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CONSUMER PRICE INDEX

Cost-of-Living Concepts and the Housing and Medical Care Components

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The Honorable Henry B. Gonzalez
Ranking Minority Member
Committee on Banking and Financial Services
House of Representatives

Dear Mr. Gonzalez:

This report responds to your request that we use the opinions of recognized experts to (1) determine if a change made in the early 1980s to the housing component in the Consumer Price Index (CPI) made the CPI either more or less suitable for use as a cost-of-living measure and (2) identify the advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely matches a cost-of-living measure. As you requested, we did not try to identify and address all of the policy issues that would be relevant to determining whether the CPI should be moved further toward a cost-of-living index.

We are sending copies of this report to the Secretary of Labor, the Commissioner of Labor Statistics, the Acting Director of the Office of Management and Budget, and other interested parties. Copies will also be made available to others on request.

The major contributors to this report are listed in appendix VII. If you have any questions about this report, please contact me on (202) 512-8676.

Sincerely yours,

L. Nye Stevens
Director, Federal Management
and Workforce Issues

Executive Summary

Purpose

The Consumer Price Index (CPI) is the measure of price changes that was used in fiscal year 1995 to adjust for inflation $441 billion in federal spending and $595 billion of federal tax receipts, thereby affecting the lives of millions of individuals who received federal benefit payments and paid federal taxes. The CPI measures the price of a fixed market basket of goods and services, organized into major components, such as transportation and medical care. Although it is often referred to as a cost-of-living index, the CPI is not designed for this purpose. A comprehensive cost-of-living index does not exist. Members of Congress have questioned the use of the current CPI for adjusting federal benefits and taxes. One outcome has been the Senate Committee on Finance's appointment of an expert commission to study the CPI.

The Ranking Minority Member of the House Committee on Banking and Financial Services, concerned that taxpayers may be negatively affected if the estimation problems of the CPI are not well understood, asked GAO to (1) determine if a change made to the housing component in the early 1980s made the CPI either more or less suitable for use as a cost-of-living measure and (2) identify the advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely matches a cost-of-living measure. GAO surveyed recognized experts to obtain their views on how the change affected the housing component and on the advantages and disadvantages of changing the medical care component. As agreed with the Ranking Minority Member, GAO did not try to identify and address all of the policy issues that would be relevant to determining whether the CPI should be moved further toward a cost-of-living index.

Background

The CPI is a measure of the average change over time in the prices paid by urban consumers for a fixed "market basket" of goods and services that people buy for day-to-day living. However, the CPI does not measure consumers' actual cost of living. When consumers face rising prices, and especially when some prices rise faster than others, consumers tend to alter their purchasing patterns to maintain as high a living standard as possible. Because the CPI holds the market basket constant and does not account for what consumers would pay when they change the amounts they buy or substitute one product for another, it does not measure consumers' cost of living. In addition, the CPI does not represent the overall cost of living because it does not include all goods and services that individuals consume.

An index measuring the cost of living is inherently broader than one focused on consumer expenditures. In theory, a cost-of-living index would include everything that contributes to consumer satisfaction, for example, market goods and services, environmental amenities, and public goods provided from tax revenues. However, the components of an actual cost-of-living index may vary and there is no single, comprehensive measure of the cost of living.

In 1961, the Price Statistics Review Committee of the National Bureau of Economic Research, chaired by George Stigler, recommended modifying the CPI's conceptual framework to represent a cost-of-living index because it was in fact being used in the private sector as a cost-of-living index. The Stigler committee specifically recommended a change in the method used to measure homeownership.[1] The Bureau of Labor Statistics (BLS), which produces the CPI, first changed the measure of the costs of homeownership in 1983. The current approach, which estimates the amount of rent that would be paid for owner-occupied housing were it rented, is known as the rental equivalence method. This approach seeks to measure the costs of consuming housing services over time rather than the value of housing as an asset that might appreciate over time. The latter approach was used before 1983.

The medical care component of the CPI is based only on out-of-pocket medical expenses that consumers pay, including health insurance premiums. The CPI does not include payments by third-party payers.[2] Under a comprehensive cost-of-living concept, all medical care expenses, regardless of the source of payment, would be included in the CPI because consumers receive benefits from the payments.

Results in Brief

According to BLS officials, BLS made the change to the rental equivalence method to improve the measurement of the cost of homeownership while adhering to the CPI's conceptual structure of pricing a fixed market basket of goods and services. It was not done, BLS officials said, to move the CPI toward a cost-of-living index. However, according to 10 experts on the housing measurement whom GAO surveyed, the change also had that

[1]Price Statistics Review Committee, The Price Statistics of the Federal Government: Review, Appraisal, and Recommendations, A Report to the Office of Statistical Standards, Bureau of the Budget (New York: National Bureau of Economic Research, 1961). The Stigler committee was formed under a contract between the Bureau of the Budget—the predecessor of the Office of Management and Budget—and the National Bureau of Economic Research.

[2]Third-party payers can include health insurance, including employer-provided or subsidized insurance, or government-financed health care programs, such as Medicaid or part A of Medicare.

effect. The experts said that the change, because it better measured consumer consumption, made the CPI more suitable for use as a measure of the cost of living.

Nearly all of the experts GAO surveyed agreed that the rental equivalence method adequately addressed issues that had been raised about the method that was replaced. Several experts said that new additional methodological issues had emerged with the use of the rental equivalence method.

Since the 1960s, an increasing portion of medical care costs have been paid by third-party payers, such as employers and governments. Today, about two-thirds of medical care expenses are excluded from the CPI because third parties directly pay for these costs. Including third-party payments in the CPI would move it further toward being a cost-of-living index. However, according to BLS officials, BLS excludes third-party payments from the CPI because BLS constructs the CPI to represent only direct expenditures by consumers and because BLS officials do not believe that adding such payments would make the CPI a clearly better index for its most important federal uses.

Of the 10 medical care measurement experts responding to GAO's structured interview survey, a majority offered advantages and all identified disadvantages to changing the medical care component to more closely match a cost-of-living measure. Advantages cited by the experts tended to focus on improved policymaking, including health-care-specific policies and macroeconomic policies. Disadvantages they cited included, for example, the technical and political feasibility of making the changes and the expense associated with the changes.

The Stigler committee said that the CPI and its uses should match and that a cost-of-living based CPI would better match its uses at that time. GAO believes that there is a fundamental soundness to the principle of the index matching its uses. However, the federal government uses the CPI in a variety of ways, some of which did not exist when the Stigler committee did its work. As a result, it is increasingly difficult to design an index to match its uses, and it is unclear whether these uses would all be better served by changing the medical care component or by some other means of moving toward a cost-of-living index.

GAO's Analysis

Homeownership Change Made the CPI More Suitable as a Cost-of-Living Measure

All of the housing measurement experts GAO surveyed said BLS' change to the rental equivalence method made the CPI more suitable for use as a measure of the cost of living. The experts' comments indicated that the CPI is more suitable because it measures the cost of housing services that are used (rental equivalence method) rather than the cost of buying a house or its value as an asset (asset-price approach). Although the change to the rental equivalence method made the CPI more suitable as a cost-of-living index, BLS officials said that the intention of the change was not to move the CPI toward a cost-of-living measure. Rather, they said the change was intended to improve the measurement of housing costs.

All of the experts reported that, in general, the rental equivalence method adequately addressed the concerns that had been expressed about the use of the asset-price approach. For example, the rental equivalence method measures the value of the use of the house rather than the change in the investment capital of the house. One expert agreed that the concerns with the previous approach were addressed, but noted that the new method still was inaccurate in its representation of homeowners with mortgage payments or those with very low housing costs.

The experts' responses to whether concerns have emerged as a result of using the rental equivalence method were mixed—some identified additional methodological issues, such as difficulties in finding rental units that match the characteristics of owner-occupied units, while other experts did not mention such issues. Of the issues identified, however, none were mentioned by more than two of the experts.

Experts Cited Advantages and Disadvantages of Changing Measurement of Medical Care Component

According to Health Care Financing Administration (HCFA) data, out-of-pocket expenses (which are counted in the CPI) represent less than one-third of what was spent on medical care in 1991. Including in the CPI the approximately two-thirds of medical expenses currently paid by third parties, such as employers and governments, would be consistent with a comprehensive cost-of-living concept that would incorporate all medical care expenses.

The 10 medical care measurement experts GAO surveyed differed in their opinions about whether the current measure of medical care costs should

be changed to better approximate a cost-of-living measure. A majority of the experts cited advantages to making such a change. For example, a few of the experts said that public and private policymaking would be improved with such a change because policymakers and researchers would, for example, have a better understanding of what is happening in medical care costs. These experts said a change to a cost-of-living concept would support implementation of appropriate health care policies and improved macroeconomic policymaking. Nonetheless, the experts all raised disadvantages to making such a change. For example, a few of the experts noted that a change in conceptualization would mean a break in the continuity of the price data, which would affect long-term trend analyses involving medical care prices. A few experts also noted other concerns, such as how to measure medical care using a cost-of-living basis, the cost of doing so, and the political acceptability of changes that might result.

A majority of the experts said that some types of third-party payment should be added to the medical care component. However, they did not agree on which third-party payments to include. The majority would include medical care paid for by employer- or union-provided health insurance, whereas one-half supported the inclusion of government-provided care. One expert did not support the addition of any third-party paid expenses.

BLS does not plan to include third-party payments in the CPI because it views the CPI as an index that measures the changes in the prices of goods and services that consumers purchase directly. BLS officials said they make changes to improve the representation of out-of-pocket expenses rather than to move the CPI conceptually toward a cost-of-living index. BLS officials also said that they do not believe that adding third-party payments would make the CPI a clearly better index for its most important uses in adjusting Social Security payments and income tax brackets.

Unclear Whether Medical Care Component Should Be Changed

The Stigler committee recommended that the CPI better reflect the cost of living because of the uses that were being made of it. However, the ways in which the CPI is used have increased since that recommendation was made in 1961. For example, the federal government now uses the CPI to adjust some federal benefit payments and the income tax brackets.

Because of the additional uses being made of the CPI, whether the medical care component should be changed to better reflect the cost of living is

unclear. To make this decision, policymakers would need to consider several issues GAO did not address, such as (1) how these uses would be affected if the medical care component were changed to more fully reflect cost-of-living concepts, (2) whether any single price index can completely meet all purposes, and (3) the inevitable choices to be made between the cost of changing the CPI to be more reflective of the cost of living and the scope and quality of such an altered index. While many of these choices would be on technical issues, some would entail policy judgments.

Recommendations

GAO is making no recommendations in this report.

Agency Comments

The Office of Management and Budget (OMB) and BLS commented on a draft of this report. In a meeting on July 15, 1996, OMB's Chief Statistician said the draft was a fine report and that it would be useful in educating laymen and policymakers about the CPI. In her written comments of July 11, 1996, the BLS Commissioner focused on the report's treatment of the medical component. The Commissioner said that BLS had excluded employer-provided benefits for a variety of considerations but had not rejected the cost-of-living concept. She said that one theoretically correct, comprehensive measure of the cost of living does not exist and shaping a medical care component to include employer-provided benefits would raise formidable measurement problems. The Commissioner suggested that a separate index might be a better way to address different medical care cost policy concerns and uses than changing the CPI.

Given the limited scope of its work, GAO has not taken a position on whether the medical care component should reflect the cost of living or whether multiple indexes are needed to better fit the uses made of the CPI.

The Chief Statistician's and the BLS Commissioner's comments are discussed further at the end of chapter 4. A copy of the BLS Commissioner's written comments is included in appendix VI.

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Abbreviations

BLS	Bureau of Labor Statistics
CBO	Congressional Budget Office
CEX	Consumer Expenditure Survey
CPI	consumer price index
CPI-U	consumer price index representing all urban consumers
CPI-W	consumer price index representing all urban wage and clerical workers
FHLBB	Federal Home Loan Bank Board
FHA	Federal Housing Administration
GDP	Gross Domestic Product
HCFA	Health Care Financing Administration
HMO	health maintenance organization
ILO	International Labor Organization
OMB	Office of Management and Budget
PPI	Producer Price Index
VA	Department of Veterans Affairs

Introduction

Changes in prices as measured by the Consumer Price Index (CPI) were automatically linked to $441 billion in federal spending and $595 billion of federal tax receipts and affected the lives of millions of individuals who received federal benefit payments and paid federal taxes in fiscal year 1995.[1] For example, when Congress legislated the use of the CPI to automatically increase Social Security payments,[2] it indicated that this indexation was to offset increases in the cost of living.

According to BLS, the CPI is not a cost-of-living index but measures the change in prices of a fixed market basket of goods and services. However, the CPI has been used in various ways that are related to the cost of living. For example, the CPI is used as an escalator to adjust income payments, tax brackets, and deductions for personal exemptions. Although some elements of the CPI reflect cost-of-living concepts, the CPI was not designed as a cost-of-living index. To date, the federal government has not developed a comprehensive cost-of-living index.

The CPI tracks the change in prices of a fixed market basket of goods and services purchased directly by urban consumers. These purchases are for food, clothing, shelter, fuels, transportation, entertainment, medical services, and other goods and services that people buy for day-to-day living. Only expenditures made by consumers are captured in the CPI.

The CPI does not attempt to measure all changes in the cost of consumption needed for an individual to maintain a constant level of utility, that is, consumer satisfaction.[3] When consumers face rising prices, and especially when some prices rise faster than others, consumers tend to alter their purchasing patterns to maintain as high a living standard as possible. Because the CPI holds the "market basket" constant and does not account for what consumers would pay when they change the amounts they buy, or substitute one product for another, it does not measure consumers' cost of living. The CPI, therefore, is not a cost-of-living index.

[1]For additional information about congressional mandated uses of the CPI, see the report, Statistical Agencies: Statutory Requirements Affecting Government Programs (GAO/GGD-96-106, July 17, 1996).

[2]42 U.S.C. 415(i).

[3]In economics, the term "utility" is used to denote an individual's overall satisfaction. Constant utility is maintaining the same level of satisfaction from one period to another and can entail substituting one good or service for another in response to changes in relative prices. Utility for economic purposes, however, cannot be measured. Nonetheless, it is affected by various factors, such as one's level of consumption, psychological attitudes, social pressures, personal experiences, and cultural environment.

A comprehensive cost-of-living index would be broader in coverage than an index based on consumer expenditures or consumer budgets. In theory, a cost-of-living index would include purchased goods and services; the use of semidurable and durable goods, such as houses and automobiles, owned or rented; free goods of nature; and government-provided goods and services. However, the components of an actual cost-of-living index may vary and there is no single, comprehensive measure of the cost of living.

Some government-provided goods and services, such as public mass transit, that charge for the service are included in the CPI. However, other items that would be in a comprehensive cost-of-living index, particularly public and free goods of nature, are excluded from the CPI because they cannot be readily measured and consumers do not directly pay for their use.

Background

The Bureau of Labor Statistics (BLS), within the Department of Labor, produces the CPI by measuring the average change over time in the prices paid by urban consumers for a fixed market basket of consumer goods and services. The market basket is determined from detailed records of purchases made by thousands of individuals and families. The items selected for the market basket, such as potatoes, are to be priced each month at retail outlets, such as grocery stores, in urban areas throughout the country. According to BLS, in 1995, approximately 30,000 outlets were visited each month, with prices collected for 94,000 items.

The CPI is used as a measure of price changes to make economic decisions in the private and public sectors. For example, landlords use the CPI to adjust rental payments for the effects of inflation. According to BLS, the CPI has three major uses: (1) indicator of inflation for policymaking and economic decisionmaking; (2) escalator for wages, income payments, and tax brackets to preserve the purchasing power of people receiving government transfer payments and to adjust the tax burden so that people pay in inflation-adjusted dollars; and (3) deflator of selected economic statistical data series to make adjustments to show real changes in the data over time. For additional information about the uses and construction of the CPI, see appendix II.

