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EFFECTS OF INFLATION ON THE NEEDS OF RETIRED PERSONS

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1. How will continued high rates of inflation affect the financial needs of retired persons, both absolutely and in comparison with other segments of the population?

2. What effects will there be on the age of retirement and the need for retirement income?

3. To what extent will these needs be met from social programs, private plans or individual savings?

MR. PHILIP M. ALDEN, JR.: There is a certain irony that our subject today should be inflation, since this forum follows no more than two weeks from the revelation that the rate of inflation, as measured by the Consumer Price Index, is now at a rate which, for those of us with short memories, seems like the lowest point in a hundred years. However, it is safe to say that there are very few of us that really expect that the rate has receded permanently, and in that regard, I hope we are all wrong.

In any event, it is safe to say that, until fairly recently, most of us operated on the tacit assumption that cost of living increases and the increases in the Consumer Price Index were simply different ways of measuring the same thing, but many economists began to have doubts when the CPI itself reached double digit range. We all began to read articles that asserted that the CPI overstated inflation, that it had an upward bias, and in particular, with respect to this session, that it overstated inflation's effect on the elderly, due in large measure to the housing cost component of the CPI.

At TPF&C we wondered, if it were true, what all this meant to retired employees and to pension plan sponsors. So being very cautious and without attempting to say whether, in fact, the CPI does overstate retiree cost of living increases or, if it does, by how much, we decided to do some analysis, some "what-if" games, if you will. Our analysis was published, and the charts and exhibits shown are taken directly from that study, entitled "Pensioner Cost of Living Increases, Who Needs Them?"

We began by defining the term "purchasing power index" as actual retirement income divided by needed retirement income. The numerator is self-explanatory. By "needed income," we mean the initial amount of total retirement income of the pensioner plus any cumulative increases in his or her cost of living. One could argue that the initial level of retirement income is

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less than needed or, in some cases, more than needed. But assuming it is sufficient at retirement, then the increases in the retiree's pension should keep it at that proper level. Here is an example of how the "purchasing power index," or PPI, is calculated.

Purchasing Power Index

	Benefit	Amount	% of Total
Year One:	Social Security:	$ 6,000	60%
	Private Pension:	4,000	40%
	Total	$10,000	
	Needed Income	10,000	
	PPI	1.0	
Year Two:	Social Security:	$ 6,660	62%
	Private Pension:	4,000	38%
	Total	$10,660	
	Needed Income	10,800	
	PPI	.987	

Years Since Retirement	Purchasing Power Index
5	96.4
7	95.9 (low point)
10	96.8
15	101.7
20	110.2
25	122.1
30	137.1
35	155.2

We assume, in this case, the CPI is growing at 11%, the cost of living a little less, 8%. Note in particular, that at the outset in year 1, Social Security provides 60% of this retiree's total income. That is a very significant figure, as we will see later. In year 1, we have arbitrarily set the index at 1.00. In year 2, Social Security is ratcheted up 11%, and we assume the pension stays unchanged. Total income is now $10,660, but needed income has gone up by the cost of living, 8%, up to $10,800, and when we divide the $10,660 by the $10,800, we get a new purchasing power index in year 2 showing a decline in real purchasing power.

In this case, the initial decline in purchasing power continues for 7 years, as you see. Carrying the example still further, we find a reversal in the index. The low point is reached in the 7th year after retirement. Then it starts to grow very slowly. At 10 years out it is up to 96.8, by year 15 it is over 100, and it continues to grow at an accelerating rate during the remainder of this employee's lifetime.

The cause of this, you can readily discern, is over-indexation. In this case we assumed a 3% difference between the indexation of the Social Security component of total retirement income and the true increase in the cost of living. It turns out that changes in the PPI, the purchasing power index, are very sensitive to the proportion that the initial amount of Social Security bears to the retiree's total income at retirement.

