

## The experimental consumer price index for elderly Americans (CPI-E): 1982–2007

*Over the 25 years from December 1982 to December 2007, the experimental consumer price index for Americans 62 years of age and older (CPI-E) rose somewhat faster than the CPI-U and the CPI-W, mainly because prices for medical care and shelter, which are weighted more heavily in the CPI-E, increased more rapidly than overall inflation during the period*

Kenneth J. Stewart

The Consumer Price Index (CPI) measures the average change over time in the prices paid by urban consumers for a representative market basket of consumer goods and services. The Bureau of Labor Statistics (BLS) publishes measures of price change for two official population groups. The Consumer Price Index for All Urban Consumers (CPI-U) represents the spending habits of about 87 percent of the population of the United States,<sup>1</sup> and the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), a subset of the CPI-U population, represents about 32 percent of the U.S. population.

As the U.S. population ages, policymakers have become increasingly interested in issues facing older Americans.<sup>2</sup> In 1987, Congress directed BLS to begin calculating a consumer price index for the elderly. In response, BLS developed an experimental consumer price index for Americans 62 years of age and older. Commonly called the CPI-E, the index was reconstructed to 1982; hence, CPI-E data are now available for 25 years, from December 1982 through December 2007.<sup>3</sup>

The experimental CPI-E has moved somewhat differently than the CPI-U and the CPI-W over the last quarter century. From December 1982 to December 2007, the experimental

CPI-E rose 126.5 percent, compared with increases of 115.2 percent for the CPI-U and 110.0 percent for the CPI-W. That translates into average annual increases of 3.3 percent, 3.1 percent, and 3.0 percent for the CPI-E, CPI-U, and CPI-W, respectively.

### Methodological limitations of the CPI-E

Although the CPI-E indicates a higher overall inflation rate for older Americans compared with the CPI-U and the CPI-W, because it is an experimental index, any conclusions drawn from these data should be treated with caution.<sup>4</sup> This section summarizes the various limitations inherent in the methodology used to construct the CPI-E.

The first methodological limitation is that the expenditure weights used in the CPI-E are subject to higher sampling error than those used for the official consumer price indexes. For each CPI population group, the CPI is currently divided into 211 item categories and 38 geographic areas. Each item-area combination is weighted according to its importance in the spending patterns of the respective population. The population of older Americans used in the CPI-E is composed of all urban noninstitutionalized consumer units that meet one of the following three conditions:

Kenneth J. Stewart is an economist in the Division of Consumer Prices and Price Indexes, Bureau of Labor Statistics. E-mail: [stewart.ken@bls.gov](mailto:stewart.ken@bls.gov)

1. Unattached individuals who are at least 62 years of age;
2. Members of families whose reference person (as defined in the Consumer Expenditure Survey) or spouse is at least 62 years of age; or
3. Members of groups of unrelated individuals living together who pool their resources to meet their living expenses and whose reference person is at least 62 years of age.

Approximately 16.1 percent of all consumer units met this definition for older Americans in 2006.<sup>5</sup> Because the number of consumer units used for determining weights in the experimental index was relatively small, expenditure weights used in the construction of the experimental price index have a higher sampling error than those used for the CPI-U and CPI-W.<sup>6</sup>

The second methodological limitation of the CPI-E is that it uses the same geographic areas and the same retail outlets as those used for the CPI-U. Retail outlets are selected for pricing in the CPI-U based on data reported in a survey representing all urban households, and the CPI-E uses the same retail outlet sample. The outlets selected thus might not be representative of the location and types of stores used by the elderly population.

A third methodological limitation is that the items priced for the CPI-E are the same as those priced in the official consumer price indexes. Because the items sampled within selected outlets are determined with probabilities proportionate to total urban (and not elderly) expenditures, the specific items selected for pricing in each outlet may not be representative of the CPI-E population.

Finally, the fourth methodological limitation is that the prices used in the CPI-E are the same as those used in the official indexes. For example, senior citizen discount rates are used in the CPI only in proportion to their use by the urban population as a whole. These discounted prices would presumably be more widespread in an index specifically designed for older Americans.