The CPI was initiated during World War I, when rapid increases in the prices of goods and services, particularly in shipbuilding centers, made such an index essential for calculating cost-of-living adjustments in wages.

In 1921, BLS began regular publication of an index representing the expenditures of urban wage and clerical workers, which was then called the Cost-of-Living Index. The name of the index was changed to the CPI following controversy during World War II over the index's validity as a measure of the cost of living. According to BLS, it has always been a measure of the changes in prices for goods and services purchased for family living.

Major revisions were made to the CPI about every 10 years to update the fixed market basket; the next major revision is scheduled to be released in January 1998. Because people's buying habits changed, new studies were made of what goods and services people were purchasing and major revisions of the CPI were made in 1940, 1953, 1964, 1978, and 1987. In the 1978 major revision, several changes were made, including the publication of a new index for all urban consumers—CPI-U. According to BLS, the CPI-U, which represents the expenditures of about 80 percent of the population, takes into account the buying patterns of professional employees, part-time workers, the self-employed, the unemployed, and retired people, as well as those previously covered in the CPI. BLS continued publication of the original index, the CPI-W, which represents the expenditures of urban wage and clerical workers, about 32 percent of the population.

Conceptual Change to the CPI Recommended in 1961

In 1961, the Price Statistics Review Committee of the National Bureau of Economic Research, chaired by George Stigler, identified conceptual problems with the CPI and addressed issues concerning the measurement over time of durable goods, such as housing.[4] The Stigler committee acknowledged that the CPI's original purpose was to measure average price changes of a fixed market basket of goods and services over time, which could measure the change in consumers' standard of living if the marketplace did not change.[5] However, given that consumers' tastes change over time, or that higher quality goods at lower prices may become available, the committee determined that a fixed market basket of goods and services did not realistically represent a consumer's standard of living. The Stigler committee recommended that the conceptual framework of

[4]The Stigler committee was formed under a contract between the Bureau of the Budget—the predecessor of the Office of Management and Budget—and the National Bureau of Economic Research. The scope of the committee's review was extremely wide and included not only the study of the main price indexes compiled by the federal government, but included price indexes that had not been developed. The CPI was one of three principal price indexes that the committee reviewed. The committee's work is still recognized as the preeminent study of the CPI.

[5]Price Statistics Review Committee, The Price Statistics of the Federal Government: Review, Appraisal, and Recommendations, A Report to the Office of Statistical Standards, Bureau of the Budget (New York: National Bureau of Economic Research, 1961).

the CPI be modified to represent a cost-of-living index because the CPI was being used in the private sector as a cost-of-living measure.[6] Specifically, the committee recommended that the asset-price approach for measuring homeownership costs be replaced with an approach that determined the cost of consuming a flow of services generated by durable goods like houses. A flow-of-services approach would measure the cost of consuming housing rather than the change in the investment value of a house that the asset-price approach measured.

According to BLS, the Stigler committee's effort was the last comprehensive review of price indexes. At the time we were doing our work, a CPI commission appointed by the Senate Finance Committee was conducting a study on the CPI's accuracy as a measure of the cost of living. The commission issued an interim report in September 1995.[7] According to the interim report, the commission's formation and charter were motivated by concern that the CPI misstates inflation and leads to inappropriate changes in federal individual income tax brackets and federal benefits. The interim report discusses categories of potential bias in the CPI, such as substitution and quality change.

The commission's interim estimate was that the CPI overstates inflation by 1.0 percent per year, which fell within a range of 0.7 to 2.0 percent. The commission expects its final report to include recommendations for procedures to improve and/or complement the CPI. The commission's final report is scheduled to be issued by December 1996.

Objectives, Scope, and Methodology

The Ranking Minority Member of the House Committee on Banking and Financial Services asked us to (1) determine if a change made to the housing component in the early 1980s made the CPI either more or less suitable for use as a cost-of-living measure and (2) identify the advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely matches a cost-of-living measure. We surveyed recognized experts to obtain their views on how the change affected the housing component and on the advantages and disadvantages of changing the medical care component. As agreed with the requester, we

[6]In 1961, neither Social Security payments nor income tax brackets were adjusted for inflation. Automatic adjustments of Social Security benefits, which are based on increases in the CPI, began in 1975 (42 U.S.C. 415(i)); automatic inflation adjustments of federal income tax brackets and deductions for personal exemptions were required by law to begin with the 1985 tax year (26 U.S.C. 1(f)).

[7]See "Toward a More Accurate Measure of the Cost of Living" Interim Report to the Senate Finance Committee from the Advisory Commission to Study the Consumer Price Index, Sept. 15, 1995.

did not try to identify and address all of the policy issues that might arise in moving the CPI toward a cost-of-living index.

We reviewed relevant literature and held discussions with experts in the field to gain an understanding of the methodologies used in computing the CPI. These experts included individuals associated with the CPI at BLS, as well as private organizations and academic institutions. We also obtained information from BLS officials on their plans to revise and improve the CPI. On the basis of these reviews and discussions, we identified the major concerns that were associated with the asset-price approach, which was used to measure homeowners' costs before 1983, and the measurement of medical care. We recognize that these concerns and issues we identified are not exhaustive.

To obtain the views of experts, we selected two panels of experts and surveyed them. We chose 10 housing measurement experts from a candidate list of more than 50 names; we also chose 10 individuals to serve as medical care measurement experts from a candidate list of more than 50 names. To obtain diverse candidate lists, we conducted a literature review and asked for nominations of potential experts from those experts in the field and representatives of BLS that we met with during our initial discussions. We then contacted the nominated individuals and asked for their nominations of experts. To avoid potential conflicts of interest, we excluded individuals from the lists who were current political appointees, current BLS employees, and previous BLS administrators responsible for making CPI methodological changes. In selecting the experts, we first selected those who were nominated more frequently than the others and then randomly chose thereafter. We verified that these selections included experts from academic and user communities, such as the American Medical Association, and that the selections contained at least one expert suggested by BLS. The responses we received reflect only the views of the experts included. (See app. IV for a list of the selected experts.)

We surveyed 10 housing measurement experts. The questionnaire we sent to these experts contained a historical synopsis of housing cost measurement in the CPI, including brief descriptions of the concerns that stimulated BLS' adoption of the rental equivalence method in the 1980s and an overview discussion of the rental equivalence method in terms of measuring the cost of living. We asked the selected housing experts if the rental equivalence method adequately addressed the concerns expressed by critics about the use of the asset-price approach and if any concerns emerged as a result of using the rental equivalence method. In addition, we

asked them if the adoption of the rental equivalence method made the CPI either more or less suitable for use as a measure of cost of living. (See app. V for a copy of the information and questionnaire sent to each expert.)

We interviewed 10 medical measurement experts. Before holding the interviews, we sent a letter to these experts in which we provided a background paper that identified and briefly described measurement issues that may result from cost shifting among medical care payers. This material was provided to the experts prior to our interviews as a reference point from which to begin our in-person interviews. At the interviews, we asked the experts about the influence of cost shifting on the medical care component. We also asked the experts to provide advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely approximates a cost-of-living measure. (See app. V for a copy of the information sent to and the questions asked of each expert.)

We did our work in Baltimore, MD; Boston, MA; Chicago, IL; Philadelphia, PA; Richmond, VA; and Washington, D.C., between July 1995 and January 1996 in accordance with generally accepted government auditing standards.

We requested comments on a draft of this report from the Acting Director of OMB and the Secretary of Labor, or their designees. The comments are summarized and addressed in chapter 4. A more detailed account of our scope and methodology is contained in appendix I.

Methodological Changes to Homeownership Measure Made the CPI More Suitable as a Cost-of-Living Measure

In the 1980s, BLS began using the rental equivalence method of measuring homeowners' costs. Recognized experts that we surveyed viewed the change that BLS made as making the CPI more suitable as a measure of the cost of living. They noted, however, that some new issues have emerged as a result of using the rental equivalence method. Although the new method may have made the CPI more suitable as a cost-of-living measure, BLS officials said this was not their objective. Rather, they made the change to better measure housing costs within the CPI's structure of measuring price changes of a fixed market basket of goods and services.

Historical Development of Housing Measures in the CPI

Homeownership was not included in the original CPI that was designed to represent 1917 through 1919 expenditures of wage earner and clerical worker families in large shipbuilding and industrial centers, for the main reason that these families typically did not own homes. Costs associated with homeownership were first included in 1953 because homeownership among the urban wage earner and clerical worker population increased following World War II. The homeownership measure in the CPI—the asset-price approach—was designed to measure changes in the cost of acquiring, financing, and maintaining houses. This concept was used from 1953 to 1983. For more information on the historical development of the measurement of housing, see appendix III.

BLS Adopted the Rental Equivalence Method

Following publication of the Stigler committee report, BLS started in the 1960s to explore measures of the flow of services received from owner-occupied homes. However, because methodologies had not yet been developed on how to measure these services, BLS had to develop new methodologies.

BLS decided to explore two flow-of-services methods: user cost and rental equivalence. BLS staff considered the two methods to be equally powerful in concept; however, problems raised over implementation of the user cost method outweighed its attractiveness. A user cost index measures total cost to owners living in their homes by adding the various explicit costs, such as payments for mortgage interest and property taxes, and implicit costs, such as depreciation, which homeowners incur in providing shelter for themselves. The user cost approach was abandoned after much review because it involved estimating the appreciation or depreciation value of a house over time and the cost of not having access to equity in the house. BLS noted that calculating such estimates was difficult because

of substantial variations in housing data. BLS also found that the method sometimes provided some peculiar results.

Rental equivalence, on the other hand, was easier to explain to the public and the users. The rental equivalence method attempts to infer the income that homeowners forgo when they reside in their own homes rather than rent them to others.

In 1977, when it was time to implement methodological changes for the 1978 major revision to the CPI, BLS' advisory groups had not reached a consensus on an appropriate flow-of-services approach, so the asset-price approach was continued. In addition, some users of the CPI thought it should reflect the cost of purchasing a home because most families lived in their own homes and did not rent. Therefore, it was not changed.

BLS, however, decided to continue research and consultation and, in 1980, began publication of experimental indexes that represented alternative homeownership concepts. These indexes were variations of the user cost method and the asset-price approach, as well as the rental equivalence method. By the early 1980s, however, changes in real estate and mortgage markets—high prices of housing and high interest rates—drew attention to the limitations of the approach used to measure homeowners' costs. For a detailed description of issues associated with the asset-price approach, see appendix III. In 1981, the Commissioner of Labor Statistics announced that beginning in 1983, BLS would use the rental equivalence method to measure homeownership costs.

In January 1983, BLS changed the measurement of homeowners' costs in the CPI-U from an asset-price approach to a flow-of-services approach. The CPI-W was not changed until January 1985 because BLS wanted to provide adequate notice of the conceptual change, since the CPI-W was used to escalate long-term labor contracts and federal programs.

Experts Said That the Rental Equivalence Method Makes CPI More Suitable as a Cost-of-Living Measure

We asked 10 experts their views on whether the rental equivalence method made the CPI more or less suitable as a cost-of-living index. All 10 were expert in measuring housing costs and were very familiar with the CPI housing component.

All of the housing measurement experts agreed that the adoption of the rental equivalence method made the CPI more suitable for use as a measure of the cost of living. Our analysis of the experts' comments showed that

most of the experts responded that the CPI is now more suitable because it measures the cost of housing services that are used, rather than the cost of buying the house or its value as an asset.[1] One of the experts said that the cost-of-living index "concept is based on consumer utility theory which suggests that utility comes from consumption, or use. Since rent is the 'price of using,' rental equivalence enhances the use of the CPI as a proxy for the cost of living." A few of the experts also noted that additional improvements, such as including environmental costs and taxes in the CPI, would make it more like a cost-of-living index. A few of the experts noted that the rental equivalence method was not perfect for measuring the cost of living because renting is not the same as owning a home.

Experts Agreed That Concerns About the Asset-Price Approach Were Adequately Addressed With the Rental Equivalence Method

All of the housing measurement experts reported that in general, the rental equivalence method adequately addressed the concerns that had been expressed about the use of the asset-price approach, which had been used prior to the early 1980s.[2] A few of these experts commented that in comparison with the asset-price approach, the rental equivalence method was better in the representation of inflation and tracking the changes in the cost of occupying a home. The rental equivalence method was viewed by a few experts to be more appropriate than the asset-price approach, especially if the CPI is to approximate the cost of living. A few of the experts also noted that rental equivalence addressed long-standing concerns with the mortgage and housing price data that were associated with the asset-price approach (e.g., mortgage interest rates overstating actual interest expenses).[3] According to a few of the experts, rental equivalence could represent all sections of the housing market, as long as rental housing of similar quality is available. A few of the experts also commented that the rental equivalence method in comparison to the user cost index method, which was also proposed in the 1970s as an alternative methodology, was easier to understand, more stable, and was not subject to arguable assumptions.

A few experts mentioned alternative methods to the rental equivalence method. These experts' general comments indicated some interest in using variations of current mortgage payments, down payments, or mortgage

[1]Our summary descriptions of experts' views are derived from our compilations and content analysis of their comments and observations.

[2]One expert provided a yes/no response. This expert stated that the rental equivalence method "still does not accurately represent homeowners who are making a mortgage payment or who have paid off their mortgages and have very low housing costs."

[3]See appendix III for a more detailed explanation of concerns associated with the asset-price approach to measuring homeowners' costs.

interest to measure homeowners' costs. However, there was no consensus on any one variation. As one of these experts noted, the "suggestion is not in any way intended to invite a return to the asset-price approach used until 1982."

Mixture of Issues With the Rental Equivalence Method

Overall, the experts' responses to whether issues have emerged as a result of using the rental equivalence method were mixed. The majority of experts said there were issues with the method, but none of the specific issues was identified by more than two experts. Although the experts found the rental equivalence method to be a good replacement for the asset-price approach, a few of the experts expressed concern that the rental units used in the methodology may not be similar to the owner-occupied housing units they are to represent. One expert said that this "could lead to errors, but in both directions."

A few of the experts noted another concern that the CPI overstates inflation because of the time at which the rental equivalence method was implemented. The change to rental equivalence occurred at a historical peak in mortgage interest rates. As a result of the timing of the switch in methodology, the subsequent decline in mortgage interest rates was not captured in the CPI. One of the experts noted that "government transfer payments would be . . . lower today if the switch had not been made at the interest rate peak. Moving to a better index, but at the wrong time, has been extremely costly."

BLS Views Rental Equivalence as Consistent With Fixed Market Basket Definition

BLS officials told us that the adoption of the change to the rental equivalence method was simply a change in the measurement of the costs of homeownership rather than one intended to move the index toward a cost-of-living index. In making changes to the CPI, BLS said it seeks to improve the presentation of out-of-pocket expenditures, not to move the CPI conceptually toward a cost-of-living index.

Advantages and Disadvantages Cited for Changing Measurement of Medical Care

Medical care expenses, including health insurance premiums, directly paid by consumers have historically been included in the CPI. Medical care expenses paid by third parties, such as employers, which make up about two-thirds of all medical care expenses, are excluded from the CPI. A CPI based on comprehensive cost-of-living concepts would include expenses paid by third parties.

The 10 medical care measurement experts responding to our structured interview survey offered various advantages and disadvantages to changing the medical care component to an approach that more closely matches a cost-of-living measure. A majority of the experts said that some types of third-party expenses should be included in determining the level of importance BLS would assign to medical care price changes. Medical care expenses paid by third parties are excluded because, according to BLS, the CPI is designed to measure only out-of-pocket expenses and given that the most important purposes are probably Social Security and tax bracket indexation, it is not clear that health insurance fringe benefits should be included.

All of the experts we interviewed said that prices that are actually paid by consumers and third-parties should be used in the CPI. Since 1987, BLS has been moving toward collecting more transaction prices for medical care items.

