



Focus on Prices and Spending



Consumer Price Index: Second Quarter 2010

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Current Price Topics

Measuring U.S. Inflation Using European Methods

Common international standards for producing economic statistics—such as the measures of inflation—are important for the increasingly integrated world economy. This is particularly true for the 27 countries¹ of the European Union (EU) whose economies now are a single market, and it is even more critical for the 17 EU countries² of the Eurozone that replaced their own monetary units with the euro. Consequently, the EU requires each member country and prospective member country to produce standardized (harmonized in euro-speak) economic statistics. The EU's statistical agency, Eurostat, develops the standards in consultation with the statistical agencies of the EU member states.

*The Harmonized Index of Consumer Prices (HICP)*³ is Eurostat's standard consumer price index. Eurostat chose this name to distinguish the HICP from the old consumer price indexes; many European statistical offices continue to produce their countries' traditional CPIs for historical continuity and for internal purposes, such as adjusting pensions. These statistical offices now also produce HICPs for their respective countries. Eurostat averages⁴ the national HICPs to produce the multinational HICPs, including the *European*

Index of Consumer Prices (EICP), the aggregate HICP for the entire EU. Eurostat also produces average HICPs for other European areas and country groups, such as the Eurozone. Eurostat publishes these HICPs in its monthly press release.⁵ The European Central Bank (ECB), the monetary authority that regulates the euro, is a primary user of the HICP. The ECB uses the HICP to formulate Eurozone monetary policy. Some countries outside of Europe also calculate an HICP for the ECB and for their own use. The U.S. Bureau of Labor Statistics (BLS) has been producing a US-HICP⁶ as an experimental index⁷ since 2006.

The U.S. HICP differs from the official U.S. CPI—in two major respects: population coverage and the treatment of owner-occupied housing. The CPI-U's target population is urban consumers, noninstitutional residents of metropolitan areas and urban places in the United States; their consumption expenditures are the basis for the CPI-U weights. On the other hand, Eurostat specifies that HICP targets a country's total population: rural as well as urban. BLS was able to expand the population coverage for the US-HICP to the total (noninstitutional) U.S. population, because the Consumer Expenditure Survey (CE), which is the source for the CPI weights, covers rural areas. As the CPI does not collect prices in rural areas, the US-HICP uses the price movement of non-metropolitan urban places in each of the four census regions to stand in

for rural price change in each region. (BLS was not able to add the institutional population, which consists largely of residents of prisons and nursing homes; but this population's expenditures are very low, so this probably is not a serious omission.⁸)

The second difference between the U.S. CPI-U and an HICP is in the treatment of owner-occupied housing, which is subject to different conceptual approaches in various price indexes. The US-CPI-U uses a *rental-equivalence* approach, which uses market rents to impute owners' shelter costs. Although this has become a common approach internationally, two other alternatives are used, as well. The *acquisitions* approach regards houses as comparable to other durable goods and uses their purchase price in the index. The other alternative is the *user-cost* approach in which the conceptual objective is to estimate the cost of producing shelter services for the occupant. The Europeans were unable to agree on a conceptual approach for the HICP, and so Eurostat decided that for now their consumer price index would omit owner-occupied housing.

Table 1 compares inflation rates for the 9 years for which we have US-HICP results. Note that, over this period, the US-HICP, which excludes owner-occupied housing, rose more than the official CPI-U, which includes this housing. Both U.S. series show that the United States has experienced greater price volatility than Europe, particularly in the last 4 years. The great U.S. price volatility is largely attribut-

able to differences in the pricing and usage of motor fuel. The motor fuel component has more weight⁹ in the United States, reflecting its much greater usage. At the same time, motor fuel's percent price change is smaller in Europe where the consumption tax is a larger portion of fuel's price to consumers. 

Current Price Trends

All Items Less Food and Energy Pushes Retail Inflation

All items

The all items Consumer Price Index for All Urban Consumers (CPI-U) increased at a 1.5-percent seasonally adjusted annual rate (SAAR) during the second quarter of 2011. (See chart 1.) For the first 6 months of 2011, the index rose at a 3.8-percent SAAR. This compares with an increase of 1.5 percent in 2010.

Decelerations in the energy and food indexes offset an acceleration in the index for all items less food and energy, leaving all items increasing at a slower pace than that of the first quarter of 2011. The indexes for energy, food and all items less food and energy all rose in 2010 and have increased more rapidly so far in 2011, with the index for all items rising at more than double the pace of its 2010 increase.