Exhibit 1

Change in Purchasing Power During Retirement as a Function of Initial Proportion of Social Security

Assumptions:
CPI Increase – **11%** per Year
COL Increase – **8%** per Year

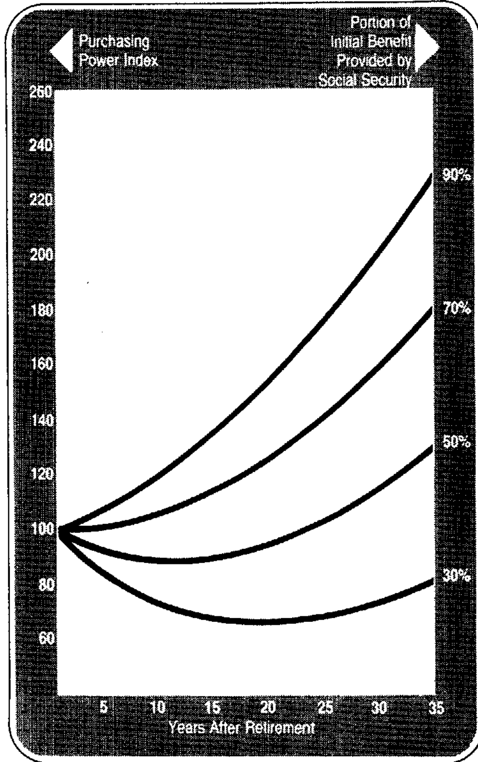
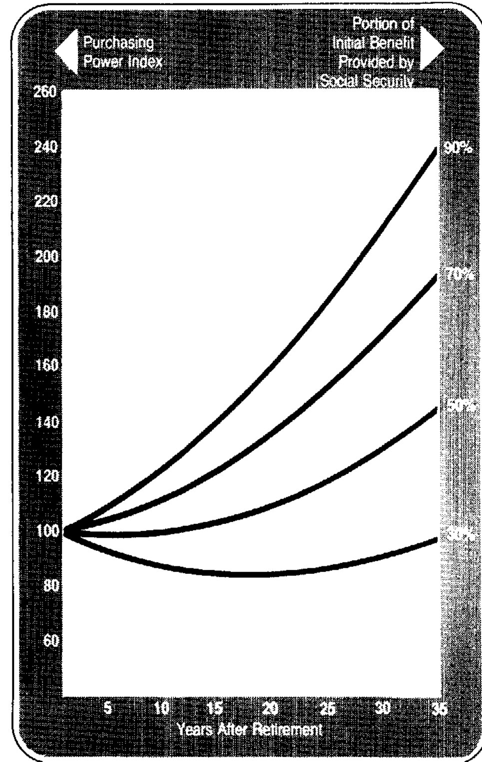


Exhibit 2

Change in Purchasing Power During Retirement as a Function of Initial Proportion of Social Security

Assumptions:
CPI Increase – **7%** per Year
COL Increase – **4%** per Year



Using the same CPI and cost of living assumptions, 11% and 8% respectively, Exhibit 1 illustrates what happens during retirement if the Social Security percentage is somewhat different. The top line shows what happens when Social Security provides 90% of the initial amount of total retirement income, the second line down 70%, the third line 50%, and the bottom line 30%. You will note that if Social Security initially provides 70% or more, purchasing power actually rises, given this set of assumptions during all years after retirement. Conversely, if it provides only 30% of the initial retirement income, the retiree will never regain his or her initial purchasing power if the private pension is unchanged. Nevertheless, reversal does occur in this case, at about year 19.

Exhibit 2 shows similar results under much lower inflation assumptions. In this case we assumed a constant CPI increase of 7% a year in retirement with the true cost of living, however defined, measured at 3% lower. Exhibit 2 demonstrates that if the CPI maintains a 3% margin over cost of living increases, most retirees do very well indeed. Even in the case of the individual for whom Social Security initially affords only 30% of total benefits, the PPI drops to something around 85% and then, if he or she lives long enough, comes back up to a level close to 100%. The others, those who are essentially lower paid employees, all have very good results indeed. Exhibit 3 illustrates that, with double digit inflation, the other side of the coin, higher paid employees, those for whom Social Security provides initially less than 50% of total retirement income, fare rather poorly. However, even here the decline in purchasing power moderates with time and may eventually reverse.