Determining Medical Care Costs in the CPI

The CPI is constructed from two kinds of data. One kind is used to determine what items are to be included in the CPI components and the relative importance of the components. The second kind of data reflects the prices paid for items in the CPI. (See app. II for more information on the construction of the CPI.) These two kinds of data are used to construct the medical care component; and over the years, BLS has tried different methods of incorporating these data.

Difference Between Weighting and Pricing

The goods and services that consumers purchase are collectively referred to as items in the market basket. These items are grouped together into components. For example, hearing aids and dental services are items in the medical care component. BLS assigns weights to items within a component and to the components. Weighting is the proportionate emphasis given to price changes of one item or component in relation to other items and components. In the medical care component, weighting is affected by the presence or absence of third-party payers. In addition,

prices paid by consumers are collected for the items in the market basket. For the medical care component, BLS may collect several different prices for the same item from medical care providers. For example, one hospital may have a list price that is charged a patient who pays the fees directly, while another hospital reports a discounted transaction price for the same procedure that has been negotiated with third-party payers.

To further illustrate how weighting and pricing differ, consider a hypothetical example of a consumer who receives medical care at a physician's office. The consumer pays a $5 insurance co-payment and the insurance provider pays the physician an additional $12 under a negotiated fee arrangement. The combined payment to the physician of $17 is less than the price that the physician "lists" for the service provided, $20. In computing the CPI, such a transaction may have the following effects:

- The $5 co-payment is the "out-of-pocket" expenditure, which is used to set the amount of the weight. To determine the share of consumer expenditures spent on medical care or other components, BLS added that $5 together with all other consumption expenditures in the Consumer Expenditure Survey (CEX), which includes the consumer's cost of premiums paid for health insurance. This aggregate of medical expenses is compared with the aggregate of expenditures on all goods and services in the market basket. The percentage of medical care expenses in relation to all expenditures becomes the expenditure weight assigned to the medical care component.
- In its pricing surveys, BLS would price the medical service at $20, the list price. The transaction price would be $17 in this hypothetical situation, assuming that this payment method were selected for pricing.

BLS Tried Different Methods to Price Medical Care Costs

Medical care has always been in the CPI, and consumer-purchased health insurance has always been included as a medical expense. Over the years, BLS tried different methods of pricing medical care, including health insurance directly paid by consumers, but has not altered the method used to determine the weight of the medical care component.

Originally, the price change rate for health insurance was assumed to be equal to the average of other medical items. In the 1950 revision, BLS deviated from this approach and began to directly price health insurance policies. In 1964, the approach was changed to an approach that again based health insurance price changes on prices observed for other medical goods and services, as well as the insurance carriers' operating costs and

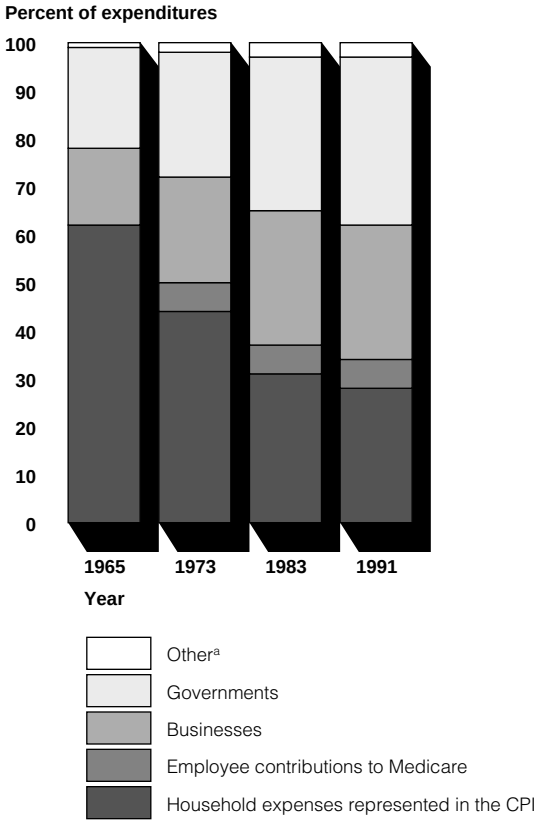
profits. In 1978 and 1987, BLS made minor adjustments in measuring health insurance with most of the changes occurring in publication of health insurance price changes.

In 1987, BLS began to collect medical care transaction prices, actual prices paid, which include fees that have been negotiated between medical care providers and third-party payers. BLS plans to collect transaction prices for all medical care items by January 1997. (See app. III for a detailed historical description of the measurement of medical care items.)

Trends in Medical Care Expenditures

In 1965, households directly paid for about two-thirds of all medical care expenses. About 30 years later, these medical care expenses, upon which the CPI is based, represented less than one-third of all medical care expenses. As shown in figure 3.1, the proportion of total medical care represented in the CPI steadily declined since 1965.

Figure 3.1: Percentage Distribution of Medical Care Expenditures by Type of Payer, for Selected Years



[a]A small proportion of medical care expenses is paid by philanthropic sources and income received by medical care institutions from assets, such as interest, dividends, and rents.

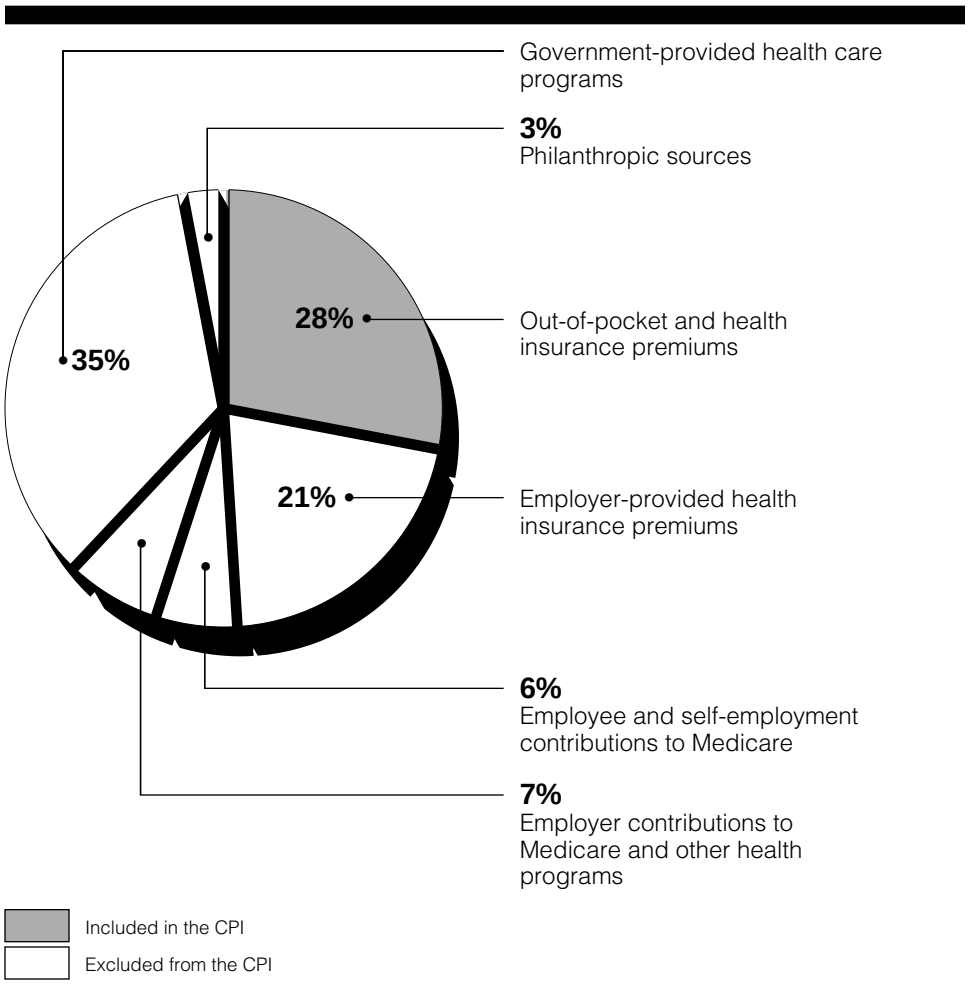
Source: Health Care Financing Administration (HCFA).

The most recent data available, for 1991, indicate that about 28 percent of total consumption of medical care is represented in the CPI.[1] Because the medical care component is based only on out-of-pocket medical expenses and health insurance premiums reported in the CEX, not all medical care expenditures are included in the CPI (see fig. 3.2). The CPI does not include medical care that consumers receive through employer-provided benefits

[1]The 28 percent includes out-of-pocket expenses directly paid by households, employees' portion of employer-provided health insurance premiums, Medicare part B premiums, and health insurance premiums directly paid by households. In the background paper we sent to the medical care measurement experts, we incorrectly stated that out-of-pocket medical expenses and health insurance premiums in the CEX represent about 20 percent of total consumption of medical care.

and government-provided health care programs, such as Medicaid and part A of Medicare. Although employees and the self-employed make contributions to the Medicare hospital insurance trust fund, BLS considers these contributions as employment taxes and thereby excludes expenses paid under these programs.[2]

Figure 3.2: Percentage Distribution of Medical Care Expenditures by Type of Payer, 1991



Source: BLS.

[2]Employers pay medical care expenses through their contributions to Medicare, workers' compensation, temporary disability insurance, and industrial in-plant health services.

Researchers' View of the CPI's Measurement of Medical Care

Like other aspects of research on the CPI and cost-of-living indexes, research on the medical care component has sought to determine the appropriate weights and prices for medical care. Research into the issue of cost shifting between third parties and consumers has drawn attention to the impact that the inclusion of third-party payments may have on the weight given to the medical care component of the CPI. Similarly, research findings on medical care providers using multiple prices for the same medical care service have led to an examination of the CPI's use of list prices rather than transaction prices.

Concerns About Medical Care Weight

The appropriateness of the weight assigned for medical care in the CPI has been questioned by some researchers who contend that the current weight distorts price changes that result from cost shifting among health care payers. They contend that the current weight based on expenditures directly paid by households can result in an inaccurate level of importance being assigned to this component of the CPI, as compared with a weight based on all medical expenditures. The inaccuracy can occur when costs shift between payers who are included in the CPI and those who are excluded. For example, if employers decrease the amount that they pay of their employees' medical care expenses, then the employees' direct expenses, which are used to set the CPI medical care component weight, increase thereby increasing the weight assigned to medical care. An inappropriate weight of a component in the CPI can lead to over- or understatement of the rate of inflation, if the rate of price change for that component differs from other components in the CPI.[3] A weight based on all medical care expenses, however, would not be affected by cost shifting over time between payers because all costs, regardless of who paid for the care, would be represented in the CPI.

Cost shifting over time can be illustrated by employers' efforts to constrain increases in annual health insurance premiums by raising deductibles and shifting more of the premium costs to employees. BLS reported that the proportion of families paying all or part of their health insurance premiums has increased from 60 percent in 1984 to 67 percent in 1992.[4] BLS reported that between 1984 and 1992 average household out-of-pocket

[3]The change to the rental equivalence method of measuring homeowners' costs changed its relative importance from 25 percent to 14 percent of all items in the CPI. As explained in appendix II, a change in relative importance of an item affects that item's influence on the overall CPI. The decrease in the relative importance of homeownership in this instance corrected for overstatement of the rate of inflation.

[4]Bureau of Labor Statistics, "Health Insurance Premiums Dominate Health Care Budget of Consumers," Issues in Labor Statistics (Washington, D.C.: U.S. Government Printing Office, 1994).

medical care expenditures rose from $1,049 to $1,634, a rise of about 7 percent per year. These data suggest that the weight for medical care, which is based on 1982 through 1984 CEX data, is lower than one that would be derived from more recent out-of-pocket medical expenses.

A comprehensive cost-of-living index would include out-of-pocket, government-provided, and employer-provided medical care costs to incorporate all medical care expenses. In a 1994 study, the Congressional Budget Office (CBO) noted that, if the measurement of all medical care expenses were more appropriate for measuring the cost of living, the current CPI would have a downward bias relative to the cost of living.[5] Using data from the National Income and Product Accounts, CBO estimated in 1994 that the influence of medical care price changes on the CPI would more than double if all medical care expenses were incorporated.

Concerns About How Medical Care Expenses Are Priced

In addition, researchers have noted the divergence in medical care price indexes when one group of payers subsidizes another. Cost shifting within the marketplace also occurs when third-party payers are charged prices that differ from prices paid by consumers. BLS does not use transaction prices for all medical care goods and services included in the CPI; it has announced plans to do so. Any collection and use of inappropriate medical care prices could lead to over- or understatement of the rate of inflation, if the rate of change for transaction prices differs from the prices used in the CPI. (See app. II for a description of the collection of medical care prices for the CPI.)

In its 1994 study, CBO noted that a CPI based on out-of-pocket medical costs fails to capture price distortions caused by cost shifting.[6] In this case, cost shifting may occur when the government does not reimburse health care providers for full cost of services to Medicare patients, and providers try to recoup the difference by increasing the costs to their private-pay patients (e.g., those paying for services themselves). CBO found that Medicare reimbursement in the early 1990s paid for 88 percent of the costs of covered services, compared with full reimbursement during the mid-1980s.[7] CBO observed that the CPI for out-of-pocket medical care costs

[5]John F. Peterson, "Is the Growth of the CPI a Biased Measure of Changes in the Cost of Living?" CBO Papers (Washington, D.C.: CBO, 1994) pp. 22-23.

[6]Peterson, pp. 22-23.

[7]Congressional Budget Office, "Responses to Uncompensated Care and Public-Program Controls on Spending: Do Hospitals 'Cost Shift'?" CBO Papers (Washington, D.C.: Congressional Budget Office, 1993).

increased faster than the price index for Medicare during the mid-1980s to early 1990s because of cost shifting.[8] The study suggests that the CPI overstates the rate of inflation because it fails to capture the price paid by the federal government.

However, HCFA disputes CBO's findings on cost shifting. According to an HCFA official, any findings that Medicare or Medicaid pays less per day of hospital care than others is not evidence that these programs are shifting their costs elsewhere.

The medical care measurement experts we surveyed indicated in their general comments that this issue is not resolved. A few of the experts said that cost shifting does not occur between government-provided programs and other payers and cited research on cost shifting in Illinois[9] and California[10] hospitals. The study of Illinois hospitals supported CBO's findings that hospitals offset most of the rise in unreimbursed Medicare costs during the 1980s by generating higher revenues from private payers, which were cited in the background paper sent to the medical care experts. The author, however, suggests that as private sector pricing becomes more competitive, the ability and willingness of hospitals to cost shift will decline. The study of California hospitals found no cost shifting from publicly funded patients to privately insured patients.

Experts' Views on Changing Medical Care Measurement Were Mixed

We asked 10 experts for their views on the advantages and disadvantages of changing the current measurement of medical care costs to more closely match a cost-of-living measure. We also asked about the types of medical care expenses that should be included in the weighting of the medical care component, as well as the types of prices that should be incorporated in calculating the changes in medical care costs.

[8]Peterson, pp. 22-23.

[9]David Dranove, "Pricing by Non-Profit Institutions: The Case of Hospital Cost-Shifting," Journal of Health Economics, Vol. VII (1988), pp. 47-57.

[10]David Dranove and William D. White, "Government Cutbacks in Hospital Reimbursement: Who Bears the Burden?" (Working paper under revision for journal review July 1995.)

