items" CPI that is used in Social Security cost of living adjustments (COLAs), and to adjust federal income tax brackets. Besides the All items index, the Bureau of Labor Statistics (BLS) publishes CPIs for many categories of goods, including eight major groups and hundreds of narrower categories of goods and services. In addition, the CPI also publishes many "special aggregates." These include the energy index, indexes for commodities and services, and a number of indexes that exclude particular categories, such as all items less shelter and all items less medical care. These special aggregates are not tied to any legislation or used to adjust official payments.¹

One of these special aggregates, the CPI for all items less food and energy, probably receives more attention than any other consumer price index. Indeed, it gets so much attention that some people confuse it with the All items CPI,

and wrongly think that the CPI itself generally excludes food and energy. This article briefly explains what the index for all items less food and energy is and what it isn't, examines its history, and looks at its behavior relative to other official CPI indexes.

It is natural to ask why an index excluding food and energy, two categories of items fundamental to the market basket of virtually all consumers, would be of interest. The answer lies in the value of such an index in analyzing the causes and nature of inflation. Food and especially energy have been more volatile in recent years than almost everything else in the CPI, and their sharp short-term movements up and down can dominate the movement of the All items index, obscuring longer term underlying trends or important changes in other categories. Additionally, food and energy prices are more subject to significant "shocks" than prices of other goods and services. Inflation due largely to higher food or energy prices might have different policy implications than broader inflation.

The index for all items less food and energy had its inception during an era in which inflation was a major economic problem and policy issue. Although wage and price controls were initiated in 1971 in an attempt to control persistent inflation, the CPI, in 1973, recorded its largest increase since 1947. Re-

ferring to inflation in 1973, the January 1974 Annual Report of the Council of Economic Advisers said:

“There is no simple explanation for this price behavior which was the most extraordinary in almost a generation and which confounded the Council and most other economists alike. The simultaneous upsurge in demand in the United States and in foreign countries, the shortfall in agricultural production of 1972 and early 1973, the decline in the international exchange value of the dollar, the unexpected capacity problems in materials industries, the increases in petroleum prices late in the year as a result of the Arab oil embargo, the shifting character of domestic price controls—all of these tell part of the story of last year’s inflation.”²

Policymakers were grasping to understand inflation and its causes. Clearly food and energy shocks were among the causes of the inflation. Energy prices had increased 17 percent during 1973, and food prices had risen over 20 percent. In 1957, the CPI created an index for all items less food in recognition of the volatility in food prices due to seasonal and weather-related factors. The Cost of Living Council, the body charged with administering wage and price controls, requested an index that excluded energy as well. The index for all items less food and energy was first published in April 1977. A historical series was created extending back to 1957. As it turns out, ex-

cluding food and energy, prices had risen less than 5 percent during 1973.

The index for all items less food and energy is often unofficially referred to as the “core” CPI, a term created by the media and not the Bureau of Labor Statistics. In fact, details of what should be excluded in an index designed to measure this core inflation are not obvious. For example, nonalcoholic beverages are considered part of food in the CPI and are thus excluded from this core index, but alcoholic beverages are not. Food away from home is also excluded from this core index, although it is not a volatile index at all. Other indexes, such as apparel, are relatively volatile but are included in this index for all items less food and energy. Though it gets a lot of attention, this index for all items less food and energy is just one of many indexes that can be considered by analysts and policymakers in evaluating price change.

How has this core index behaved? As could be expected, it has been less volatile than the all items index. Over the long run, however, the increase in the index excluding food and energy has gone up about the same amount as the overall measure that includes food and energy. After 1982 (a recession year that marked the end of a period of high inflation), the similarities have been striking. (See table 1.)

To some degree, this is an intuitive result; energy is an important input in production, and it is to be expected that energy prices

Table 1. Percent change, total and annualized for selected categories, December 1982–December 2010

Category	Total change	Annualized
All items	124.6	2.93
Food	126.4	2.96
Energy	117.7	2.82
All items less food and energy	128.2	2.99

will exert an influence on other prices in the long run. Of course, for various shorter time periods the movement of the indexes may be very different. From December 2001 to July 2008, for example, the all items index rose at a 3.4-percent annual rate, compared with 2.2 percent excluding food and energy, as energy

increased at a 15.1-percent annual rate during that time. (See chart 1.)

The index excluding food and energy did not rise above 3 percent or fall below 1 percent from June 1995 through March 2010; the October 2010 figure of 0.6 percent was the lowest in the history of the index. The 12-month change of the All items index during this same time period rose as high as 5.6 percent and fell as low as -2.1 percent.


In conclusion, the index for all items less food and energy is one of many indexes produced by the CPI that are used for analyzing the nature and source of inflation primarily in the short run. This index is not tied to any laws or used to adjust official payments. It is typically less volatile than the All Items CPI, though it has increased at a similar rate in the long run. 