Energy

Energy declined at a 12.5-percent SAAR in

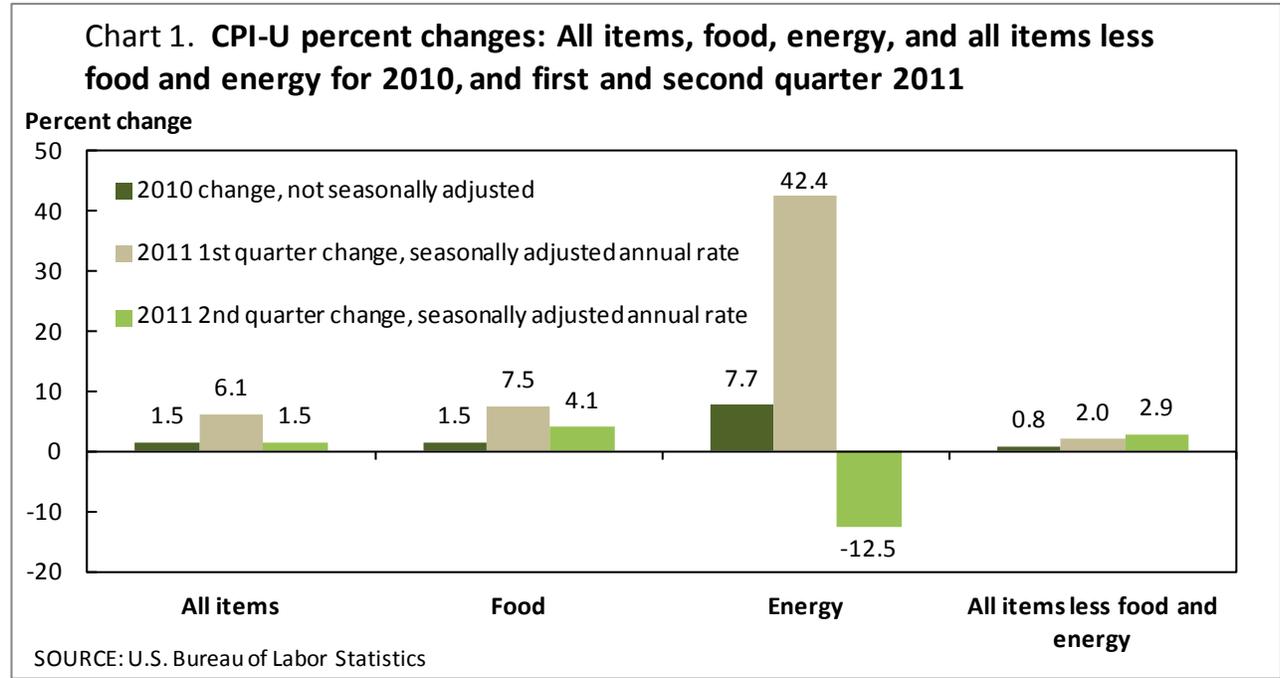
the second quarter of 2011 after rising at a 42.4-percent rate in the first quarter. For the first 6 months of 2011, the energy index has climbed at an 11.6-percent SAAR, following a

7.7-percent increase in all of 2010. Within the energy component, the gasoline index fell at a 20.5-percent SAAR in the second quarter of 2011, after advancing at a rate of 71.2 percent

Table 1. The HICP; annual change from previous year and 9-year change

Year	Eurozone (17 countries)	European Union (EU) (27 countries)	US-HICP	CPI-U
2002	2.3	2.1	2.2	1.6
2003	2.1	2.0	2.3	2.3
2004	2.2	2.0	2.8	2.7
2005	2.2	2.2	3.9	3.4
2006	2.2	2.2	3.2	3.2
2007	2.1	2.3	2.6	2.8
2008	3.3	3.7	4.4	3.8
2009	0.3	1.0	-0.9	-0.4
2010	1.6	2.1	2.5	1.6
2001–2010	19.8	21.4	24.8	23.1

NOTE: All figures are calculated from annual averages, except the 2002 and 2001–2010. The US-HICP figures are calculated from December 2001.
SOURCE: U.S. Bureau of Labor Statistics.