Advantages and Disadvantages Cited by Experts of Moving to a Cost-of-Living Concept

All but one of the experts cited advantages to changing the current measurement of medical care to an approach that more closely approximates a cost-of-living measure. Our analysis of the experts' responses showed that a few of the experts said that policymaking would be improved with such a change.[11] These experts said that a change to a cost-of-living concept could support the implementation of appropriate health care policies. For example, one expert cited a need for accurate information during a debate on pharmaceutical drugs. A few experts also cited each of the following advantages:

- A change would improve macroeconomic policymaking; one expert noted that the Federal Reserve was currently guessing at the amount of overstatement of inflation in the CPI.
- A change to cost-of-living concepts for the medical care component would allow private and public policymakers and researchers to have a better understanding of what is happening in medical care costs.
- The change would improve the Gross Domestic Product's (GDP) implicit price deflator thereby improving research that used the implicit price deflator.[12]

All of the experts cited at least one disadvantage to changing the medical care component to more closely approximate a cost-of-living measure. A few of the experts were concerned about the measurement of utility (as previously defined in footnote 3, p. 10) in the medical area. For example, one expert questioned how one would measure a patient's satisfaction from a procedure that had a very high mortality rate but also offered, when successful, a long-term survival rate. In addition, a few experts noted the following disadvantages:

- A change would mean a break in the continuity of the price data, which would affect long-term trend analyses.
- Measures based on cost-of-living concepts were susceptible to manipulation because of the subjectivity of measuring satisfaction.

[11]Our summary descriptions of experts' views are derived from our compilation and content analysis of their comments and observations. The 10 experts that we interviewed all had different reasons for their opinions on changing the medical care component to be more reflective of the cost of living. Because the format used to record their reasons was open-ended, the elaborations given by one expert did not necessarily follow those expressed by another expert. Therefore, the information we present is a description of what they said, as opposed to a tally of specific reasons. See appendix V for a copy of the instrument used to collect this information.

[12]The implicit price deflator is a measure of inflation that is obtained from GDP data. The movement of the implicit price deflator usually closely parallels the movement of the CPI but is rarely identical to it. In theory, the implicit price deflator reflects the price trends throughout the economy, whereas the CPI represents price trends at the retail level.

- It would be expensive to switch to the new methodology, and it would also be more expensive than the current methodology to maintain. For example, one expert noted that transaction price data would be regarded by health care providers as sensitive information and burdensome to provide to BLS. More specifically, this expert said that physicians would have to go through each of their third-party contracts to obtain this information.
- In general, the political environment is not conducive to making a change in medical care indexes. For example, one expert noted that recognition of a previous overstatement in the CPI would anger those whose benefits are indexed with the CPI.

In addition, a few of the experts were concerned about changing the medical care component without changing other components at the same time to more closely approximate a cost-of-living measure.

Most Experts Said Additional Expenses Should Be Included in the Weighting of Medical Care

In addition to obtaining the experts' opinions on the advantages and disadvantages of changing the current measurement of medical care costs, we took the opportunity to ask the experts how cost-of-living concepts would be implemented. All but one of the experts said that some types of medical expenses other than those already captured in the CPI should be included in weighting the medical care component. The majority of the experts said that employer-provided and union-provided medical care should be included in the weighting of the medical care component. One-half of the experts supported the inclusion of government-provided care. Fewer experts supported the inclusion of medical expenses provided by charitable organizations and expenses absorbed by health care providers. One expert said that no additional expenses should be included in the weighting of the medical care component. This expert said that if the CPI is used to adjust wages or payments, then only out-of-pocket expenses paid by consumers should be included in the CPI.

Our analysis of the experts' responses showed that a few of the medical care measurement experts who supported the inclusion of all medical care expenses commented that it was logical to include all expenses if the burden of payment fell upon the general population. Of the experts who supported the inclusion of additional expenses other than those provided by charities or the government, a few said that expenses that affect the buying power of consumers should be included in the medical care component.

There was no consensus on how to implement weighting that is based on cost-of-living concepts. The experts' observations on whether public-provided health care should be included illustrate both the diverse and occasionally contradictory comments of the experts. A few of the experts did not want such care included because other government-provided services (e.g., national defense) were not in the CPI. Other experts expressly told us that government-provided care should be included because consumers pay for this care through taxes and lower wages. These experts also supported the inclusion of taxes in the CPI. And still other experts were silent on this issue. A few of the experts expressed the opinion that the medical care component should not be changed to measure cost-of-living concepts unless all components were changed at the same time.[13]

Experts Agree That Transaction Prices Should Be Used

All of the medical care measurement experts said that transaction prices should be used in gathering price data for medical goods and services. A few of the experts observed that consumers are paying transaction prices and that list prices should only be used in instances when nothing else is available, or if list prices are cheaper to collect. A similar number advocated the pricing of comprehensive health care packages, such as basic health maintenance organizations' (HMO) plans. However, one expert advocated using list prices in geographic areas where HMOs had not penetrated the market. A few of the experts made the following additional comments:

- List prices could be transaction prices in some instances.
- Transaction prices are available for data collection.
- BLS was not recording the appropriate transaction prices.
- List prices usage in the CPI has led to the overstatement of inflation, especially in pharmaceutical drugs.
- BLS' pricing of medical care items was inappropriate. These experts told us that BLS should be pricing the cost of a treatment or cure of an illness. They said that the current approach of pricing the cost of medical care items, such as x-rays, doctor visits, diagnostic tests, and hospital stays, is inappropriate for today's CPI.

[13]Although we did not inquire further into their reasons during the interviews, these experts may have been referring to the issue of including taxes in the CPI when referring to changing all components at one time. The Stigler committee recognized the difficulty in including government services and taxes in the CPI. The committee said that more research was needed before a more comprehensive cost-of-living index that included government services could be constructed and did not recommend making any changes at that time. This issue has not been addressed nor has there been an evaluation of the CPI in the context of its uses to adjust federal benefit payments and income tax brackets.

- BLS' methodologies are not capturing the substitution of new treatments for items in the CPI's medical care market basket. For example, one expert said BLS should be pricing the cost of treating medical conditions, such as heart attacks, rather than hospital stays. This expert stated that BLS' methodology used for the CPI indicates that the per day charges for hospital stays are going up for heart attack patients, when in reality new treatments allow patients to go home earlier. According to this expert, by incorrectly pricing hospital stays, the current BLS methodology results in overstatement of inflation.

  In addition, a few of the experts also provided an example of the difference in rate of price change between transaction and list prices. They noted the lower rate of increase for hospital rooms in the Producer Price Index (PPI), which uses transaction prices. The difference between the CPI and the PPI for physicians fees that both use transaction prices, however, is not as large as that for hospital rooms.

  BLS began collecting and using medical care transaction prices in 1987. Since then, it has expanded the collection of transaction prices for additional medical care items. It plans to collect transaction prices for all medical items by January 1997. (See app. III for further details.)

  According to BLS, the incorporation of discounted transaction prices was accomplished through a series of improvements in detailed data collection procedures; therefore, the experts were unlikely to know that BLS had already begun to incorporate hospital transaction prices in the CPI. According to a BLS official, about 15 percent of hospital prices in the CPI are transaction prices.

  While BLS officials considered the capturing of medical transaction prices to be an improvement, they said many problems remain in measuring price change in medical care. They agreed with our experts who noted that measuring specific commodities and services used in medical treatments does not capture changes in the approaches for treating specific medical problems. However, according to the officials, every treatment is administered, not just to a medical condition but to an individual with that condition. Therefore, according to these officials, the treatment administered in different cases with a given condition, such as a heart attack, need not be the same. Using the same example of hospital stays cited by one of the experts, BLS said that some patients will require shorter or longer hospital stays, or different combinations of drugs or surgical procedures, which further complicates defining what is to be priced and

calculation of expenditure weights. According to BLS, in some cases a shorter hospital stay might not be better (if, for example, the patient were weaker and at greater risk for complications when he or she left the hospital), while in other cases it might be better.

Other Comments

When asked if they would like to make additional comments, the medical care measurement experts identified several issues related to changing the approach used to measure medical care. In their general comments, a few of the experts said that the United States measures medical care better than other developed countries. One expert said that if the United States changes its approach to measuring medical care, the other countries are likely to change their methodologies to whatever the United States does. Other comments stated by a few of the experts included

- The CPI cannot be used for their work because the CPI uses list prices.
- They were concerned about how a change to cost-of-living concepts would measure quality changes and noted that the implementation of these concepts would involve value judgments.
- The distinction between prices and quantities had to be clear, implying that an increase in total expenditures cannot be easily translated into increases in prices or increases in quantities without the collection of additional data.

Also, a few experts questioned whether the CPI should be used as a measure by which to make cost-of-living adjustments. These experts suggested that BLS develop CPIs for specific demographic groups.

BLS Does Not Plan to Include Third-Party Payments

BLS does not plan to include third-party payments in the medical care component. BLS officials hold this position for several reasons.

- BLS views the CPI as an index that measures the changes in prices of goods and services that consumers purchase directly—the fixed market basket. Therefore, the CPI excludes payments made by private third parties. The changes to the CPI that BLS seeks to make are to improve the representation of out-of-pocket expenditures, not to move the CPI conceptually toward a cost-of-living index.
- BLS considers medical care provided through employment as a cost of doing business rather than a consumer expenditure.
- BLS excludes income taxes, which pay for government-provided health care, because they are indirect payment for medical care. The CPI only

includes taxes that are paid as a result of consumption, such as sales taxes.

- According to the Commissioner of Labor Statistics, methodologies have "not advanced to the point where anyone knows how to construct true cost-of-living measures" for medical care and other CPI components.[14]
- According to BLS, the most important purposes for use of the CPI are probably the indexation of Social Security payments and federal income tax brackets. BLS says it is not clear that health insurance fringe benefits should be included in the CPI because these benefits are not taxed.

[14]Consumer Price Index: Hearings Before the Committee on Finance, United States Senate. 104th Cong., 1st Sess., p. 108 (1995) (statement by Katharine G. Abraham, Commissioner, BLS, Department of Labor).

Observations

According to BLS, the CPI is not a cost-of-living index but a measure of the change in prices of a fixed market basket of goods and services. But questions have surfaced from time to time as to whether the CPI could and should be made into a cost-of-living index. The Stigler committee's landmark study in 1961 said the CPI should be changed to better reflect the cost of living because of the uses that were being made of it at that time. However, additional uses have been made of the CPI since 1961, most notably indexing Social Security benefits and individual income tax brackets and deductions for personal exemptions.

Since the Stigler committee's report, BLS changed the way in which the CPI measures homeownership. It went from an asset approach to a rental equivalency method. For our review, we asked 10 housing measurement experts whether the change made the CPI more or less suitable for use as a cost-of-living measure. They all said it made the CPI more suitable as a cost-of-living index.

BLS has said that it did not make the change to move the CPI closer to a cost-of-living index, whether or not it had that effect. According to BLS, it made the change to improve the presentation of consumers' out-of-pocket expenditures, which was in keeping with the concept it follows to construct the CPI.

BLS likely would be unable to remain faithful to that concept if it were to make the medical care component truly reflective of the cost of living. The medical care component is not reflective in large measure because it excludes payments made by third parties for medical care that consumers receive. BLS is opposed to adding third-party payments to the CPI because the payments do not reflect what consumers spend directly and because BLS officials do not believe that adding such payments would make the CPI a clearly better index for its most important uses.

We discussed with 10 medical care measurement experts the advantages and disadvantages to changing the medical care component to more closely match a cost-of-living measure. A majority of the experts offered advantages and all identified disadvantages to making such a change. Also, we discussed with the experts the question of what types of medical care expenses the CPI should include in determining the weight of the medical care component. Their answers were not unanimous, and cautionary statements were made. Most experts would include some type of third-party payment, but there was no consensus on how to implement weighting that is based upon cost-of-living concepts. A few questioned

whether a single CPI should be used as a measure by which to make cost-of-living adjustments.

The overall impact of changing the medical care component of the CPI is unknown. In terms of the weighting of the component, a 1994 CBO study suggests that the present system leads to an understatement of the rate of inflation. Regarding the pricing, a few of the medical care measurement experts we interviewed stated that the use of list prices leads to an overstatement of the rate of inflation. Taken together, the overall magnitude or direction of a possible misstatement from the current weighting and pricing of medical care items is unknown.

Taking into account the views of our experts and the scope of our work, we do not have a view as to whether the medical care component should be changed to reflect the cost of living. The Stigler committee held that the CPI and the uses made of it should match. Although BLS cannot control the uses made of the CPI, we believe there is a fundamental soundness to the principle of the index matching its uses. However, the federal government uses the CPI in a variety of ways today, some of which did not exist when the Stigler committee did its work. Because the relationship between the current CPI and these uses has not been assessed, it is not clear whether the current CPI, a CPI based on cost-of-living concepts, or even multiple new indexes would best meet all of the purposes for which the CPI is now used. Further, there would be inevitable technical and policy choices to be made in any effort to change the CPI. These choices would reflect on the cost, scope, and quality of such an altered index. Because these issues were outside the scope of our review, we are not making recommendations on whether BLS should work toward making the CPI a comprehensive cost-of-living index.

Agency Comments and Our Evaluation

OMB and BLS commented on a draft of this report. At a July 15, 1996, meeting, OMB's Chief Statistician characterized the draft as a fine report and said it had an educational quality that would make it useful for laymen and policymakers. She and her staff identified several places where a technical change could be appropriate or the wording of the report could be improved, and we made these alterations where appropriate.

The BLS Commissioner focused her comments on the medical care component. Appendix VI contains a copy of the Commissioner's July 11, 1996, letter and our additional comments. The Commissioner said the draft report asserted that incorporating expenditures on medical care goods and

services by third-party payers would move the CPI toward "the cost-of-living concept." According to the Commissioner, this argument implies that there exists one theoretically correct, comprehensive measure of the cost of living and that the CPI deviates from this measure because it lacks a cost-of-living concept as a measurement objective. Neither assumption is strictly correct, the Commissioner said.

Elaborating on this statement, the Commissioner presented information to indicate that different index concepts are required to address different policy concerns and uses, implying that it is infeasible to change the CPI to conform with every possible use. She said developing a separate index measure might be a better way to address the concerns with tracking medical care costs than changing the CPI. The Commissioner also identified conceptual and operational difficulties, some of which she termed formidable or impossible to overcome, that she associated with developing a comprehensive cost-of-living measure. Finally, concerning the exclusion of employer-provided benefits from the medical care component, the Commissioner said BLS' decision to exclude those benefits reflected a variety of considerations about the scope and use of the CPI but not a rejection of the cost-of-living concept.

We did not intend to suggest that there was a single, correct, and comprehensive measure of the cost of living or that there could only be one measure. Accordingly, we made this position clearer in the executive summary and in chapter 1.

As we said earlier in this chapter, because of the limitations of our scope, we have not taken a view as to whether the medical care component should be changed to reflect the cost of living or whether multiple indexes should be developed. We agree with BLS' contention that designing a cost-of-living index is not an easy task. However, to the extent the government uses the CPI for significant purposes as if it were a cost-of-living index, we believe there is fundamental soundness to the principle of an index matching its purposes.

Objectives, Scope, and Methodology

The Ranking Minority Member of the House Committee on Banking and Financial Services asked us to (1) determine if a change made to the housing component in the early 1980s made the CPI either more or less suitable for use as a cost-of-living measure and (2) identify the advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely matches a cost-of-living measure. We surveyed recognized experts to obtain their views on how the change affected the housing component and on the advantages and disadvantages of changing the medical care component. As agreed with the requester, we did not try to identify and address all of the policy issues that would be relevant to determining whether the CPI should be moved further toward a cost-of-living index.

We first reviewed relevant literature and held discussions with experts in the field. These experts included individuals associated with the CPI at the Bureau of Labor Statistics (BLS), as well as private organizations. We also included individuals in congressional and other federal government agencies who are researchers on the topic of the CPI; these included several former BLS officials.