Chart 1. Twelve-month percent change, All items and all items less food and energy, January 1977–December 2010



SOURCE: U.S. Bureau of Labor Statistics

Current Price Trends
Energy Prices up in 2010;
Consumer Inflation for Most
Other Categories Modest

All items

The All Items Consumer Price Index for All Urban Consumers (CPI-U) increased 1.5 percent in 2010, after increasing 2.7 percent in 2009. In the fourth quarter of 2010, the index increased at a 3.5-percent seasonally adjusted annual rate (SAAR).

Despite a considerable increase in the energy index during the second half of the year, overall price change for the year 2010 was moderate. A historically low increase in the index for all items less food and energy was coupled with a significant increase in energy prices.

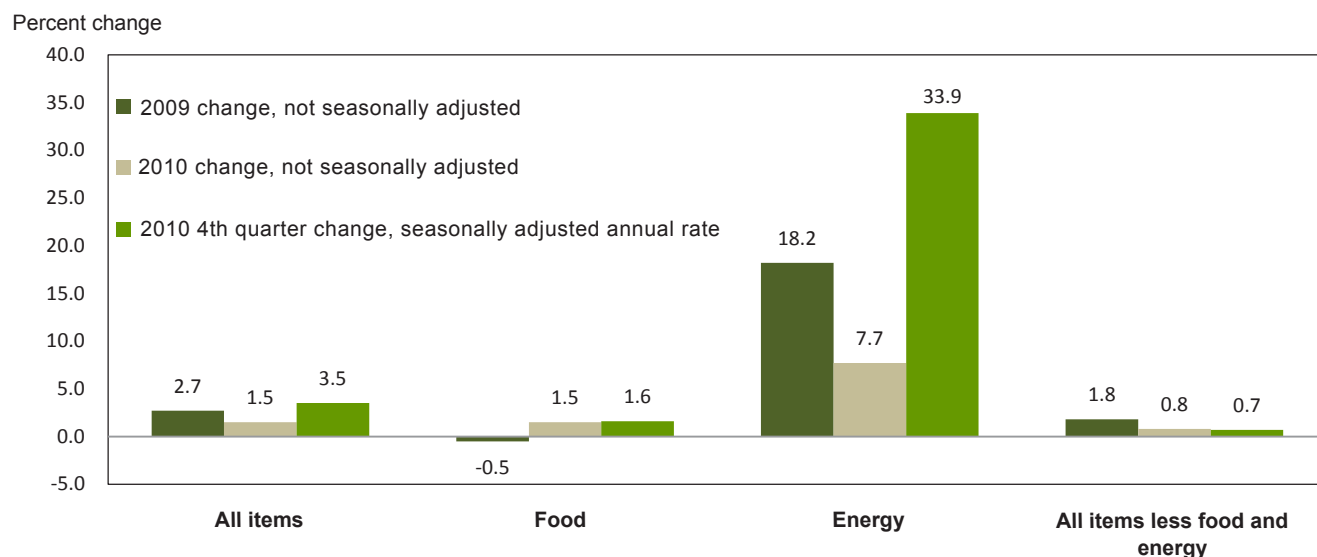
Food price change was in line with overall inflation for 2010. (See chart 2.)

All items less food and energy

The index for all items less food and energy rose 0.8 percent in 2010, after increasing 1.8 percent in 2009. This is the smallest calendar-year change ever recorded in the all items less food and energy index. From 1999 to 2009, this index increased at an annual rate of 2.1 percent, more than double the increase of 2010. The index showed slow growth in the latter three quarters of 2010, after falling in the first quarter.

The driving force behind the deceleration in the index for all items less food and energy was the shelter index, which followed a historically low increase of 0.3 percent in 2009, with a 0.4-percent increase in 2010. Shelter makes

Chart 2. CPI-U percent changes: All items, food, energy, and all items less food and energy for 2009, 2010, and fourth quarter 2010



SOURCE: U.S. Bureau of Labor Statistics

up roughly 40 percent of the all items less food and energy market basket. In the fourth quarter, shelter increased at a 1.2-percent annualized rate, the highest quarterly increase for the year, and a three-fold increase over its third quarter rate.

From 1996 through 2006, the shelter index increased at an annual rate of 3.2 percent. In recent years, shelter inflation has decelerated. The 12-month changes in shelter for 2007, 2008, 2009, and 2010 were 3.1, 1.9, 0.3, and 0.4 percent, respectively. This index showed negative running 12-month changes for the first 10 months of 2010, before turning positive in November. The January 2010 12-month decrease of 0.1 percent was the first negative change in the shelter index since the inception of this index in 1952, and its December 2010 level remains below its July 2009 peak.