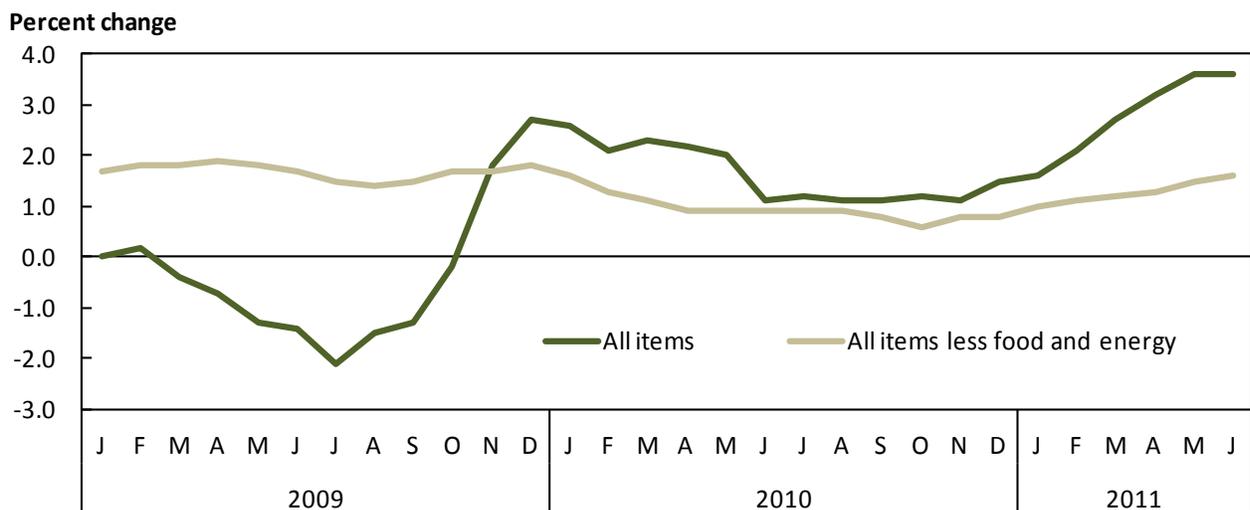
during the first quarter. The gasoline index increased 13.8 percent in 2010.

The household energy index also turned down in the second quarter of 2011, slipping 0.1 SAAR, after rising at a 7.2-percent rate in the first quarter. The electricity index was the major cause of the downturn, falling at a 2.2-percent rate in the second quarter following a 2.7-percent SAAR increase in the first quarter. The natural gas index increased at an 8.0-percent SAAR in the second quarter, after rising at a 3.3-percent rate in the first quarter of 2011. The index for fuel oil significantly slowed its rate of increase to 0.3 percent in the second quarter of 2011, from a 106.9-percent rate in the first quarter. For the first half of 2011, the household energy index

climbed at a 3.5-percent SAAR. All three of its major components contributed to the move, with the fuel oil index increasing the fastest, at a rate of 44.1 percent. The natural gas index (5.6-percent SAAR) and the electricity index (0.2-percent SAAR) also contributed positively to the household energy increase during the first half of 2011.

Crude oil prices continued to be volatile during the second quarter of 2011, peaking at \$116.53 per barrel in late April.¹⁰ Correspondingly, gasoline prices have risen, increasing 35.6 percent from June 2010 to June 2011. The April 2011 peak in crude oil prices remains below the July 2008 peak of \$134 a barrel. Similarly, gasoline prices remain below their 2008 peak so far this year.

Chart 2. Twelve-month percent change, all items and all items less food and energy, January 2009–June 2011



SOURCE: U.S. Bureau of Labor Statistics

Food

Food prices rose at a 4.1-percent SAAR in the second quarter of 2011, after rising at a 7.5-percent rate in the first quarter. The food index rose 1.5 percent in 2010. The food at home index slowed in the second quarter of 2011 to a 4.7-percent SAAR, after rising at a rate of 11.2 percent in the first quarter. Of the six major food at home groups, only the fruits and vegetables index fell in the second quarter, declining at a 10.2-percent SAAR, after rising at a 23.3-percent rate in the first quarter. Apples (–8.0 percent), oranges (–10.9 percent), lettuce (–48.8 percent), and tomatoes (–63.4 percent) all contributed to the decline in the fruits and vegetables index. The other grocery store food indexes increased in the second quarter. Dairy and related products led the way with a 12.4-percent rate of increase, a modest acceleration from the first quarter SAAR of 8.4 percent. Milk (17.0 percent) and cheese (16.9 percent) each had a major influence on the rise in dairy and related products. Meats, poultry, fish and eggs increased at a 9.0-percent SAAR, a deceleration from the 13.5-percent SAAR posted in the first quarter of 2011. The cereals and bakery products index accelerated in the second quarter, increasing at a 7.1-percent SAAR after posting a 5.7-percent rate of increase in the first quarter. Nonalcoholic beverages and beverage materials (6.3 percent) and other food at home (5.1 percent) both slowed from their first quarter rates of 10.4 percent and 7.1 percent, respectively.

Food away from home rose at 3.2-percent rate in the second quarter, after rising at a 2.8-percent SAAR rate in the first quarter of 2011. The food away from home index has risen 2.3 percent over the past year, almost double the 1.2-percent increase of June 2009 through June 2010.

All items less food and energy

The index for all items less food and energy rose at a 2.9-percent rate in the second quarter of 2011, a slightly faster rate than its 2.0-percent SAAR in the first quarter. (See chart 2.) The shelter index accelerated in the second quarter, rising at a rate of 1.9 percent, after increasing at a 1.3-percent SAAR in the first quarter. Within shelter, rent rose at a 1.7-percent SAAR in the second quarter, after a 1.2-percent rate of increase in the first quarter. Owners' equivalent rent rose at a 1.3-percent SAAR in both quarters of 2011. Lodging away from home advanced at a 25.8-percent rate in the second quarter of 2011, after falling in this year's first quarter.