### Relative behavior of price indexes

Table 1 shows the percent changes in the CPI-E, CPI-U, and CPI-W for selected expenditure categories for each year from 1983 through 2007. Over this 25-year period, the CPI-E for all items rose at an annual average rate of 3.3 percent, compared with increases of 3.1 percent and 3.0 percent for the CPI-U and CPI-W, respectively. (Table 2 shows 25-year averages for the three indexes for more

detailed expenditure categories.)

Price change for each major expenditure group varies by population because the distribution of expenditures within those item categories differs. For example, within the housing major group, the weight for owner-occupied shelter is higher for the CPI-E population than it is for the CPI-U and CPI-W populations. The weight for residential rent, on the other hand, is smaller for the CPI-E population. Table 3 shows the relative weights of selected item categories in the three populations, as of December 2007.<sup>7</sup>

There are several reasons why older Americans faced slightly higher inflation rates over the past 25 years. First, older Americans devote a substantially larger share of their total budgets to medical care. For example, as table 3 shows, the share of expenditures on medical care costs by the CPI-E population is more than double that of the CPI-W population. Medical care inflation increased more rapidly than most other goods and services over the 1983–2007 period. (See table 2.) In fact, medical care inflation outpaced overall inflation in each of those 25 years, with the exception of 1996. A second reason that older Americans experienced higher rates of inflation is that they spend more on shelter relative to the other population groups. (See table 3.) During the 25-year period, costs for shelter have modestly outpaced overall inflation. For these reasons, the medical care and shelter components account for a significant portion of the difference between the higher rate of increase measured for the CPI-E relative to the CPI-U and CPI-W over the period from December 1982 to December 2007.<sup>8</sup>

Other item categories have contributed to the historically higher rate of inflation for the elderly population as well, although to a lesser degree than medical care and shelter. For example, fuel oil prices have outpaced overall inflation during the last quarter century, and the typical older American spends a higher proportion of his or her expenditures on fuel oil than does the average consumer.

Although items such as medical care and shelter caused the overall CPI-E to increase more rapidly than the CPI-U and the CPI-W, some items have had a partially offsetting effect. For example, the CPI-U population spends a larger proportion than the elderly on college tuition, tobacco, and motor fuel. These item categories rose faster than overall inflation over the 25-year period and acted to partially offset the effects of items such as medical care, shelter, and fuel oil.

The differences between the CPI-E and the other two indexes have been declining in recent years. From 1983 to 1993, the CPI-E for all items rose at an average an-

**Table 1. Percent changes for the experimental consumer price index for Americans 62 years of age and older (CPI-E), compared with the official CPI-U and CPI-W, for selected items, December 1982 to December 2007**

