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Testimony by

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I am pleased to appear here today to address some of the issues surrounding the adjustment of federal programs for movements in the cost of living. For the current fiscal year, roughly 30 percent of total federal outlays are indexed to movements in consumer prices, with social security, SSI, veterans' pensions, military retirement, and civilian pensions accounting for the bulk of this spending. On the tax side, indexation is largely confined to the individual income tax which accounts for about 45 percent of federal receipts. Congress explicitly intended, in enacting the indexation of these spending and tax programs, to insulate those affected individuals from the consequences of increases in the cost of living. The vehicle chosen for making these adjustments was the Consumer Price Index, and the issue at hand is whether that price index is appropriate for the task.

If it is not, there are significant implications for the budget deficit, and there is the potential for considerable unintended transfers of wealth. As I noted in testimony earlier this year, if annual inflation adjustments to indexed programs and taxes were reduced by one percentage point--and making the admittedly strong assumption that there are no other changes in the economy--the annual level of the deficit would be lower by about \$55 billion after five years, including the effects of lower debt levels. The cumulative deficit reduction over this period would be nearly \$150 billion, and these savings would continue to grow in subsequent years.

I believe the evidence suggests that some adjustment to our indexing procedures is warranted. I am certain that many of the technical details will be elaborated in your discussions later this morning, but let me briefly outline some of the conceptual issues. To

begin, a review of the legislative history surrounding indexation does not reveal a full appreciation for the important distinction between the CPI and a true measure of the cost of living. The CPI is constructed to measure price changes for a fixed market basket of goods and services. At present that market basket--at least at the higher levels of aggregation--is fixed to spending patterns that prevailed in 1982 to 1984. Economic theory indicates that changes in a fixed-weight price index such as the CPI form an upper bound to changes in the cost of living, even if all of the individual prices used in the index are measured without error. The reason is that the use of fixed weights is appropriate only if there is no possibility for consumers to offset any of the consequences of increased prices for some goods by substituting others. While the degree of substitutability among products may be open to question, it is undeniable that such substitution does indeed occur.

Other technical aspects to the construction of the CPI also suggest it may overstate cost-of-living changes. Researchers at the BLS have found that an interaction between the use of fixed weights at the most disaggregated level and the manner in which new samples of retail outlets are linked into the index may be resulting in an overstatement of price increases. In January, the Bureau implemented procedures that should alleviate this so-called "sample rotation bias" at grocery stores, but the problem likely remains for other categories. More generally, the BLS is experimenting with a geometric weighting scheme that offers broader relief from this technical problem.

Over the postwar period, there has been a marked tendency for consumers to shift purchases from high-priced full-service stores to lower-priced discount retailers. The BLS uses surveys of consumer

buying patterns to keep abreast of these developments. On the basis of these surveys, a new sample of retail outlets is drawn for roughly one-fifth of U S cities each year. Thus, with some lag, innovations in retailing are captured in the CPI. However, at the time when new outlets are rotated into the sample, if prices are found to be lower at the new establishments than at those being rotated out of the sample, the differential is, in effect, attributed to lower quality rather than to lower prices. Even granting that the quality of service and ambience may differ between the new and old outlets, presumably some of the shift in shopping patterns reflects the fact that consumers can purchase the same goods at lower prices. Consequently, some of the price declines associated with the growing importance of discount retailers may not be fully captured by our statistics.

In sum, the fixed-weight nature of the CPI and other aspects of its construction point in the direction of an overstatement of increases in the cost of living. Even if this upward bias were only a fraction of a percentage point per year, the relentless compounding of such a discrepancy ultimately would have budgetary consequences meriting serious attention.

There are, however, reasons for suspecting that weighting and construction are not the only factors leading the CPI to overstate changes in the cost of living. A more difficult, but to my mind no less important, issue concerns making adequate adjustment for the improvement in the quality of goods and services over time. I would note that the BLS does make adjustments for quality changes in the CPI. What is at issue is whether the implemented procedures, or for that matter any practical procedures that could be established in the foreseeable future, can be expected to account fully for quality

changes across the vast array of goods and services available in our economy

In many respects, the issue of price measurement has as its mirror image the fundamental problem of defining with precision a unit of output. If this conundrum could be resolved, not only would we have more accurate price measures, but we would have correspondingly better measures of output and productivity. But defining a unit of output is an exceptionally difficult task when the characteristics of products and services are changing rapidly and along many dimensions. Under these circumstances, disentangling price change from quality improvement presents a formidable challenge.

Nowhere are these challenges more acute than in the area of medical care. What is the appropriate unit of output? Should one price procedures, treatments, or cures? Should the comfort or satisfaction of the patient be accounted for in price measurement? The past century has witnessed astonishing improvements in medical care. Cures and preventive treatments have become available for previously untreatable diseases. Medical advances have also led to new treatments that are more effective and that have increased the speed and comfort of recovery.