Several other indexes rose at double digit rates in the second quarter, including new vehicles (10.1 percent), used cars and trucks (16.8 percent), and apparel (11.5 percent). On the other hand, the airline fare index declined at a double-digit rate, falling at a 14.9-percent SAAR during the second quarter of 2011, after increasing at a 28.0-percent in the first quarter. Tobacco also fell in the second quarter, declining at a 0.9-percent rate, after rising at a

1.5-percent rate in the first quarter.

The [household furnishings and operations](#) index increased at a rate of 1.4 percent in the second quarter after a 0.2-percent SAAR in the first quarter of 2011. [Medical care](#), which rose at a 2.9-percent rate in the first quarter, increased at a 3.2-percent SAAR in the second quarter. Subsequent to the first quarter rate rise of 1.8 percent, recreation increased at a 0.8-percent SAAR in the second quarter. In contrast, the [communication](#) index declined, falling at a 1.3-percent SAAR in the second quarter of 2011, after declining at a 1.4-percent rate in the first quarter.

The rate of inflation for [all items less food and energy](#) has picked up in 2011, with a first half SAAR of 2.5 percent. For the 2-year period from June 2009 to June 2011, the index for [all items less food and energy](#) increased at a 1.3-percent annual rate. Over the same period, the heavily weighted [shelter](#) index increased at a rate of 0.2 percent, and [used cars and trucks](#) increased at a 10.5-percent annual rate. Other indexes that offset the shelter index's slow growth during the June 2009 to June

2011 time span included [airline fares](#) (10.3 percent), [tobacco](#) (5.4 percent), [college tuition](#) (5.1 percent), and [new vehicles](#) (2.7 percent).

Not all indexes increased during the June 2009 to June 2011 time span. [Household furnishings and operations](#) fell 1.8 percent per year, while [communication](#) declined 1.0 percent annually. The [recreation](#) index fell at a 0.4-percent rate, as the indexes for [toys, video and audio](#), and [photography](#) all fell over the period.

Price movements described in this text reflect data as released on July 15, 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 The 27 EU countries (the “EMU27”) are Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania; Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

² The Eurozone, formally the European Monetary Union (EMU), currently consists of 17 EU members: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Seven other countries will join the Eurozone in the future. Three European microstates (Monaco, San Marino, and the Vatican City) also use the euro. Three EU countries (Denmark, Sweden, and the United Kingdom) are not part of the Eurozone.

³ For the Eurostat-developed HICP methods, see W. Erwin Diewert, “Harmonized Indexes of Consumer Prices: Their Conceptual Foundations” *Zeitschrift für Volkswirtschaft und Statistik* 2002, vol. 138 (4) 547–637; available in English at www.econ.ubc.ca/diewert/harindex.pdf. Also, see “Annex 1 The Harmonized Indices of Consumer Prices (European Union),” in *The Consumer Price Index: Theory and Practice*, Geneva, International Labour Office, 2004.

⁴ The countries’ weights are derived from their “private domestic consumption expenditures,” a component of gross domestic product (GDP).

⁵ For a recent example, see http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-16052011-BP/EN/2-16052011-BP-EN.PDF.

⁶ See Walter Lane and Mary Lynn Schmidt, “Comparing U.S. and European inflation: the CPI and the HICP,” *Monthly Labor Review*, May 2006, pp. 20–27, available at <http://www.bls.gov/opub/mlr/2006/05/art3full.pdf>.

⁷ Experimental indexes, which are only available by request, are produced outside the CPI production system after the release of each month’s CPI.

⁸ Another probably inconsequential conceptual difference is that the US-HICP uses the “domestic concept” for including expenditures in the weights, which is based on where the expenditures occurred; in contrast, the U.S. CPI uses the “national concept” that depends on who made the expenditures. The domestic concept includes expenditures of foreign visitors to a country but excludes residents’ out-of-country expenditures. The national concept includes all U.S. residents’ consumption expenditures incurred both at home and abroad and excludes expenditures of non-residents. (Expenditures made outside the United States are included in the CPI weights, but no prices—except for a few online prices—are collected from sellers abroad.)

⁹ In the CPI-U, the share of weight for motor fuel is currently about 5.1 percent; and, in the US-HICP, about 6.8 percent. It is not easy to determine the weight shares for the European HICPs; for example, in the German HICP—which has the largest weight among the European HICPs—the weight for fuels and lubricants for personal transport equipment is about 3.6 percent.

¹⁰ Energy Information Administration; see <http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WTOTUSA&f=W>.