Year	All items			Food and beverages			Housing			Apparel			Transportation		
	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W
Average.....	3.3	3.1	3.0	3.1	3.1	3.0	3.3	3.1	3.0	0.6	0.7	0.7	2.8	2.7	2.7
1983.....	3.7	3.8	3.3	2.7	2.7	2.6	3.4	3.5	2.3	3.2	2.9	2.7	3.4	3.9	4.0
1984.....	4.1	3.9	3.6	4.0	3.8	3.6	4.3	4.3	3.3	2.0	2.0	2.0	3.0	3.1	3.2
1985.....	4.1	3.8	3.6	2.7	2.8	2.8	4.4	4.3	4.2	2.9	2.8	3.0	3.3	2.6	2.3
1986.....	1.8	1.1	.6	4.0	3.7	3.7	1.4	1.7	1.7	.6	.9	.8	-5.0	-5.9	-6.5
1987.....	4.5	4.4	4.5	3.6	3.5	3.4	4.0	3.7	3.5	4.8	4.8	4.8	5.7	6.1	6.7
1988.....	4.5	4.4	4.4	5.1	5.1	5.1	4.2	4.0	3.9	5.0	4.7	4.4	2.9	3.0	2.9
1989.....	5.2	4.6	4.5	6.0	5.5	5.5	4.8	3.9	3.9	-2.8	1.0	.8	4.9	4.0	4.0
1990.....	6.6	6.1	6.1	5.4	5.3	5.3	5.0	4.5	4.2	5.0	5.1	5.1	11.1	1.4	1.4
1991.....	3.4	3.1	2.8	2.4	2.5	2.5	3.5	3.4	3.4	3.3	3.4	3.1	-1.4	-1.5	-1.7
1992.....	3.0	2.9	2.9	1.0	1.6	1.6	2.6	2.6	2.6	3.7	1.4	1.6	2.9	3.0	3.0
1993.....	3.1	2.7	2.5	3.0	2.7	2.7	2.8	2.7	2.6	1.5	.9	.7	2.6	2.4	2.0
1994.....	2.7	2.7	2.7	3.2	2.7	2.6	2.2	2.2	2.1	-2.2	-1.6	-1.5	2.8	3.8	4.5
1995.....	2.8	2.5	2.5	2.0	2.1	2.2	3.2	3.0	2.8	.2	.1	.2	1.4	1.5	1.6
1996.....	3.4	3.3	3.3	4.4	4.2	4.2	3.1	2.9	2.9	-7	-2	-2	5.1	4.4	4.2
1997.....	1.8	1.7	1.5	1.5	1.6	1.5	2.5	2.4	2.3	1.5	1.0	.8	-1.1	-1.4	-1.7
1998.....	1.9	1.6	1.6	2.3	2.3	2.1	2.2	2.3	2.2	-7	-7	-4	-1.7	-1.7	-2.0
1999.....	2.8	2.7	2.7	1.9	2.0	2.0	2.4	2.2	2.1	-8	-6	-6	5.7	5.4	5.7
2000.....	3.6	3.4	3.4	2.7	2.8	2.8	4.3	4.3	4.3	-1.6	-1.8	-1.9	4.1	4.1	4.3
2001.....	1.9	1.6	1.3	2.6	2.8	2.8	2.7	2.9	2.9	-3.1	-3.2	-2.8	-3.8	-3.8	-4.2
2002.....	2.6	2.4	2.4	1.4	1.5	1.4	2.6	2.4	2.3	-1.6	-1.8	-1.7	3.8	3.8	3.8
2003.....	2.1	1.9	1.6	3.5	3.5	3.7	2.3	2.2	2.3	-2.1	-2.1	-1.8	.9	.3	-.3
2004.....	3.4	3.3	3.4	2.7	2.6	2.6	3.3	3.0	3.0	-5	-2	-1	6.3	6.5	7.1
2005.....	3.6	3.4	3.5	2.2	2.3	2.2	4.2	4.0	4.2	-8	-1.1	-1.2	4.8	4.8	5.0
2006.....	2.7	2.5	2.4	2.2	2.2	2.1	3.3	3.3	3.2	.6	.9	1.2	1.5	1.6	1.6
2007.....	4.0	4.1	4.3	5.0	4.8	4.9	3.2	3.0	3.1	-6	-3	-4	7.8	8.3	8.9
Year	Medical care			Recreation			Education and communication			Entertainment			Other goods and services		
	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W
Average.....	5.5	5.4	5.4	1.7	1.1	.8	.5	2.0	1.7	3.7	3.5	3.4	4.7	5.1	5.3
1983.....	6.2	6.4	6.5	—	—	—	—	—	—	4.6	4.0	4.0	7.2	7.9	8.0
1984.....	6.1	6.1	6.2	—	—	—	—	—	—	4.7	4.2	4.0	5.2	6.0	5.6
1985.....	6.9	6.8	6.7	—	—	—	—	—	—	3.8	3.1	2.8	5.5	6.3	6.1
1986.....	8.1	7.7	7.6	—	—	—	—	—	—	3.9	3.4	3.5	4.9	5.5	5.3
1987.....	5.3	5.8	6.1	—	—	—	—	—	—	3.7	4.0	3.9	5.3	6.1	6.2
1988.....	7.5	6.9	7.0	—	—	—	—	—	—	4.8	4.6	4.5	6.6	7.0	7.1
1989.....	9.0	8.5	8.3	—	—	—	—	—	—	5.2	5.1	5.1	7.4	8.2	8.6
1990.....	11.3	9.6	9.1	—	—	—	—	—	—	4.6	4.3	3.8	7.2	7.6	7.7
1991.....	8.5	7.9	7.8	—	—	—	—	—	—	4.4	3.9	3.8	7.1	8.0	8.1
1992.....	6.6	6.6	6.8	—	—	—	—	—	—	3.2	2.8	2.7	5.6	6.5	6.4
1993.....	5.7	5.4	5.2	—	—	—	—	—	—	3.2	2.8	2.7	2.2	2.7	1.6
1994.....	5.4	4.9	4.9	—	—	—	—	—	—	2.6	2.3	2.1	4.0	4.2	4.2
1995.....	3.8	3.9	4.0	—	—	—	—	—	—	3.7	3.3	3.1	4.2	4.3	4.1
1996.....	2.7	3.0	3.1	—	—	—	—	—	—	2.2	2.9	3.0	3.4	3.6	3.4
1997.....	2.7	2.8	2.8	—	—	—	—	—	—	1.0	1.4	1.3	5.1	5.2	5.4
1998.....	3.6	3.4	3.3	2.5	1.2	.8	-2	.7	.9	—	—	—	6.6	8.8	11.3
1999.....	3.8	3.7	3.6	1.3	.8	.4	.7	1.6	1.6	—	—	—	4.5	5.1	5.8
2000.....	4.3	4.2	4.2	2.2	1.7	1.4	-6	1.3	1.2	—	—	—	3.9	4.2	4.5
2001.....	5.0	4.7	4.7	2.1	1.5	1.2	2.3	3.2	3.1	—	—	—	4.3	4.5	5.1
2002.....	5.0	5.0	5.2	1.7	1.1	.9	.6	2.2	1.8	—	—	—	2.7	3.3	4.0
2003.....	3.8	3.7	3.7	1.5	1.1	.8	-1.6	1.6	.8	—	—	—	2.2	1.5	1.0