Technological innovations have been exceptionally rapid in the medical field. A case study of CAT scanners documented the dramatic and swift improvements in quality that occurred after their initial introduction in the early 1970s. Substantial gains were made in scan time, resolution, and the speed of image reconstruction. These characteristics, in turn, have a direct bearing on the comfort and convenience of the patient and the quality of the diagnosis provided by the doctor. Conventional price measures will almost surely miss much of this type of quality improvement because of the

enormous complexity involved in defining the output that is being consumed and measuring the corresponding unit price of that output

Although medical care is perhaps the most striking example of rapid--and difficult to measure--quality improvement, similar problems occur across a broad range of goods and services. Research has found that quality improvement may not be adequately captured for goods and services ranging from complicated capital equipment to power tools to consumer appliances to the simple consumption of household lighting.

To be sure, there are offsets to unmeasured increases in quality. The downward adjustment made to measured auto prices for the cost of mandated pollution control devices is one example cited in a recent CBO study. Although this equipment may provide a benefit to society, the owner of the automobile likely captures little of the direct benefit associated with his or her increase in outlays. Other products may be made more poorly in ways that escape detection in our price statistics. But given the perpetual advance of knowledge and technology, these cases are surely overwhelmed by a tendency for the quality of goods and services to rise over time in a manner that is difficult to define and measure. Those who remember with fondness the products of yesteryear are probably suffering from either fading memories or excessive sentimentality.

The difficulties confronted in price measurement are not confined to the quality advances of existing products. The continual introduction of new goods and services onto the markets of our dynamic economy creates additional challenges for price measurement. In some cases, a new good may be similar to an improved version of an old good. In other cases, new products may deliver services to consumers that effectively were not available before--for example, personal computers, video cassette recorders, and cellular phones. New goods

and services are incorporated in our price measures, but only with a lag. This lag can create an upward bias because new products often experience their largest price declines early in the product cycle. The more spectacular examples involve consumer electronics such as computers and communications equipment, but the enormous entry of new products onto the markets every year makes this a more pervasive problem than is commonly understood. While any one product may not figure prominently in household budgets, the totality of new products and the often large price declines that occur before they are incorporated in our price measures suggest this problem may not be trivial.

These difficulties should not be read as a blanket indictment of our current statistical procedures. The Consumer Price Index is a fundamentally sound statistical program. The BLS has, over the years, made frequent and significant improvements in the CPI and further improvements should be, and are, on their agenda. Updated market baskets, experimentation with alternative indexing formulas, and ongoing research on the application of hedonic indexes offer the possibility of better measurement in the future.

But even the implementation of improvements in the CPI can lead to distortions when this measure is used directly as a cost-of-living escalator. For example, the BLS made a significant change in how it calculates the CPI in 1983, when it shifted from a method in which the price index for housing was constructed as if each household was paying the current home price and mortgage rate on its residence to one that is a more realistic measure of the cost of home occupancy. Because of the run-up in house prices and interest rates between the 1960s and early 1980s, the official CPI rose about 9 percent more than indicated by the newer, superior measure. By the time the index was

changed, this overstatement had added substantially to the level of outlays in the large indexed federal programs. Once the additional interest outlays required to finance the cumulatively higher federal debt are added in, a rough estimate suggests that, all else equal, the deficit for FY1994 would have been smaller by \$50 billion had the overindexing not occurred.

The fundamental problem is that we have legislated a mechanical procedure to implement cost-of-living adjustments where--given the problems inherent in any statistical measure of aggregate prices--there is a need for the application of sound judgment. If indexation had prevailed for only a short period of time, the discrepancy between the CPI and a true measure of the cost of living would not have resulted in any appreciable problem. But left in place over long periods of time, as has now occurred and is envisioned continuing in the future, the discrepancy will compound in a manner that cumulates to very substantial magnitudes.

For this reason, I suggest that Congress give careful consideration to the establishment of an independent national commission to set annual adjustment factors for federal receipt and outlay programs. The members of this commission could review the available price statistics, taking into account the differences between these measures and the concept of a true measure of the cost of living. In addition, periodic review would allow the discrepancy to be adjusted for improvements in the available statistics as well as for insights developed from outside research. Careful consideration could be given to the establishment of a special cost-of-living adjustment for retirement benefits to reflect the buying patterns of the affected population. The replacement of a mechanical procedure by the informed judgment of experts would best ensure that the original

intent of the legislation would be fulfilled--to insulate taxpayers and benefit recipients from the effects of changes in the cost of living

The issue that we are discussing today demonstrates clearly the long-lived consequences of having allowed inflation to increase in the late 1960s and 1970s. Had the inflation environment of the 1950s and early 1960s been maintained, no widespread application of indexation would have emerged, there simply would have been no need for it. Indexation was viewed as a way of mitigating the effects of inflation. It succeeded in many respects, but we have also seen another example of the operation of the "Law of Unintended Consequences" in the enlargement of our budget deficit. I believe that, if the Federal Reserve can maintain a proper direction for monetary policy, we shall make this whole matter moot. But in the interim, we should at least attempt to refine our indexation procedures so as to ensure that the distortions are minimized.