Within shelter, owners' equivalent rent increased 0.3 percent, following a 2009 change of 0.7 percent. These past 2 calendar years have produced the smallest increases in the measure of owner-occupied housing prices ever recorded. Rent of primary residence also increased moderately, rising 0.8 percent in 2010, in line with its 2009 change of 0.7 percent. Rent inflation accelerated throughout 2010, culminating in a 2.0-percent SAAR for the fourth quarter.

Lodging away from home declined in the fourth quarter, falling at a 3.6-percent SAAR, but still finished the year at 2.5 percent above

its 2009 value because of a strong second quarter increase. Other lodging away from home including hotels and motels increased 2.0 percent in 2010, and was a major contributing factor behind the fourth quarter decline in lodging away from home, falling at a 5.4-percent rate over that period.

Among the remaining major components of the all items less food and energy index, medical care had the largest increase in 2010, jumping 3.3 percent, similar to its increase of 3.4 percent in 2009. In the fourth quarter, medical care increased at a more moderate 1.9-percent rate. Within medical care, the hospital services index jumped 7.6 percent in 2010, and accounted for about half of the overall increase in medical care.

Several important components of the all items less food and energy index either declined or remained flat in 2010. Apparel, which fell 1.1 percent, suffered its largest drop since 2005. The recreation index dropped 0.8 percent, and services excluding energy services increased 1.3 percent. Both were the smallest December 12-month changes ever recorded for those indexes. The education index increased 3.9 percent, its smallest jump ever, due in part to slow growth in the college tuition and fees index, which increased 4.1 percent in 2010, after jumping 6.0 percent in 2009. Household furnishings and operations declined at a 1.1-percent SAAR in the fourth quarter of 2010, continuing the trend established over the first

9 months of the year. The index finished the year 2.5 percent lower than the index in 2009. Airline fares rose at a 29.0-percent rate in the fourth quarter, after declining at a 4.6-percent rate in the third quarter. All told, airline fares increased 5.8 percent in 2010, after rising 4.3 percent in 2009. The communication index fell 1.1 percent for the year, after declining at a 3.3-percent rate in the fourth quarter. The index was led by falling prices for wireless telephone services, which dropped at a 7.0-percent rate in the fourth quarter and 3.6 percent for the full year.

The rate of inflation for all items less food and energy continued its trend of deceleration in the fourth quarter of 2010, increasing at a 0.7-percent SAAR and matching its rate for the third quarter. During the first half of 2010, the index increased at a 0.6-percent rate. The 1-year change for all items less food and energy has not eclipsed 2 percent since November of 2008.

Energy

The energy index rose 7.7 percent in 2010, after increasing 18.2 percent in 2009. Energy prices trended upward throughout the second half of 2010, after volatile movement in the first two quarters of the year. The index climbed 9.2 percent SAAR in the first quarter of 2010 and declined sharply at a 25.7-percent SAAR in the second quarter. The fourth quarter saw the energy index jump at 33.9-percent clip, following a 24.5-percent rate increase in the third quarter.

Within the energy component, the gasoline index continued its steep upward trend in the fourth quarter of 2010, rising sharply at a 70.1-percent SAAR after increasing at a 48.8-percent rate in the third quarter. The 2010 increase of 13.8 percent was almost double the annualized increase for the preceding 10 years.

Household energy prices crept up 0.8 percent in 2010, after falling 4.9 percent in 2009. The index increased at a 3.5-percent SAAR in the fourth quarter. Both the major components of household energy rose in the fourth quarter, in spite of some volatile movement within those components. Most notably, the fuel oil index surged upward at a 71.2-percent rate for the fourth quarter. For the year, fuel oil prices jumped 16.5 percent, accounting for roughly 90 percent of the increase in the household energy index. The natural gas index fell at an 18.1-percent SAAR in the fourth quarter, after increasing at a 1.8-percent rate in the third quarter. For the year, the natural gas index fell 2.8 percent, after a precipitous 18.1-percent drop in 2009. The electricity index rose 0.7 percent in 2010, following its moderate decrease of 0.5 percent in 2009. The index jumped at a 6.4-percent rate in the fourth quarter of 2010.