See footnotes at end of table.

**Table 1. Continued—Percent changes for the experimental consumer price index for Americans 62 years of age and older (CPI-E), compared with the official CPI-U and CPI-W, for selected items, December 1982 to December 2007**

Year	Medical care			Recreation			Education and communication			Entertainment			Other goods and services		
	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W	CPI-E	CPI-U	CPI-W
2004.....	4.2	4.2	4.3	1.5	.7	.6	-.5	1.5	.7	—	—	—	2.7	2.5	2.5
2005.....	4.1	4.3	4.4	1.6	1.1	.9	1.1	2.4	1.9	—	—	—	3.2	3.1	3.4
2006.....	3.3	3.6	3.6	1.3	1.0	.9	1.2	2.3	2.0	—	—	—	3.0	3.0	2.8
2007.....	4.9	5.2	5.2	1.1	.8	.6	2.5	3.0	2.6	—	—	—	3.3	3.3	3.9

NOTE: Entertainment was a CPI major group through 1997; the annualized averages for entertainment cover the period from December 1982 to December 1997. Similarly, recreation, as well as education and communication, became major groups in 1998; the annualized averages for recreation and for education and communication cover the period from December 1997 to December 2007. Dashes are shown for years when data were not available.

**Table 2. Average annual percent changes in the CPI-E, CPI-U, and CPI-W for selected item categories, December 1982 to December 2007**

Expenditure group	CPI-E	CPI-U	CPI-W
All items.....	3.3	3.1	3.0
Food and beverages.....	3.1	3.1	3.0
Food at home.....	3.1	3.0	3.0
Food away from home.....	3.1	3.1	3.1
Alcoholic beverages.....	3.0	3.1	3.1
Housing.....	3.3	3.1	3.0
Shelter.....	3.8	3.7	3.6
Rent of primary residence.....	3.7	3.7	3.6
Owners' equivalent rent.....	3.7	3.7	3.6
Apparel.....	.6	.7	.7
Transportation.....	2.8	2.7	2.7
Motor fuel.....	3.7	3.8	3.8
Medical care.....	5.5	5.4	5.4
Medical care commodities.....	4.8	4.6	4.5
Medical care services.....	5.8	5.6	5.6
Recreation.....	1.7	1.1	.8
Education and communication.....	.5	2.0	1.7
College tuition and fees.....	7.0	7.3	7.3
Other goods and services.....	4.7	5.2	5.3
Tobacco and smoking products.....	7.3	7.3	7.3