To obtain the views of experts, we selected two panels of experts and surveyed them. The first panel, consisting of 10 housing measurement experts, was provided a data collection instrument that included a historical synopsis of BLS' housing costs measurement for the CPI. This instrument also included brief descriptions of the concerns that stimulated BLS' adoption of the rental equivalence method in the 1980s, an overview discussion of the rental equivalence method in terms of measuring the cost of living, and a set of questions about housing costs measurement methodologies.

We asked the selected housing measurement experts if the rental equivalence method adequately addressed the concerns expressed by critics about the use of the asset-price approach and if any concerns emerged as a result of using the rental equivalence method. We also asked them if the adoption of the rental equivalence method made the CPI more suitable for use as a measure of cost of living. They were asked to explain their answers.

The second panel, consisting of 10 medical care measurement experts, was provided the background paper that identified and briefly described issues that several researchers view as creating measurement limitations for the CPI as a result of cost shifting among medical care payers. This

material was provided to these experts prior to our interviews as a reference point from which to begin the interviews.

In the interviews, we asked the selected medical experts whether the influence of cost shifting on medical care pricing and associated weighting of the medical care component are measurement problems or limitations that need to be addressed. We inquired about the types of health care expenditures that they thought should be included in the weighting of the medical care component of the CPI, as well as the types of prices that should be incorporated in calculating changes in medical care costs. We also asked the experts to provide advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely approximates a cost-of-living measure.

We used the following process to identify and select two panels of experts. The 10 housing measurement experts were chosen from a candidate list of more than 50 names. The 10 individuals who served as medical care measurement experts were selected from a candidate list of more than 50 names. To obtain diverse candidate lists, we conducted a literature review and contacted experts identified through this review. We asked for nominations of potential experts from the recognized experts and representatives of BLS that we met with during our initial discussions. We then contacted the nominated individuals and asked for their recommendations of experts. To avoid potential conflicts of interest, we excluded individuals from the lists who were current political appointees, current BLS employees, and previous BLS administrators responsible for making CPI methodological changes. In selecting the experts, we first selected those who were nominated most frequently and then randomly chose from those with equal frequency of nomination. We verified that these selections included experts from academic and user communities and that the selections contained at least one of the experts suggested by BLS. We recognize that the responses we received reflect only the views of the experts included.

Several of the experts initially selected were unable or unwilling to participate. We replaced these individuals with alternates from the remaining respective candidates lists.

We provided the selected housing measurement experts a package containing a letter of introduction, an instruction sheet, and response sheets. The packages were sent on September 27, October 18, and

October 24, 1995. We received responses from all 10 housing experts by November 21, 1995.

We provided the selected medical care measurement experts a package containing a letter of introduction and background information. The packages were sent between October 19 and November 17, 1995. We interviewed the 10 medical experts between October 31 and December 12, 1995.

We took steps to safeguard the privacy of the experts' responses. All categorical responses were reported in summary form. When specific comments were discussed in the report, we did not include any information that could be used to identify individual respondents. All identifying information was removed from the responses so that they could not be matched with individual experts.

We tabulated the responses for each question to obtain an overall assessment of the experts' opinions. We also did a content analysis of the medical care measurement experts' identification of advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely approximates a cost-of-living measure. From an initial reading of the responses, we developed a list of cited advantages and disadvantages. We used this list to code the responses of all experts. The coding of the responses was verified by a second coder, and a third person checked coding reliability. As a method of focusing our analysis on the recurring advantages and disadvantages identified by the experts, we adopted a decision rule to report only those advantages and disadvantages cited by two or more experts.

Experts' comments made throughout the data collection instruments were identified separately and were used in our descriptions of the experts' responses. We did a content analysis of their comments. From an initial reading of the responses, we developed lists of comments made by the housing measurement experts; lists were also developed from the medical care measurement experts' comments. We used these lists to code the responses of all experts. The coding of the responses was verified by a second coder, and a third person checked coding reliability. As a method of focusing our analysis on the recurring comments made by the experts, we adopted a decision rule to report only those comments made by two or more experts. Unless we explicitly state otherwise, when we refer to the experts' opinions, at least two of the experts expressed the same view that is being cited. We used these comments to illustrate our results.

To gain an understanding of the methodologies used in the CPI, we reviewed relevant literature and held discussions with experts in the field. These experts included individuals associated with the CPI at BLS, as well as private organizations and academic institutions. We also obtained information from BLS officials on their plans to revise and improve the CPI. On the basis of our literature reviews and discussions, we identified the major concerns that were associated with the asset-price approach that was used to measure homeowners' costs before 1983. We also identified the conceptual limitations of the current medical care costs methodology in terms of its measurement of the cost of living. We recognize that these concerns and limitations are not exhaustive; however, we believe that the most significant concerns and limitations were identified.

Consumer Price Index

A CPI is an economic statistic that measures changes over time in the general level of prices of goods and services that a reference population acquires, uses, or pays for consumption.[1] Ralph Turvey suggested that the design of a CPI rests upon how it is used and identified six uses: (1) general measure of inflation; (2) indexation by government—adjusting the burden upon people paying taxes, fines, or fees so that they pay in inflation-free currency, and preserving the purchasing power of people receiving government transfer payments; (3) prices and wage and salary adjustment in contracts; (4) current cost accounting—revaluation of fixed assets and stock for accounting purposes; (5) national accounting deflation—obtaining constant-price estimates of consumption expenditures; and (6) retail sales deflation.[2]

Definition and Uses of the U.S. CPI

In the United States, the Bureau of Labor Statistics (BLS) of the Department of Labor produces the CPI, which is a measure of the average change over time in the prices paid by urban consumers for a fixed market basket of consumer goods and services. BLS has identified the following three major uses of the CPI:

- economic indicator of inflation. The administration, Congress, and the Federal Reserve use trends in the CPI as an aid in formulating fiscal and monetary policies. Business and labor leaders, as well as private citizens, use the CPI as a guide to making economic decisions.
- escalator for wages, income payments, and tax brackets. The CPI is used by collective bargaining units to adjust wages of approximately three million workers. It is used to adjust some federal benefit payments for inflation. For example, in March 1995, as a result of changes in the CPI, 43 million Social Security beneficiaries; 6 million Supplemental Security Income recipients; 6 million railroad, military, and federal civilian retirees and survivors; and about 26 million food stamp recipients had their benefits adjusted for inflation. The CPI is also used to adjust the federal individual income tax structure to prevent bracket creep (i.e., increases in real tax rates due solely to inflation). Benefit payments, deductions for personal exemptions, and tax brackets are adjusted automatically by the CPI, rather than on the basis of discretionary policy decisions.
- deflator of selected economic statistical data series. The CPI is used to adjust selected economic statistical series for price changes and to

[1]In this report, consumption is defined as purchased goods and services; the use of semidurable and durable goods owned or rented; free goods of nature, such as air and water; and public goods.

[2]Ralph Turvey, Consumer Price Indices: An ILO Manual (Geneva: International Labor Office, 1989), pp. 4-6.

translate these series into inflation-free dollars. Examples of data series adjusted by the CPI include retail sales, hourly and weekly earnings, and components of the National Income and Product Accounts.

Construction of the U.S. CPI

Construction of the CPI begins by selecting a group of goods and services that are usually bought by the reference population in the index. The collection of goods and services, called items, is known as the market basket. The CPI market basket is developed from detailed expenditure information provided by families and individuals who participate in the Consumer Expenditure Survey (CEX). Altogether, about 29,000 individuals and families provide expenditure information for use in determining the importance, or weight, of each item in the index structure. These data are also used to select the categories of items from which specific unique commodity and service items are selected to be priced for the CPI.

BLS measures price changes each month by checking the prices of the items in the market basket and then comparing the aggregate costs of the market basket with those for the previous month. BLS obtains prices for most items through personal visits by its field representatives to approximately 30,000 retail establishments. BLS staff also sample about 60,000 housing units to obtain information on housing costs.

Components

BLS classified all CEX expenditure items into over 200 categories, arranged into seven major components: (1) food and beverages; (2) housing; (3) apparel and upkeep; (4) transportation; (5) medical care; (6) entertainment; and (7) other goods and services, such as haircuts, college tuition, and bank fees. Taxes that are directly associated with the prices of specific goods and services, such as sales and excise taxes, are also included.[3]

Expenditure Weights

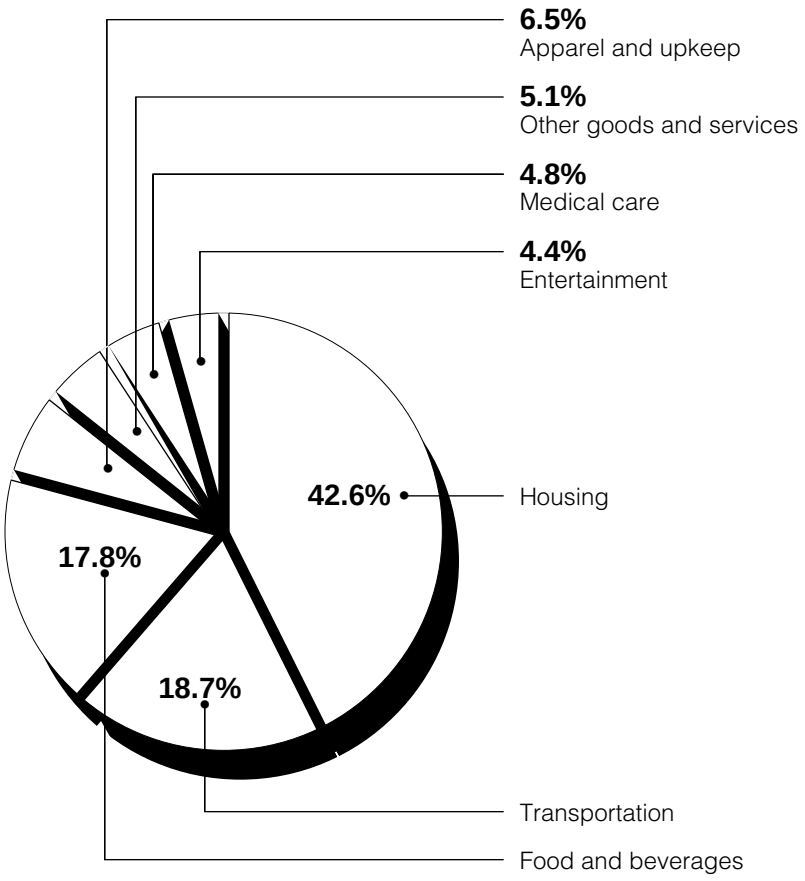
Expenditure weights are used to give proportionate emphasis for price changes of one item (or component) in relation to other items (components) in the CPI and are derived from the expenditure on those items as recorded in the CEX. Expenditure weights allow the CPI to distinguish between items that have a major impact on consumers and to provide appropriate emphases to price changes associated with them. For example, the weight for airline fares is larger than the weight given to

[3]The CPI excludes taxes not directly associated with the purchase of consumer goods and services, such as income and Social Security taxes. The CPI does not include investment items, such as stocks, bonds, real estate, and life insurance, because they relate to savings and not daily living expenses.

white bread because a larger proportion of aggregate consumer expenditures is made on airline tickets than on white bread. Therefore, if the price of white bread dropped more than one-half of its previous price, the CPI would experience a smaller amount of change than if the price of airfares experienced a slight decline.

Based on average expenditures during the reference period, expenditure weights remain fixed or constant until the next major revision of the CPI and serve as a benchmark from which price comparisons are calculated. The weights of the components for the last major revision in 1987 are those as derived from the 1982 through 1984 CEX (see fig. II.1).

Figure II.1: Expenditure Weights for 1987 CPI Revision



Source: BLS.

Relative Importance

A concept related to expenditure weights is the relative importance of an item, which can be used to show the direct effect an item has on the overall CPI price change. The relative importance shows the share of total expenditure that would occur if consumed quantities of the items remain constant.[4] Although the expenditure weights remain fixed until the CPI is

[4]The CPI is estimating the change in the cost of a constant level of consumption by using the same quantities of items in the fixed market basket. This methodology, however, does not maintain consumers' utility with this fixed-quantity, fixed-item market basket.

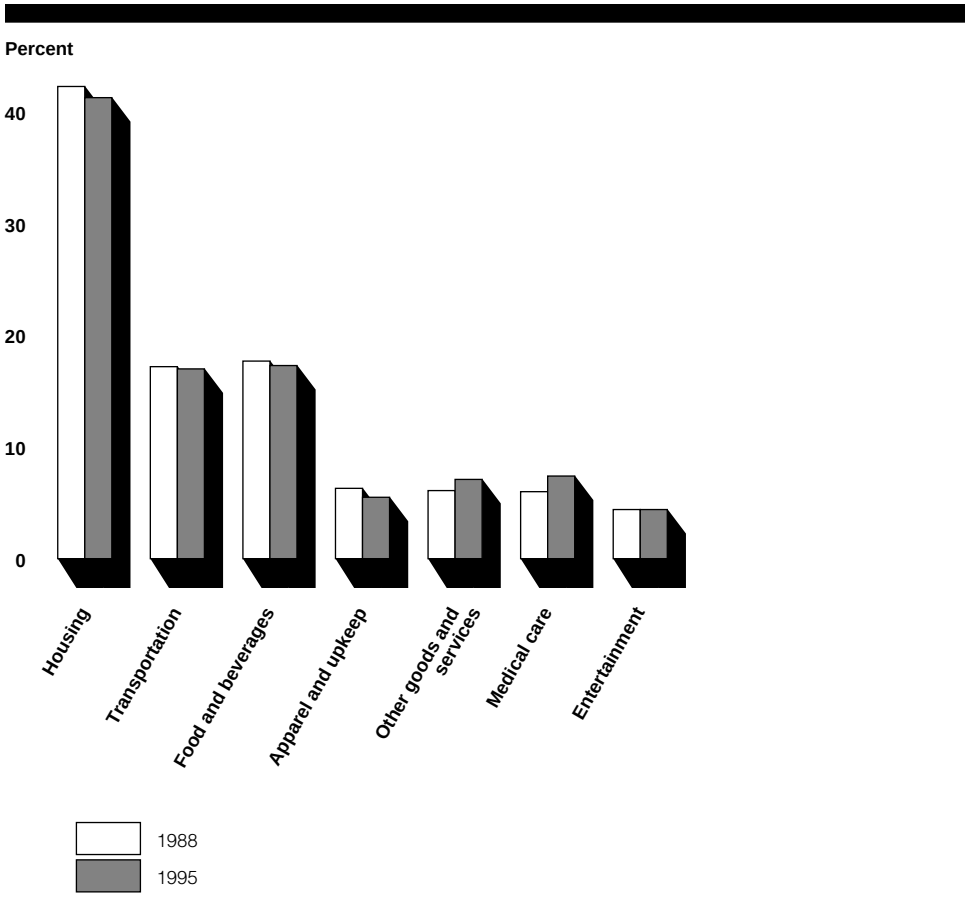
rebased in a major revision about every 10 years,[5] the relative importance changes over time reflecting the effect of price changes.

Expenditure weights proportions equal the relative importance percentages at the time of a major revision. But since BLS maintains the quantities of the items as the same amounts that were consumed in the base period, the relative importance percentages change as a result of changing prices. Items registering a greater-than-average price increase become relatively more important. Conversely, items registering a smaller-than-average price increase become relatively less important. Therefore, as the time between major revisions increases, items with higher-than-average rates of inflation have increasing rates of influence upon the CPI.[6] As shown in figure II.2, the relative importance of medical care in the index for all urban consumers, which was 6.0 in December 1988, increased to 7.4 in December 1995 because medical prices increased at a greater rate than the rate for the all items CPI—the overall CPI. During the same period, the relative importance of housing fell from 42.3 percent to 41.3 percent because housing prices increased at a lower rate than the all items CPI.

[5]Major revisions were made to the CPI in 1940, 1953, 1964, 1978, and 1987; a major revision is planned for 1998.