Gasoline prices continued their upward trend in 2010, increasing 13.8 percent for the year, after a 53.5-percent increase in 2009. Gas prices dropped at an 18.5-percent rate in the

first half of 2010, but jumped at a 59.1-percent rate during the second half. Gasoline prices are steadily regaining the ground they lost in 2008, when they bottomed out at \$1.74 per gallon in December. Prices now stand at \$3.03 per gallon, 26.8 percent shy of their July 2008 peak. Crude oil prices in 2010 peaked at \$87.51 per barrel in December, their highest recorded price since October 2008.3

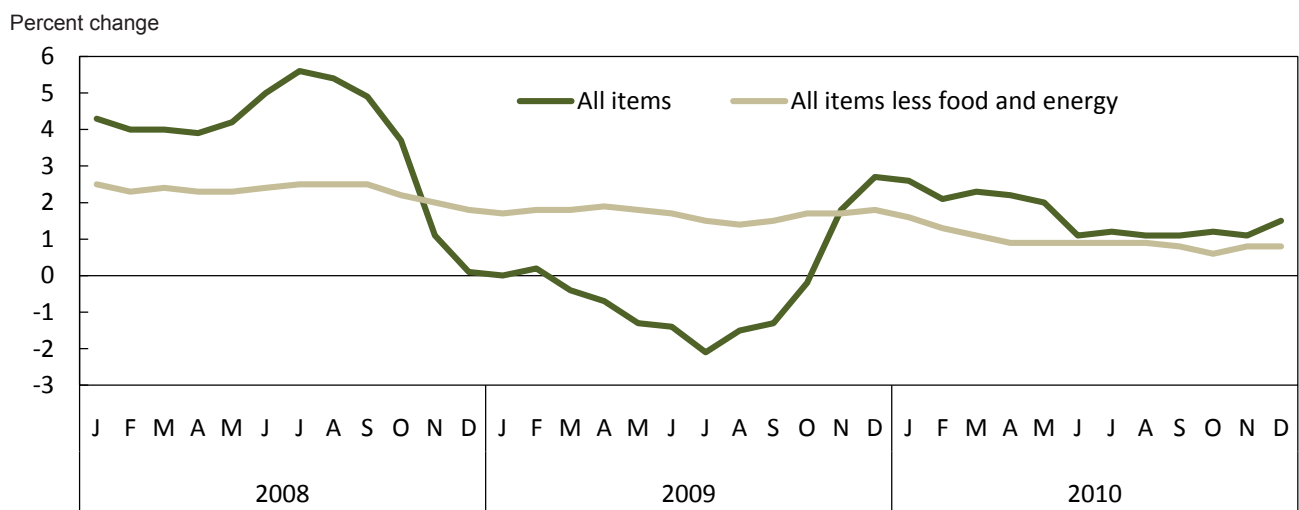
Food

Food price change was in line with overall inflation in 2010, increasing 1.5 percent after a 0.5-percent drop in 2009. The fourth quarter saw food prices jump at a 1.6-percent rate, consistent with its movement over the first 9 months of the year, when the index increased at 1.5-percent rate. Grocery store food prices increased 1.7 percent in 2010, after falling 2.4 percent in 2009. Of the six major grocery store

food groups, the meats, poultry, fish, and eggs group increased the most in 2010, jumping 5.5 percent, its largest increase since 2003. This increase accounted for about three-quarters of the total increase in grocery store prices. Pork products accounted for about a third of the 2010 jump in the meats, poultry, fish and eggs category, as prices for bacon and breakfast sausages rose 13.7 percent and 8.4 percent, respectively.

All other food at home groups increased in 2010, with the exception of cereals and bakery products, which dropped 0.2 percent, and nonalcoholic beverages, which dropped by 1.2 percent. Dairy products increased 3.7 percent in 2010. The fruits and vegetables index showed a 1.4-percent increase for the year, and 3.9 percent in the fourth quarter. (See chart 3.)


Chart 3. Twelve-month percent change, All items and all items less food and energy, January 2008–December 2010



SOURCE: U.S. Bureau of Labor Statistics

Food away from home prices increased 1.3 percent in 2010, following a 1.9-percent increase in 2009. The index showed moderate, yet consistent, increases in each of the four quarters in 2010. Food at employee sites and schools rose 2.5 percent in 2010, but the food away from home index was moved largely by the full service meals and snacks index, which increased 1.3 percent, and the limited service meals and snacks index, which rose 1.0 percent. By itself, the full service meals and snacks index accounted for about half of the food away from home increase.

Price movements described in this text reflect data as released on January 14, 2011. All 12-month and longer percent changes reflect not seasonally adjusted data except as noted. Percent changes covering less than a year are based on seasonally adjusted annual rates, unless otherwise noted. CPI seasonally adjusted indexes and percent changes are subject to annual revision.

Additional information is available from the CPI Information and Analysis section, at cpi_info@bls.gov or (202) 691-7000. 

Notes

¹ See John S. Greenlees and Robert B. McClelland, “Addressing Misconceptions about the Consumer Price Index,” *Monthly Labor Review* (August 2008), pp. 3-19.

² U.S. Council of Economic Advisers, *The Annual Report of the Council of Economic Advisers*, 1974 (Washington D.C., GPO, 1974), p. 65.

³ Energy Information Administration; see http://tonto.eia.doe.gov/dnav/pet/pet_pri_wco_k_w.htm (visited January 14, 2011).