NOTE: The indexes for recreation and for education and communication were first published in 1998. The annual average numbers cited in this table for these index series cover the period from December 1997 to December 2007. In addition, although owners' equivalent rent was introduced into the CPI-U and CPI-E in 1983, it was not introduced into the CPI-W until 1985. Therefore, the CPI-W annual average percent change cited in this table for owners' equivalent rent covers the period from December 1984 to December 2007.

nual rate of 4.0 percent, while the CPI-U and CPI-W rose 3.7 percent and 3.5 percent, respectively; from 1993 to 2007, the CPI-E increased at an average annual rate of 2.8 percent, while the CPI-U and CPI-W both rose at a 2.6-percent annual rate. (See chart 1 and table 1.) The reduction in the difference between the experimental index and the two official indexes was caused primarily by changes in the relative inflation rates of medical care and shelter compared with overall inflation. Specifically, the gap between medical care and overall inflation has fallen since 1993. Similarly, the difference between the inflation rate for shelter and the overall inflation rate has declined slightly as well.

### The CPI-E and Social Security benefits

Adjustments to Social Security benefits currently are based on changes in the CPI-W.<sup>9</sup> Some policymakers have advocated using the CPI-E to adjust Social Security benefits instead, arguing that the CPI-W, which represents the spending patterns of wage-earner and clerical families, specifically excludes the experience of families whose primary source of income is retirement pensions and Social Security.

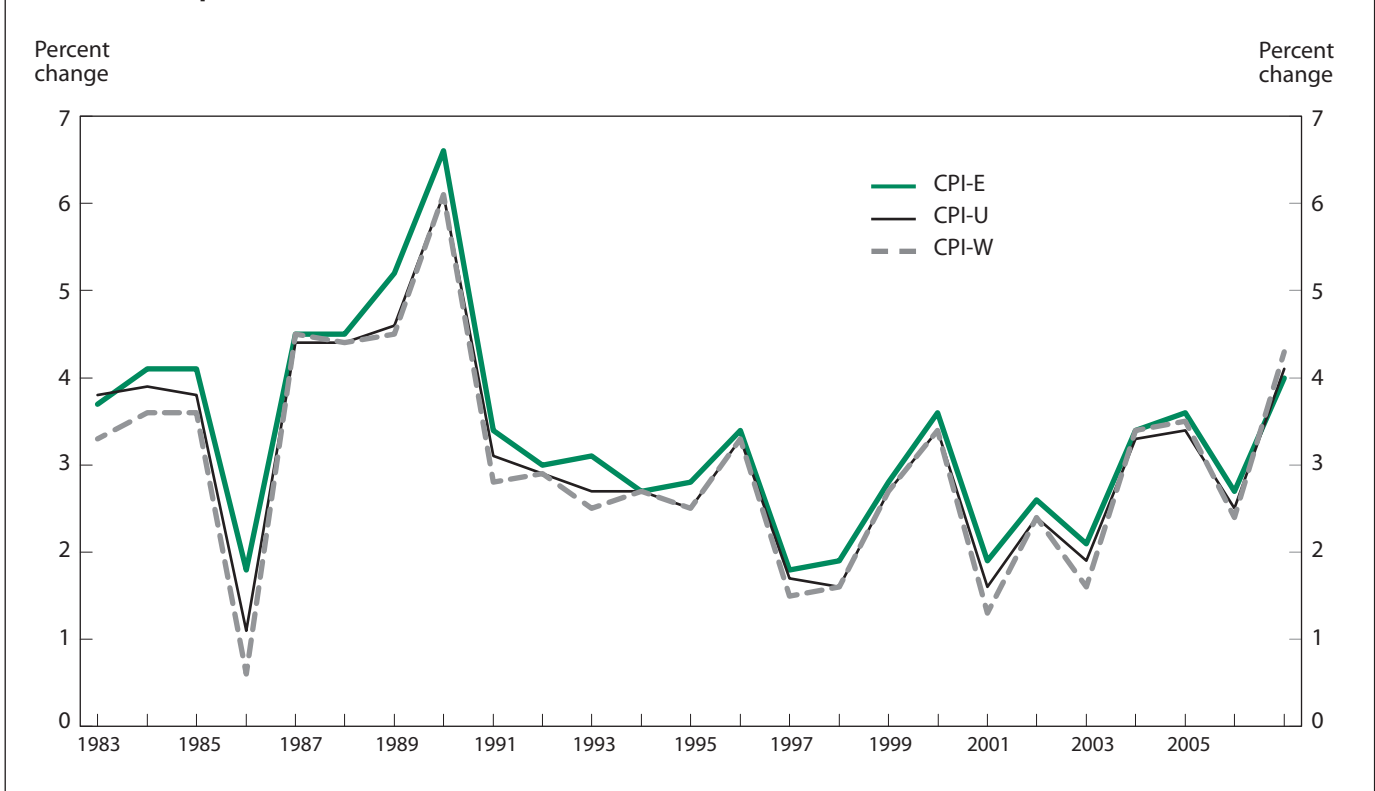
Some researchers have discussed the potential costs and benefits of such a change.<sup>10</sup> Others have noted that the index population defined for the CPI-E and the population