[6]"Substitution" bias is directly related to this feature of the CPI. Because the quantities remained fixed, the CPI fails to reflect consumer behavior in which consumers purchase larger amounts of cheaper items that can be substituted for items that have become more expensive. This results in an upward bias in the CPI, relative to a comprehensive cost-of-living index, as it gives increasing importance to items with higher-than-average price increases. A downward bias can also occur when consumers are driven to purchase more expensive substitutes, which occurs during wars and mandatory price controls.

Figure II.2: Relative Importance of Components in the CPI-U, 1988 and 1995



Source: BLS.

Pricing of Market Basket Items

Each month, BLS field representatives visit or call thousands of retail stores, service establishments, rental units, and doctors' offices all over the United States. For the entire month, they record the prices of about 94,000 items. To determine which retail outlets its representatives should visit to obtain its monthly price quotations, BLS sponsors the Point-of-Purchase Survey, conducted by the Bureau of the Census. The survey respondents are asked by outlet categories, such as doctors, whether they made specific purchases and, if so, the names and locations of all places of purchases and the expenditure amounts. BLS uses the results from the survey to select outlets for pricing. This survey is

conducted in approximately 20 percent of a sample of urban areas each year and, as a result, the entire nonshelter sample is updated every 5 years.

Price Collection for Nonshelter Items

BLS field representatives visit each selected outlet to select items that will be priced either monthly or bimonthly. For each outlet, categories of items are selected for pricing. Using probability selection methods based on revenues and volume information provided by the retail outlet, BLS field representatives use a random numbers table to select a unique item within the specified categories for pricing. The monthly price changes for the same item (e.g., cigarettes) that are collected by BLS field representatives in urban areas throughout the United States are averaged, weighted according to their relative importance, and published for selected items and the all items CPI.

Price Collection for Shelter Items

BLS uses monthly price changes of units in its housing survey for the residential rent and owners equivalent rent items in the CPI housing component. Homeowners' equivalent rent is estimated from approximately 36,000 rented units and 26,000 owned units in the BLS housing survey. To obtain values of implicit rent each month, BLS assigns a set of renter units to each owner unit based on similar housing characteristics and tracks the rent paid for these units. Each month, BLS field representatives obtain information from renter units on the rent for the current month, the previous month, and what services are provided. From owner units, field representatives obtain an estimated implicit rent—what the owners think they could rent the house for monthly, not including utilities. This collected implicit rent is only used to weight the owner-occupied housing unit; it is not used to estimate the movement of the owners' equivalent rent.

Price Collection for Medical Care Items

Medical care prices are collected in a unique manner by BLS because the medical care component of the CPI is based on out-of-pocket expenses rather than on total health care expenditures. Therefore, pricing for health insurance premiums and some other medical care goods and services, which are paid indirectly through consumer-purchased health insurance, is approached in a different manner than the items previously described.

Only the portion of health insurance premiums paid by the consumer is included in the CPI; premiums that are paid by others, such as employers, are excluded. The health insurance item in the CPI includes only that portion of the premium that is retained by the insurance carrier for

administrative costs and profits (about 10 percent of the premiums for the CPI) and is generally referred to as retained earnings.

The portions of the premium that are paid as benefits have been assigned to relevant medical care categories, such as hospital rooms. BLS calculates the price for the health-insurance-represented portion of the medical care category as a product of the price of the item and the retained earnings of the health insurance carrier. For example, the CPI's index value for health insurance hospital room is affected by both the insurance companies' retained earnings and hospital room prices; whereas, the hospital room paid-out-of-pocket and health insurance benefit payments for rooms are affected by hospital room price changes.

Unrelated to the problems associated with third-party payers for medical care, in January 1995, BLS implemented changes in its collection of prescription drug prices. These changes addressed problems associated with the introduction of generic drugs when the patent protection for the brand drug expires. The methodology that BLS field representatives used to price prescription drugs was altered. When the patent expires for a brand drug that has been consistently priced in the CPI, BLS field representatives repeat the selection process for the pharmaceutical drug to allow for the possible selection of the generic substitution to represent that drug.[7]

Like many other items, there are multiple prices paid for medical care provided by a single provider. For example, a medical care provider may have a list price that is charged to a patient who pays the fees directly, but the provider is also likely to have discounted fees that have been negotiated with third-party payers, such as a commercial health insurance company. Efforts on the part of service providers to segment their markets and to offer discounts have made the measurement of price change difficult.

In recent years, BLS has been attempting to obtain actual transaction prices from medical care providers. These prices represent the total amount of payment received from third-party payers as well as individuals who make coinsurance payments. Medicaid or other public assistance discount rates are not included because the government makes direct payment for these medical care goods and services. In 1987, BLS field representatives began to select discounted fees other than list prices for physician services. Field

[7]For a discussion of this methodological change in relation to the Producer Price Index, see Prescription Drug Prices: Official Index Overstates Producer Price Inflation (GAO/HEHS-95-90, Apr. 28, 1995).

representatives began selecting discounted fees from dentists in 1991, eye care providers in 1992, hospitals in 1993, and from pharmacies in 1995.

Historical Development of Housing and Medical Care Components

The following sections describe the development of the various methodologies used by the Bureau of Labor Statistics (BLS) to measure homeowners' costs and medical care costs in the CPI.

Previous Methods Used to Measure Housing

Before 1953, there was no separate housing component within the CPI. Purchases of new homes were not included in the market basket, but several types of housing expenses, such as rent, utilities, and current maintenance costs were included. In the mid-1930s, a majority of families rented their homes; only about 30 percent were homeowners. Current maintenance payments—mortgage interest, property taxes, insurance, repairs, and financing charges connected with buying and selling a house—of homeowners in the index population were included in the expenditure weight for rent. Because home purchase costs and payments on mortgage principal were considered as savings rather than expenditures on consumer goods, they were not included in the CPI market basket. Price changes for homeowners' current maintenance items were assumed to be consistent with the rate of price changes in rent, so this information was not separately gathered or surveyed.

1953 CPI Revision Created a Housing Index That Measured Changes in the Cost of Acquiring and Maintaining Houses—an Asset-Price Approach

Changes in housing trends, including a large number of new units and a continuing shift from rental to owner occupancy, caused BLS to create a separate housing index in the 1953 major revision. BLS altered the way housing costs were included in the index because of the increase in homeownership among urban wage earner and clerical worker families after World War II. According to BLS, by 1950, 49 percent of the families surveyed owned their own homes. Extension of credit on easy terms also made consumers less willing to defer purchasing a house. BLS dropped the assumption that home purchases should be viewed as saving, while it broadened the definition of housing to include all expenses connected with acquiring and operating a home.

In 1953, homeownership became an item in the housing component of the CPI. Consistent in concept and measurement with the overall CPI as a measure reflecting price changes, the asset-price approach to measuring homeowners' costs was designed to measure the price change of all costs associated with acquiring and operating a home during the current reference period. Thus, there was no distinction between the consumption of durable versus nondurable goods. If a home was purchased during the reference period, the CPI included it as if it were consumed that year. If a home was purchased before or after the reference period, it was not

included in the CPI. The purchase of a home and its mortgage was measured the same way as other items in the CPI.

The asset-price approach consisted of five parts: property taxes, property insurance, property maintenance and repairs, housing prices, and contracted mortgage interest costs. Expenditure weights for property taxes, insurance, and maintenance and repairs were based on the average expenditures of all households in the reference period.[1] Expenditure weights for contracted mortgage interest and housing prices were based only on individuals who purchased a home during the reference period. These weights were based on the total price that these individuals paid for homes purchased during the survey year, minus the price of homes that they sold during that year, plus costs associated with the purchase and selling of homes. The index weights included only newly purchased homes, or homes entering the market as owner occupied for the first time and the total amount of interest expected to be paid over the first one-half of the stated life of the mortgage.[2]

Concerns Expressed About the Asset-Price Approach

In 1981, we reported that the asset-price approach to measuring homeowners' costs was subject to criticism and documented several of the concerns in our report Measurement of Homeownership Costs in the Consumer Price Index Should be Changed (GAO/PAD-81-12, Apr. 16, 1981). For this study, we categorized these and other concerns we located in our literature search or that were expressed to us in our discussions with experts. We also sent the categorized concerns to our recognized housing measurement experts (see app. V).

1. The asset-price approach included the value of the asset of the home. The 1961 Stigler committee report criticized the asset-price approach because it measured the change in the prices of assets, rather than the change in the user cost of consuming the flow of services provided by durable goods. By doing so, the asset-price approach failed to separate the investment aspect of homeownership from the immediate consumption (flow-of-shelter services) aspect of homeownership.

2. The asset-price approach misstated inflation. From 1959 through 1980, the homeownership item rose at a higher rate than other items and the all

[1]For a description of expenditure weights and relative importance of items in the CPI, see appendix II.

[2]From 1953 through 1964, the entire mortgage payment for a house was included. By the 1964 revision, BLS determined that mortgages were either paid off or refinanced at about one-half of the term of the mortgage.

items CPI.[3] The homeownership item of the CPI did not track the same as other housing price measures from real estate experts, and it did not track the same as the personal consumption expenditures price deflator. Also, during the period of double-digit inflation, it was affected by the volatility of housing prices and mortgage interest rates.

3. The asset-price approach misrepresented the cost of living. This approach was not based on the cost-of-living concept. Notably, it did not measure actual outlays for shelter by failing to incorporate concepts such as income tax deductions for homeownership. Because of the methodologies used to determine the weighting and price changes of homeownership, critics charged that the measure distorted the cost of living for the basic necessities of food, housing, fuel, and medical costs for the elderly and the poor, who were least likely in the population to buy new homes.

4. The asset-price approach failed to represent all homeowners. The expenditure weights used for house prices and mortgages were based on 6 percent of the respondents in the consumer expenditure survey who purchased a home during the survey period. The weighting calculations effectively excluded survey respondents who were making a mortgage payment during the survey period and those who had paid off their mortgage prior to the survey. The asset-price approach was affected by the rate of new home purchases in the reference period, which could vary widely for a number of reasons between revisions. By including the total net purchase price and the first one-half of the mortgage costs for homeowners who recently purchased their homes, the weights for these two items were viewed to be too large. For example, the ratio between homeownership and residential rent in the CPI was double the same ratio in the National Income and Product Accounts.

5. The asset-price approach used limited home sales and mortgage data. BLS could not obtain consistent house price data in local areas. As a result, it used Federal Housing Administration's (FHA) 203b data to calculate monthly price changes in house prices. BLS also relied on data on conventional mortgages supplied by the Federal Home Loan Bank Board (FHLBB) and interest rate ceilings on FHA and Department of Veterans Affairs (VA) loans for mortgage interest rates. As a result of the data limitations, the pricing information used to move the homeownership item

[3]In the questionnaire we sent to the housing measurement experts, we stated that the homeownership item rose at more than double the rate of other items and of the all items CPI. BLS analysts cannot confirm this magnitude of difference for these years; the data are no longer available to calculate the amount of difference.

was based on a small unrepresentative sample of the housing market. For example, by 1980, monthly changes in the index were based on homes with FHA-insured mortgages that had a low cap ($67,500) and low interest rates (2 percent below market rates), which caused buyers to make large down payments on high-priced homes to get the lower FHA interest rates. This consumer behavior raised the housing prices of FHA-financed homes. Because FHLBB, FHA, and VA data did not contain information about new mortgage instruments, such as adjustable rate mortgages and owner-held financing, FHA data were becoming less representative of the mortgage markets. Also, during this time, FHA data were declining in quality because FHA was changing the methods used to collect its data.

6. The asset-price approach included interest costs. Unlike some other durable goods, contracted interest paid for homes was included in the CPI. Government action to raise or lower interest rates was thereby reflected directly in the CPI through the inclusion of mortgage interest. Because the executive branch could determine the interest rate ceiling for FHA-financed homes, it could have some control over inflation as measured by the CPI.

Alternative Methodologies Considered

BLS considered several alternative methods of measuring homeowners' costs and, in 1980, published five experimental measures that represented alternative homeownership concepts. Two of these measures used a user cost approach, which included prices for property taxes, property insurance, property maintenance and repairs, and mortgage interest rates, and made adjustments for the interest equity and appreciation or depreciation of the house's value. Two measures applied an outlays approach, which used an average of the interest rates paid over time instead of interest paid in current dollars, for a house purchased during the reference period. The fifth measure used a rental equivalence method, which was designed to capture the value of shelter services for owner-occupied units by determining what rent would be charged for those units had they not been owner occupied.

In January 1983, BLS changed the measurement of homeowners' costs in the CPI-U from an asset-price approach to the rental equivalence method (the CPI-W was changed in 1985). Even before the implementation of the rental equivalence method, concerns emerged about how BLS would identify rental units that were comparable in structure and location to owner-occupied dwellings. To use a rental equivalence method, BLS developed a rent index that could estimate a rental price for owner-occupied units. Rental housing, however, is generally located in

different neighborhoods and may not be easily matched with owner-occupied housing. Some researchers question the conceptual basis of using rental data to represent homeowners' costs, since the motivations to buy and rent are different. Also, questions have been raised by researchers about how BLS treats vacant units, units under rent control restrictions, and remodeling of owner-occupied units.

BLS implemented adjustments in 1988 and 1995 to address some concerns with the rental equivalence method. In 1988, BLS began making adjustments for the depreciation of housing to help separate quality changes from price changes. These technical adjustments are applied to the change in rent for each shelter index in each geographic area. The same adjustment was made to both the renters' and owners' equivalent rent indexes. In January 1995, two technical changes were made to improve the validity and reliability of the residential rent and homeowners' equivalent rent indexes. According to BLS officials, major enhancements to the housing component are planned for the upcoming major revision. These improvements are to be implemented beginning with data for January 1999.

Previous Methods Used to Measure Medical Care

Medical care has always been in the CPI, and consumer-purchased health insurance has always been included as a medical expense. Originally, the rate of price change for health insurance was assumed to be equal to the average of other medical items. BLS, in the 1950 revision, deviated from this approach and began to directly price health insurance policies. The approach was changed in the 1964 revision to an approach that again based health insurance price changes on prices observed for other medical goods and services, as well as the insurance carriers' operating costs and profits. In the 1978 and 1987 revisions, BLS made minor adjustments in measuring health insurance.

Health Insurance Directly Priced in 1950

In 1950, BLS began direct pricing of health insurance by pricing the gross premium rate for the most widely purchased family group contract for Blue Cross hospitalization. In December 1958, the Blue Shield surgical insurance rates were similarly included in the index. Two concerns, however, emerged with the CPI's approach of direct pricing of health insurance policies: (1) defining constant quality for making adjustments in premium rate changes and (2) lack of geographic delineation within industrywide health insurance policies.

Quality adjustment problems centered on changes in (1) utilization of health care services, which is based on the total number of paid insurance claims and (2) benefit coverage. According to BLS, changes in utilization presented problems both in concept and application. Rate changes due to increased utilization of health care services were treated as price changes, rather than as changes in benefit coverage. An increase in utilization was assumed to mean an increase in the number of claims, which translated to greater costs to the insuring company and the consumer. Some critics in the medical care field objected to using changes in utilization as price increases because doing so failed to eliminate from the CPI the effect of a change in the quantity of medical services provided. Health insurance rate changes resulting from changes in benefit coverage were excluded from the CPI; however, isolating such changes became increasingly difficult. For example, charges for hospital rooms or physician fees can increase at the same time that a benefit plan increases its coverage of these services. In addition, Blue Cross and Blue Shield reported data quality problems and a lack of uniform reporting from various geographic areas, which led to difficulties in discerning the utilization and cost factors affecting a benefit plan.

Another problem BLS had with direct pricing of health insurance policies was that many commercial insurance carrier contracts were written on an industrywide basis, rather than by geographic areas. Data needed to calculate the CPI by various locations were not available. BLS, therefore, had to estimate prices by locations from the industrywide insurance data.