**Table 3. CPI relative importances for the CPI-E, CPI-U, and CPI-W, selected expenditure groups, December 2007**

Expenditure group	CPI-E	CPI-U	CPI-W
All items.....	100.00	100.00	100.00
Food and beverages.....	12.87	15.10	16.56
Food at home.....	7.67	8.01	9.36
Food away from home.....	4.49	5.98	6.19
Alcoholic beverages.....	.72	1.10	1.01
Housing.....	47.51	42.24	39.96
Shelter.....	36.90	32.47	30.22
Rent of primary residence.....	3.99	5.92	7.99
Owners' equivalent rent.....	29.03	23.54	20.46
Fuel oil.....	.48	.29	.29
Apparel.....	2.42	3.57	3.86
Transportation.....	14.99	17.95	20.37
Motor fuel.....	4.10	5.41	6.76
Medical care.....	10.81	6.35	5.27
Medical care commodities.....	2.90	1.43	1.11
Medical care services.....	7.91	4.92	4.16
Recreation.....	4.62	5.38	4.84
Education and communication.....	3.19	5.97	5.51
College tuition and fees.....	.39	1.55	.98
Other goods and services.....	3.59	3.45	3.64
Tobacco and smoking products.....	.55	.74	1.17

NOTE: The CPI relative importances are based on 2003–04 Consumer Expenditure Survey weights.

**Chart 1. The experimental consumer price index for Americans 62 years of age and older (CPI-E), compared with the CPI-U and the CPI-W, December 1982 to December 2007**



receiving Social Security benefits are not equal. Specifically, the population covered by the CPI-E includes persons 62 years of age and older. Many Social Security beneficiaries are younger than 62 years of age and receive benefits

because they are surviving spouses or minor children of covered workers or because they are disabled. The spending patterns of this younger group are excluded in the expenditure weights for the CPI-E. In addition, a substantial

number of persons 62 years of age and older do not receive Social Security benefits, especially those in the 62- to 64-year range. Although these older consumers are included in the CPI-E population, they presumably would be excluded from an index specifically defined to reflect the experience of Social Security pensioners. In short, an index designed specifically to measure price change for Social Security beneficiaries—that is, one that excludes older people not receiving benefits, but includes younger people receiving survivor and disability benefits—might show price movements that differ somewhat from those of the CPI-E.

THE EXPERIMENTAL CONSUMER PRICE INDEX for Americans 62 years of age and older (CPI-E) rose some-

what faster over the last 25 years than the CPI-U and the CPI-W. The medical care and shelter components of the CPI have substantially larger relative weights in the experimental CPI-E compared with the CPI-U and CPI-W, and as a result these items tend to have a larger effect on the CPI-E than on the two official indexes. Because the CPI-W specifically excludes the experience of families whose primary source of income is from retirement pensions, some policymakers have argued that the CPI-E is a more appropriate measure of changes in the cost of living for pensioners. That said, the experimental CPI-E has limitations as an estimate of the inflation rate experienced by older Americans, and any conclusions drawn from these data should be treated with caution. □

## Notes

<sup>1</sup> The Chained CPI for All Urban Consumers (C-CPI-U), which BLS began publishing in August 2002 with data back to January 2000, also represents the urban population. The prices used in the C-CPI-U are the same as those used to produce the CPI-U and CPI-W, but the C-CPI-U uses a different formula and different weights to combine basic indexes.

<sup>2</sup> In 1987, about 12 percent of Americans were 65 years of age and older. By 2050, that number is expected to climb to more than 20 percent. See *2007 Annual Report of the Board of Trustees of the Federal Old-Age and Survivor Insurance and Federal Disability Insurance Trust Funds* (Government Printing Office, May 1, 2007), table V.A2, pp. 78–80.

<sup>3</sup> For an early summary of the experimental consumer price index for the elderly, see Nathan Amble and Ken Stewart, “Experimental price index for elderly consumers,” *Monthly Labor Review*, May 1994, pp. 11–16. Updates were published in the *CPI Detailed Reports* of July 1998, February 2002, July 2004, and December 2005. In April 2006, the Consumer Price Index program posted an article on the BLS Web site entitled, “Experimental Consumer Price Index for Americans 62 Years of Age and Older, 1998–2005”; available on the Internet at <http://146.142.4.22/cpi/cpiexpcpic2005.pdf> (visited March 18, 2008). The experimental consumer price index for elderly Americans (CPI-E) is updated monthly and is available by calling the Office of Prices and Living Conditions at 202–691–7000.

<sup>4</sup> Optimally, when constructing a CPI for older Americans, a sample of geographic areas would be drawn for that specific population. In addition, surveys would be designed to collect expenditure weights for that specific population, a point-of-purchase survey designed for that population would be used to construct the outlet frame, and the distribution of items sampled would be representative of older Americans. Such an index would be costly to construct, however, and Congress has not appropriated the necessary funds to do so.

<sup>5</sup> Derived from 2006 Consumer Expenditure Survey Interview data. For comparison, data from the Current Population Survey show that 14.7 percent of Americans were 62 years of age and older in 2006.

<sup>6</sup> Standard errors for consumer expenditure estimates, including by age group, are published in table 1300, “Age of reference person: annual means, standard errors and coefficient of variation, Consumer Expenditure Survey, 2006,” on the Internet at <http://www.bls.gov/cex/2006/stnderror/age.pdf> (visited March 18, 2008). The definition of “All consumer units” shown in the first column of table 1300 is somewhat similar to the CPI-U population, although it includes rural Americans as well. Similarly, the definition for consumer units “65 years and older” is fairly similar in definition to the CPI-E population. For each item category listed, the standard errors are invariably larger for the 65-and-older age group than they are for all consumer units.

<sup>7</sup> For each population, the “relative importance” of each item stratum in the CPI is defined to be its expenditure weight, updated over time for changes in relative prices.

<sup>8</sup> In addition, the CPI-W used a different method than the CPI-E (and CPI-U) in 1983–84 to measure shelter costs. Specifically, the CPI-W used an asset approach to measure the cost of owner-occupied shelter through 1984, while the CPI-U and CPI-E used the rental equivalence approach from 1983 to the present. In 1983 and 1984, shelter costs as measured in the CPI-W (and using the asset approach) were significantly lower than those measured for either the CPI-U or the CPI-E (both of which used rental equivalence). From December 1982 to December 1984, both the CPI-E and CPI-U rose at a 3.9-percent average annual rate, while the CPI-W rose only 3.4 percent. Essentially the entire difference between the CPI-W and the other two indexes during this 2-year period can be attributed to the differing treatment of shelter.

<sup>9</sup> As measured from the average of the third quarter of one year to the third quarter of the succeeding year, and payable the following January.

<sup>10</sup> See, for example, Bart Hobijn and David Lagakos, “Social Security and the Consumer Price Index for the Elderly,” *Current Issues in Economics and Finance* (Federal Reserve Bank of New York) May 2003; available on the Internet at [http://www.newyorkfed.org/research/current\\_issues/ci9-5.pdf](http://www.newyorkfed.org/research/current_issues/ci9-5.pdf) (visited March 18, 2008).