In response to the concerns about direct pricing of health insurance policies, BLS engaged in a series of conferences with the Health Insurance Association of America to discuss the uncertainties in pricing premium rates. BLS concluded that pricing medical care services directly, rather than direct pricing of health insurance policies, would be the best method for measuring health insurance rate changes.

1964 CPI Revision Dropped Direct Pricing of Health Insurance

In the 1964 revision, the methodology BLS used to directly price Blue Cross and Blue Shield premiums was dropped from the CPI. In its place, BLS adopted a method that indirectly priced a number of hospital and professional services on the basis of claims data[4] plus retained earnings—the operating costs in administering the insurance plan and any remaining profit.

[4]Prices were already being collected for medical services as part of the BLS pricing program for out-of-pocket medical expenses.

Another change BLS made to the CPI in 1964 reversed the approach taken to reflect changes in the utilization of health care services as price movements. Beginning in 1964, such changes were viewed as a redefinition of the risk being covered, or benefit coverage, thus a change in the quality of health care. Under this interpretation, premium changes resulting from utilization were not to be reflected in the CPI because they were no longer viewed as price changes.

Again, in this revision, the weight, or proportionate importance, for the health insurance component was based on the average expenditure for health insurance reported in the Consumer Expenditure Survey (CEX).[5] The share of insurance paid by the employer was excluded from the weight; employers' contributions for health care were viewed as income and not as expenditures for employees. The weight was divided into two subweights: (1) claims data, which reflect the benefits companies pay out; and (2) retained earnings—the funds companies have left over after paying for benefits. Although consumers do not pay directly for them, consumers' insurance premium payments are affected by changes in retained earnings.

Medical Care Component Published Separately for the First Time

The 1978 revision of the CPI introduced a new process that priced a broader range of services and, for the first time, medical care was separated from recreation and published as a separate component of the CPI. Also, a new sample design and collection methodology was incorporated into the 1972 through 1973 CEX, which improved accuracy, and provided more complete data for the selection and weighting of items for the CPI market basket. For example, the number of basic types of priced medical services increased from 33 to 258 under the 1978 revision.

In 1987, BLS made definition changes in the representation of health insurance premiums; the changes, however, did not alter the index results. BLS viewed these changes as clearer definitions of health insurance's role in the CPI. The changes were in the presentation of medical subcategories. Instead of presenting information separately for items by those paid by out-of-pocket and those paid by insurance, in the 1987 revision, the expenditures were combined for a single medical item.

[5]The CEX is a survey of the spending habits of American families. Each year approximately 4,800 families are interviewed.

BLS Began to Incorporate Discounted Transaction Prices in 1987

Until 1987, all medical care price changes were based on the list prices that providers charged a patient who pays the fees directly. As described in appendix II, BLS began incorporating discounted transaction prices—fees that have been negotiated with third-party payers—for physicians' services in 1987. BLS made this change because it recognized that up until this time, price changes for both out-of-pocket expenses and insurance benefit payments were based on list prices. In 1991, BLS began collecting transaction prices for dentists and in 1992 for eye care providers.

During 1993, BLS began including discounted transaction prices for hospital services, and about 15 percent of the hospital prices in the CPI are discounted prices. The newest procedure for obtaining hospital transaction prices is for BLS field staff to select from sampled hospitals a payer type and then ask for a patient's bill associated with that payer. BLS obtains from the bill the diagnosis for the hospitalization and then identifies the eight largest items on the bill and finds out what prices the health plan has negotiated with the hospital. BLS records whatever the plan has negotiated. A BLS official said, however, not all hospitals cooperate in providing this information, thus, published charges are still collected for some outlets.

Experts and Their Affiliations

Housing Measurement Experts

David Carrier
Regional Financial Associates

Robert Gillingham
Department of the Treasury

Pat Hendershott
The Ohio State University

Steve Malpezzi
University of Wisconsin at Madison

Joel Popkin
Joel Popkin and Company

William Randolph
Congressional Budget Office

Thomas Thibodeau
Southern Methodist University

Robert VanOrder
Federal Home Loan Mortgage Corporation

John Weicher
Hudson Institute

David Wyss
DRI/McGraw-Hill

Medical Care Measurement Experts

Ernst Berndt
Massachusetts Institute of Technology

David Cutler
Harvard University

Patricia Danzon
University of Pennsylvania

David Dranove
Northwestern University

Charlie Fisher
Jung Xing Associates

Mark Freeland
Health Care Financing Administration

Thomas Getzen
Temple University

Robert Graboyes
Federal Reserve Bank of Richmond

Joseph Newhouse
Harvard University

James Rogers
American Medical Association

Data Collection Instruments and Background Information of the CPI Component Methodologies

This appendix contains copies of the cover letters, instruction/introduction sheets, and questionnaires that we sent to the experts on the housing and medical care components of the CPI.

Homeownership Cover Letter

GAO

United States
General Accounting Office
Washington, D.C. 20548

General Government Division

Date

Address

Dear :

As we indicated to you in our recent conversation, the U.S. General Accounting Office, an independent agency of Congress, is studying certain methodologies that are used in producing the Consumer Price Index (CPI). We are focusing on one methodology in particular at this time--the rental equivalence methodology that is used to measure homeowners' cost of housing. Thank you very much for agreeing to assist us in this effort.

The enclosure accompanying this letter identifies and briefly describes concerns expressed about the asset-price approach used to measure homeownership before 1983. To address these concerns, the Bureau of Labor Statistics replaced the asset-price approach with the rental equivalence method.

We would like to obtain your views about the rental equivalence methodology in regard to these concerns and any new concerns you may have about the use of this methodology. We are also interested in your assessment as to whether the adoption of this method has made the CPI more suitable for use as a cost-of-living index.

Please review the enclosure and follow the instructions on the first page. We would appreciate receiving your responses by October 13, 1995. Please return the entire enclosure and any additional materials you may wish to provide us in the pre-addressed envelope.

We will take steps to safeguard the privacy of your responses. All categorical responses will be reported in summary form. If specific comments are discussed in our report, we will not include any information that could be used to identify individual respondents. Before releasing any report, we will remove all identifying information from your response sheets so it can no longer be matched with your name.

If you have any questions about this request, please contact Kathleen Scholl on (202) 512-7262 or Pam Pavord on (202) 512-4102.

Sincerely yours,

L. Nye Stevens, Director
Federal Management
and Workforce Issues

2

Instruction Sheet

INSTRUCTIONS

Please review the material contained in this enclosure. It includes a historical synopsis of the Bureau of Labor Statistics' (BLS) housing cost measurement for the Consumer Price Index (CPI), including brief descriptions of the concerns that stimulated BLS' adoption of the rental equivalence method in the 1980s; an overview discussion of the rental equivalence method in terms of measuring the cost of living; and a set of questions that we would like you to answer about housing cost measurement.

We have provided space after each question for you to write your response. We would appreciate receiving your response by October 13, 1995. Please return the entire enclosure and any additional materials you may wish to provide us in the pre-paid Federal Express envelope provided. If you have any questions about this request, please contact Kathleen Scholl on (202) 512-7262 or Pam Pavord on (202) 512-4102. Thank you for your assistance.

BACKGROUND OF CPI MEASUREMENT OF HOUSING COSTS

Early Measurement of Housing Costs

Homeownership was not included in the original Consumer Price Index (CPI) that was designed to represent 1917 through 1919 expenditures of wage earner and clerical worker families in large shipbuilding and industrial centers. Mainly it was not included because these families typically did not own homes. For those who owned their homes, home purchase costs and payments on mortgage principal were considered as savings and, therefore, were not included in the CPI market basket. Changes in the shelter component of the CPI were based on the cost of renting urban housing.

Measurement of Homeowners' Costs Begun in 1953

In the 1953 revision of the CPI, costs associated with homeownership were incorporated into the CPI's shelter component because homeownership among the urban wage earner and clerical worker population increased following World War II. The homeownership measure in the CPI--the asset-price approach--was designed to measure changes in the cost of acquiring, financing, and maintaining houses. The asset-price approach to calculating homeowners' costs, however, was criticized for several reasons as briefly described in the following:

1

Included the Value of the Asset of the Home. The 1961 report of the National Bureau of Economic Research's Price Statistics Review Committee chaired by George Stigler criticized the measure of homeowners' costs because it measured the change in the prices of assets, rather than the change in the user cost of consuming the flow of services provided by assets. By doing so, the measure of homeowners' costs failed to separate the investment aspect of homeownership from the immediate consumption (flow of shelter services) aspect of homeownership.

Misstated Inflation. From 1959 through 1980, the shelter component rose at more than double the rate of other components and of the all items CPI. The housing prices item of CPI did not track the same as other housing price measures from real estate experts and it did not track the same as the personal consumption expenditures implicit price deflator. Also, during the period of double-digit inflation, it reflected the volatility of housing prices and mortgage interest rates. In addition, the asset-price approach did not measure actual outlays for shelter by failing to incorporate concepts such as income tax deductions for homeownership.

Misrepresented the Cost of Living. The asset-price approach was not based on the cost-of-living concept. Because of the methodologies used to determine the weighting and price changes of homeownership (see following sections), critics charged that the measure distorted the cost of living by mixing together the cost of shelter and the investment value of housing. This may have particularly distorted the cost of living for the basic necessities of food, housing, fuel, and medical costs for the elderly and the poor, who were the least likely in the population to buy new homes.

Failed to Represent All Homeowners. The expenditure weights used for house prices and mortgages were based on the respondents in the consumer expenditure survey who purchased a home during the survey period (6 percent of all respondents). The weighting calculations effectively excluded survey respondents who were making a mortgage payment during the survey period and those who had paid off their mortgage before the survey. The asset-price approach was affected by the rate of new home purchases in the reference period, which could vary widely for a number of reasons between revisions. By including the total net purchase price and the first one-half of the mortgage costs for homeowners who recently purchased their homes, the weights for these two items were viewed to be too large. For example, the ratio between homeownership and residential rent in the CPI was double the same ratio in the National Income and Product Accounts.

Used Limited Home Sales and Mortgage Data. BLS could not obtain consistent house price data in local areas and thereby used Federal Housing Administration's (FHA) 203b data to calculate monthly price changes in house prices. It also used data on conventional mortgages supplied by the Federal Home Loan Bank Board (FHLB) as well as interest rate ceilings on FHA and Veterans Administration (VA) loans for mortgage interest rates. As a result of the data limitations, the pricing information used to move homeownership costs was based on a small unrepresentative sample of the housing market. For example, by 1980, monthly changes in the CPI were based on homes with FHA-insured mortgages that had a low cap ($67,500) and low interest rates (2 percent below market rates), which caused buyers to make large downpayments on high-priced homes to get the lower FHA interest rates. This

2

consumer behavior raised the housing prices of FHA-financed homes. Because the FHLB, FHA, and VA data did not contain information about new mortgage instruments, such as adjustable rate mortgages and owner-held financing, the data were becoming less representative of the mortgage markets. Also, FHA data were declining in quality because FHA was changing the methods used to collect its data.

Included Interests Costs. Unlike some other durable goods such as appliances, contracted interest paid for homes was included in the CPI. Government action to raise or lower interest rates was thereby reflected directly in the CPI through the inclusion of mortgage interest. Because the executive branch could determine the interest rate ceiling for FHA-financed homes, it could have some control over inflation as measured by the CPI.

Current Measurement of Homeowners' Cost

In 1983, a rental equivalence method replaced the asset-price approach to homeownership costs for the CPI-U (the same change was made for the CPI-W in 1985). The central purpose of the change was to separate shelter costs from the investment aspect of homeownership so that the CPI would reflect only the costs of shelter services provided by owner-occupied homes.

The rental equivalence method is intended to measure changes in the value of the flow of services consumed by a homeowner by estimating the changes in the implicit rent of the home. Implicit rent is the amount of rent that homeowners could charge if they were to lease their homes to others instead of living in the homes themselves. Because implicit rent is not an actual financial transaction, such as the payment to a landlord from a renter, it must be estimated. This is accomplished by measuring the change in market rents for rental housing units with similar characteristics and in similar locations as the homeowner units.

CPI as a Cost-of-Living Index

Although BLS has stated that the CPI is not a cost-of-living index, the CPI is used as a cost-of-living index to adjust federal income tax brackets and many federal benefits to offset the effects of inflation. A cost-of-living index, or constant-utility price index, however, cannot be definitively calculated in part because it would require valuation of items that are not easily priced, such as environmental quality.

Some of the changes that BLS has made in the CPI, however, have been viewed by researchers as making the CPI a closer approximation of the cost of living. In particular for owner-occupied housing, the move toward measuring a change in the cost of the flow of shelter services provided by houses (consumption of goods and services) might be viewed as a move to better approximate a cost-of-living index.

3

Housing Questionnaire

Our questions address two issues: the effectiveness of the rental equivalence method in (1) addressing the concerns about the asset-price approach, including any new concerns that the rental equivalence method may present, and (2) making the CPI a closer approximation of the cost of living.

PLEASE REVIEW AND ANSWER THE QUESTIONS THAT FOLLOW.

1. In general, has the rental equivalence method adequately addressed the concerns expressed earlier about the use of the asset-price approach? Please explain why it has or has not addressed these concerns.

☐ No

☐ Yes

_____

_____

_____

_____

_____

_____

2. Have any concerns emerged as a result of using the rental equivalence method?

☐ No

☐ Yes -- If yes, please explain.

_____

_____

_____

_____

_____

4

3. Did the adoption of the rental equivalence method make the CPI either more or less suitable for use as a measure of cost of living? Please explain the reason(s) for your choice.

☐ More suitable

☐ Less suitable

☐ Neither

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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4. If you have any additional comments on the previous questions, the rental equivalence methodology, related concerns, or the use of the CPI as a measure of the cost of living, please provide them.

6

Medical Care Cover Letter

GAO

United States
General Accounting Office
Washington, D.C. 20548

General Government Division

Date

Address

Dear :

As we indicated to you in our recent conversation, the U.S. General Accounting Office, an independent agency of Congress, is studying certain methodologies that are used in producing the Consumer Price Index (CPI). We are focusing on one methodology in particular at this time--the methodology that is used to measure medical care costs and the application of cost-of-living concepts for its measurement.

Thank you for agreeing to meet with us concerning measurement of the medical care component of the CPI. This letter includes background material for your review before we meet to obtain your opinions about the medical care component of the CPI.

The enclosure accompanying this letter identifies and briefly describes issues that several researchers view as creating measurement limitations for the CPI as a result of cost shifting among medical care payers. We have provided this material as a reference point on which to begin our interview. Please do not regard it as a position paper. You may have different perceptions of these issues and we welcome your comments during the interview.

We are also aware of other well-documented issues (e.g., adjustments for change in quality of health care) related to the measurement of medical care costs and ongoing research at the Bureau of Labor Statistics (BLS) and elsewhere to address these issues. This review, however, focuses on issues related to the measurement of the medical care component of the CPI in terms of its use as a cost-of-living index. Therefore, we are interested in documenting your opinions regarding this specific aspect of measuring medical care costs.

During our interview we would like to obtain your views on the following:

--whether the influence of cost shifting on medical care pricing and associated weighting of the medical care component are measurement problems or limitations that need to be addressed,

--types of health care expenditures that should be included in the weighting of the medical care component,

--types of prices that should be incorporated in calculating changes in medical care prices, and

--advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely approximates a cost-of-living measurement.

Please review the enclosure before our appointment on [date] at [location] at [time].

We will take steps to safeguard the privacy of your responses. All categorical responses will be reported in summary form. If specific comments are discussed in our report, we will not include any information that could be used to identify individual respondents. Before releasing any report, we will remove all identifying information from your responses so they can no longer be matched with your name.

If you have any questions about this request, please contact Kathleen Scholl on (202) 512-7262 or Pam Pavord on (202) 512-4102.

Sincerely yours,

L. Nye Stevens
Director, Federal Management
and Workforce Issues

2

Medical Care Introduction

INTRODUCTION

Following recommendations of a 1961 National Bureau of Economic Research Committee, BLS has sought to use cost-of-living theory to motivate changes and decisions in the CPI. In the 1970s, BLS began research on homeowners' costs of shelter that conceptually moved the CPI toward a cost-of-living index. Instead of tracking the change in prices of a fixed market basket of goods and services purchased directly by consumers, as is the recognized concept behind the CPI, an index based on cost-of-living concepts would attempt to measure changes in the cost of consumption for a constant level of utility--satisfaction derived from the consumption. In theory, it would allow for substitution among consumed goods and services to maintain a constant level of utility. A comprehensive cost-of-living index would include purchased commodities and services; the use of semidurable and durable goods owned or rented; free goods of nature, such as air and water; and public goods. In practice, however, some of these components cannot be readily measured and thus are either approximated or excluded from the scope of the CPI.

In the case of medical care, the CPI is based on out-of-pocket medical expenses and health insurance premiums reported in the Consumer Expenditure Survey (CEX). These expenses and premiums represent about 20 percent of total consumption of medical care. The CPI does not include medical care that consumers receive through employers and government-provided health care programs, such as Medicaid and part A of Medicare.

Cost shifting among payers who are represented in the CPI and those who are not may have an impact upon the change of prices as recorded in the CPI. Most notably they would affect the weighting--the proportionate emphasis given to price changes of one component in relation to other components in the CPI--and the specific types of medical care prices that are tracked in the CPI.

Weighting of Medical Care Component

The appropriateness of the weight assigned for medical care in the CPI has been called into question by some researchers who contend that the weight distorts price changes that result from cost shifting among health care payers. An inappropriate weight of a component in the CPI can lead to over- or understatement of the rate of inflation, if the rate of price change for that component differs from other components in the CPI.

Some researchers contend that a weight based on out-of-pocket expenditures can result in an inaccurate level of importance being assigned to a component of the CPI, as compared with a weight based on cost-of-living concepts, when costs shift between payers who are included in the CPI and those who are excluded. For example, efforts by employers to lower their costs by limiting health care coverage and benefits provided to their employees has shifted medical costs to employees' households. BLS reported that the proportion of families paying all or part of their health insurance premiums has increased from 60 percent in 1984 to 67 percent in 1992.[1] BLS reported that between 1984 and 1992 average household out-of-pocket medical care expenditures rose from $1,049 to $1,634, a rise of about

[1]Bureau of Labor Statistics, "Health Insurance Premiums Dominate Health Care Budget of Consumers" Issues in Labor Statistics (Washington, D.C.: U.S. Government Printing Office, 1994).

1

7 percent per year. These data suggest that the weight for medical care, which is based on 1982 through 1984 CEX data, is lower than one that would be derived from more recent out-of-pocket medical expenses. A weight based on total medical care consumption, however, would not be affected by cost shifting over time between payers because all costs, regardless of who paid for the care, would be represented in the CPI.

In addition to the weighting problems associated with of cost shifting between payers, a change to a cost-of-living basis for the medical care component would alter the magnitude of the overall influence of changes that medical care prices have on the CPI. Using data from the National Income and Product Accounts, the Congressional Budget Office (CBO) estimated that the weight assigned to medical care in the CPI would double from about 7 to about 15 percent if total consumption of medical care was incorporated.[2]

Pricing of Medical Care Items

Researchers have noted the divergence in medical care price indexes when one group of payers subsidizes another. Cost shifting occurs when third-party payers are charged prices that differ from marketplace prices paid by consumers. CBO noted that a CPI based on out-of-pocket medical costs fails to capture price distortions caused by cost shifting.[3] Cost shifting may occur when the government does not reimburse health care providers for full cost of services to Medicare patients and providers try to recoup the difference by increasing the costs to their private-pay patients, e.g., those paying for services themselves. CBO found that Medicare reimbursement in the early 1990s paid for about 90 percent of the costs of covered services, compared with full reimbursement during the mid 1980s.[4] CBO observed that the CPI for out-of-pocket medical care costs increased faster than the price index for Medicare during that period because of cost shifting.[5] Similarly, a Health Care Financing Administration study of hospital prices from 1978 through 1989 found that in every year except 1985, hospital list prices as recorded in the CPI, which are prices charged to private-pay patients, rose more rapidly than transaction prices, which are list prices adjusted for discounts given to third-party payers.[6]

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[2]John F. Peterson, "Is the Growth of the CPI a Biased Measure of Changes in the Cost of Living?" CBO Papers (Washington, D.C.: Congressional Budget Office, 1994) pp. 22-23.

[3]Peterson, pp. 22-23.

[4]Congressional Budget Office, "Responses to Uncompensated Care and Public-Program Controls on Spending: Do Hospitals 'Cost Shift'?" CBO Papers (Washington, D.C.: Congressional Budget Office, 1993).

[5]Peterson, pp. 22-23.

[6]Charles R. Fisher, "Trends in Total Hospital Financial Performance Under the Prospective Payment System," Health Care Financing Review, Vol. XIII (1992), p. 4.

2

Medical Care Questionnaire

Inteview Questions

1. Our background paper discusses two areas of concern -- the influence of cost shifting on medical care pricing and the associated weighting of the medical care component. In your view, are these concerns significant CPI measurement problems or limitations that need to be addressed.

Interviewer Coding

Influence of cost shifting on medical care pricing (*Check one*:)

- ☐ Yes, significant concern
- ☐ No, not a significant concern
- ☐ Other (*Include explanation above.*)
- ☐ Don't know
- ☐ No opinion

****

Weighting of the medical care component (*Check one*:)

- ☐ Yes, significant concern
- ☐ No, not a significant concern
- ☐ Other (*Include explanation above.*)
- ☐ Don't know
- ☐ No opinion

1

2. In your view, what additional health care expenses, if any, should be included in the weighting of the medical care component? Please explain the reasons for your view.

Interviewer Coding

(*Check one*:)

- ☐ No additional expenses should be included
- ☐ Don't know
- ☐ No opinion
- ☐ Other (*Include explanation above.*)

- ☐ Additional expenses should be included--> (*Check all that apply below.*)
  - ☐ Medicaid
  - ☐ Medicare Part A
  - ☐ Medicare Part B/government paid
  - ☐ Federal government provided (other than Medicaid/Medicare above)
  - ☐ State government provided
  - ☐ Local government provided
  - ☐ Charitable organization provided
  - ☐ Employer provided
  - ☐ Expenses absorbed by health care providers
  - ☐ Union provided
  - ☐ All of the above
  - ☐ Other (*Include explanation above.*)

2

3. Our background paper discusses research related to using discounted transaction prices rather than list prices in calculating changes in medical care prices. In your opinion, should discounted transaction prices be included in the CPI in some manner? Please explain why or why not.

Interviewer Coding

(*Check one:*)

☐ Discounted transaction prices should be included. (*If checked, ask question 3A.*)

☐ Discounted transaction prices should not be included. (*If checked, skip to question 4.*)

☐ Don't know (*If checked, skip to question 4.*)

☐ No opinion (*If checked, skip to question 4.*)

☐ Other (*Include explanation above.*)

3

3A. If you think discounted transaction prices should be included, please describe where they might be incorporated? (*Be prepared to give an example, like "Use both, maybe list prices for out-of-pocket expenses and transaction prices for all other care."*)

Interviewer Coding

(*Check one.*)

- ☐ Use transaction prices only; do not use list prices.
- ☐ Use both list and transaction prices (no further elaboration)
- ☐ Use list prices for (consumer?) out-of-pocket, transaction prices for all other care
- ☐
- ☐
- ☐ Other (*Include explanation above.*)

4

4. What would be the advantages and disadvantages of changing the current measurement of medical care costs to an approach that more closely approximates a cost-of-living measurement?

5. Do you have any additional observations or comments you would like to make on the measurement of the medical care component of the CPI, related concerns, or use of the CPI as a measure of cost-of-living?

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Comments From the Bureau of Labor Statistics

U. S. Department of Labor

Commissioner for
Bureau of Labor Statistics
Washington, D.C. 20212

JUL 11 1996

Mr. L. Nye Stevens, Director
Federal Management and
Workforce Issues
General Accounting Office
Washington, D.C. 20548

Dear Mr. Stevens:

Thank you for the opportunity to comment on your draft report, "CONSUMER PRICE INDEX, Progress and Problems in Measuring the Cost of Living." The report summarizes the views of several independent experts on two aspects of price measurement in the Consumer Price Index (CPI): (1) use of the rental equivalence approach for measuring change in the price of housing services consumed by owner-occupants; and (2) the current methodologies for calculating cost weights and measuring change in the price of medical care services. The panel of experts generally approved of the continued use of the rental equivalence approach. My comments, therefore, will focus on the report's treatment of medical care issues.

See comment 1.

Although the General Accounting Office (GAO) makes no recommendations in the report, its observations and commentary repeatedly hold the current CPI up against "the cost-of-living concept." In the introduction, the report acknowledges that the CPI was not designed specifically as a cost-of-living index and that, to date, the Federal Government has not developed a comprehensive cost-of-living index. Apparently, however, the latter situation is assumed to reflect only a failure of implementation, not the theoretical difficulty of defining the cost of living. The report asserts that incorporating expenditures on medical care goods and services by third party payers would move the CPI toward "the cost-of-living concept." The assumptions implicit in this line of argument are that there exists one theoretically correct, comprehensive measure of the cost of living and that the CPI deviates from this measure because it does not have a cost-of-living concept as a measurement objective. Neither assumption is strictly correct.

Mr. L. Nye Stevens--2

JUL 11 1996

Jack Triplett (Bureau of Labor Statistics (BLS) Working Paper No. 132, page 2) summarizes the theoretical issues related to defining the cost of living by stating: "Thus, there are many cost-of-living index answers to many cost-of-living questions. Each question can be thought of in terms of a compensation for inflation, and each cost-of-living index is an answer that provides an appropriate measure for some purpose." The appropriate way to construct a cost-of-living index depends upon what one assumes about: (1) individuals' utility functions; (2) how individual measures of welfare are to be aggregated into a population measure; (3) the intertemporal scope of the index; and (4) the breadth of the index in terms of all of the aspects of human experience that contribute to satisfaction. Setting up the context for an index imposes a trade-off: The more flexible and comprehensive the assumptions made, the more difficult the index becomes to construct.

Issues relating to the conceptual breadth of the index are most relevant to the arguments presented in the GAO report. A fully comprehensive cost-of-living measure would include within its scope not only market goods and services, but also everything that contributes to human satisfaction, including environmental amenities, the public goods provided by government from tax revenues, and any other "quality of life" variables. Such a broad scope presents formidable problems in measuring both quantities consumed and prices paid. Environmental quality, as experienced by any individual, is difficult to quantify, and the value placed on a given level of quality (i.e., the willingness to pay for it) is not observable. For public goods provided by government, such as national defense, it is likewise impossible to observe an individual's consumption and valuation, let alone relate this consumption to the tax payment or "price" he or she pays for it. In general, there is no obvious way to infer this information from what can be observed or queried of a sample of consumers.

The report assumes that the CPI would move closer to "the comprehensive cost-of-living concept" if it included all medical expenses, whether paid for by government, by employers, or out-of-pocket by consumers themselves. Even if the term "comprehensive" is interpreted here as comprehensive with respect to the scope of the economic benefits from government, then this statement need not be true. Other economic benefits that conceptually should be included in the more comprehensive index may have effects that counteract those of the inclusive medical care component alone. An index that included an expanded scope only in the medical care component would be a

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partial move toward a comprehensive index, and it is unclear what interpretation could be given to such a measure either in theory or in practice.

Summarizing the advantages and disadvantages of a change to the medical care component cited by various panel members illustrates Triplett's point that there are different index concepts required to address different policy concerns and uses. A measure that helps policymakers understand "what is happening in medical care costs" (page 44) and "captures the price paid by the Federal Government" (page 42) need not be compatible with a measure that is used to adjust wages or government benefits. Adding the government as a consumer in the CPI in the medical care component alone, while failing to deal with other government-provided benefits, or with the form and incidence of taxes used to pay for those benefits, may create a hodgepodge measure that satisfies most of its current users less well than the current index. Developing a separate index measure might be a better way to address the concerns with tracking medical care costs than changing the CPI.

Now on p. 28.

Now on p. 27.

I recognize that the issue of including employer-provided benefits in the CPI is complicated, and that it is possible to make a case for doing so despite the formidable measurement problems that would have to be overcome. Although I personally do not find the case for inclusion persuasive, this is something about which reasonable individuals might differ. I would like to make clear, however, that the Bureau's decision to exclude those benefits reflects a variety of considerations about the scope and use of the CPI, not a rejection of the cost-of-living concept.

Capturing transaction prices rather than list prices, as the BLS now is trying to do, generally is approved of by the report's panel and does represent an improvement in methodology. There are, nevertheless, many remaining problems in measuring price change in medical care. As some of the report's experts have noted, measuring specific commodities and services used in medical treatment does not capture changes in the treatment approaches administered for specific medical problems. Hospital stays, for example, have become shorter for most treatments (pages 49-50). Every treatment is administered, however, not just to a medical condition, but to an individual with that condition, and thus the treatment of different cases of a given condition, such as a heart attack, need not be the same. Some patients will require shorter or longer hospital stays, or different combinations of drugs or surgical procedures. This makes the definition of what is to

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be priced, and calculating expenditure weights for these items, difficult, especially since consumers are not charged for a treatment per se, but for the individual elements comprising that treatment. In some cases a shorter hospital stay might not be better (if, for example, the patient were weaker and at greater risk for complications when he or she left the hospital), while in other cases it might be.

Sincerely yours,

Katharine Abraham

KATHARINE G. ABRAHAM
Commissioner

GAO Comments

The following are GAO's comments on BLS' letter dated July 11, 1996.

1. BLS commented that although we make no recommendations, we hold the current CPI up against the "cost-of-living concept." We held the housing and medical care components of the current CPI up against the cost-of-living concept in order to carry out the work objectives that the Ranking Minority Member, House Committee on Banking and Financial Services requested.

2. BLS commented that it is unclear what interpretation could be given to an index that included an expanded scope only in the medical care component. As discussed in chapter 4, we agree that the overall impact of changing just the medical care component of the CPI is unknown. This contributed to our not taking a position on whether the medical care component of the CPI should be changed to reflect the cost of living.

3. We added BLS' views on the remaining problems in measuring price change in medical care to the discussion of medical care transaction prices in chapter 3.

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Related GAO Products

Economic Statistics: Status Report on the Initiative to Improve Economic Statistics (GAO/GGD-95-98, July 7, 1995).

Economic Statistics: Measurement Problems Can Affect the Budget and Economic Policymaking (GAO/GGD-95-99, May 2, 1995).

Prescription Drug Prices: Official Index Overstates Producer Price Inflation (GAO/HEHS-95-90, Apr. 28, 1995).

Developing a Consumer Price Index for the Elderly (GAO/T-GGD-87-22, June 29, 1987).

Stabilizing Social Security—Which Wage Measure Would Best Align Benefit Increases With Revenue Increases? (GAO/IMTEC-85-13, Aug. 27, 1985).

Funds Needed to Develop CPI Quality Control System (GAO/GGD-83-32, Apr. 1, 1983).

A CPI for Retirees Is Not Needed Now But Could Be in the Future (GAO/GGD-82-41, June 1, 1982).

A Consumer Price Index for Retirees and Alternatives for Controlling Indexing (Testimony, Apr. 20, 1982).

Measurement of Homeownership Costs in the Consumer Price Index Should Be Changed (GAO/PAD-81-12, Apr. 16, 1981).

Alternatives for Modifying the Indexation of Federal Programs (Testimony, Mar. 10, 1981).

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