Now let us hold the Social Security ratio constant. Say the retiree's private pension and his Social Security benefit each provide one-half of the total retirement income at time of retirement. We also assume the CPI grows at a constant 9% per year. Exhibit 4 shows that if actual cost of living increases are 5% less than that CPI increase of 9%, that is, if the cost of living increase is only 4% a year, purchasing power grows every year in retirement as shown on the top line. As the cost of living approaches more closely the CPI increase, then the results are a little less favorable. If the CPI and the cost of living for a retiree both grow at 9%, the bottom line on the exhibit, then the employee will eventually lose more than 40% of purchasing power, but not, you will note, much more than that. Regardless of the assumptions used, the line eventually does flatten out and begin to rise. Exhibit 5 is the same chart, but assumes that Social Security initially provides 70% of retirement income. This is, incidentally, not an unusual ratio. In fact, for an employee in this particular range of income, of whom there are many millions, the numbers here suggest that little, if any, post-retirement pension supplementation by the employer is needed.

Suppose a company wanted to insure that retiree purchasing power never fell below an arbitrary 90% of its initial value. Exhibit 7 shows what supplements would be necessary as a percent of the CPI increase if cost of living changes are assumed equal to 80% of the cost of living increase. For example, for an employee 50% of whose initial benefit is provided by Social Security, a supplement, an ad hoc increase, or a COLA amounting to about 30% of the CPI increase, added to the private pension would, in tandem with Social Security, preserve, for that employee, throughout his entire retired lifetime, a purchasing power index of 90% or more. Even for

Exhibit 3

Change in Purchasing Power During Retirement as a Function of Initial Proportion of Social Security

Assumptions:
CPI Increase – **15%** per Year
COL Increase – **12%** per Year

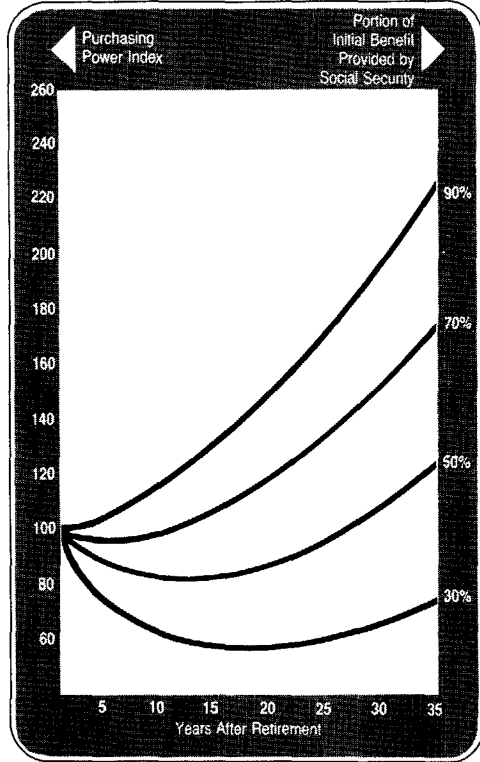


Exhibit 4

Change in Purchasing Power
During Retirement as a Function
of Cost-of-Living Increase

Assumptions:
CPI Increase – **9%** per Year
Initial Portion of Benefit
Provided by Social Security – **50%**

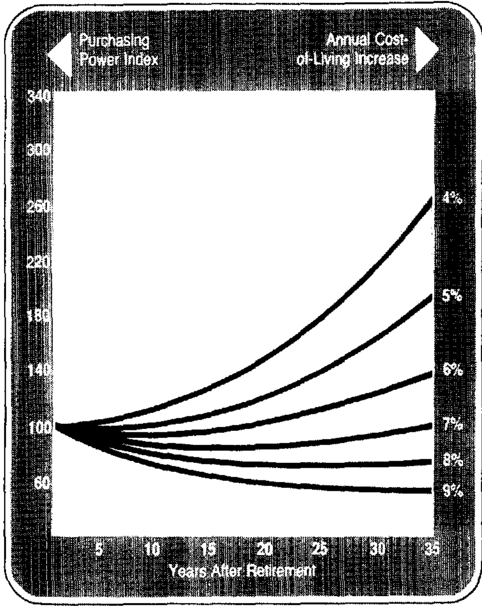


Exhibit 5

Change in Purchasing Power
During Retirement as a Function
of Cost-of-Living Increase

Assumptions:
CPI Increase – **9%** per Year
Initial Portion of Benefit
Provided by Social Security – **70%**

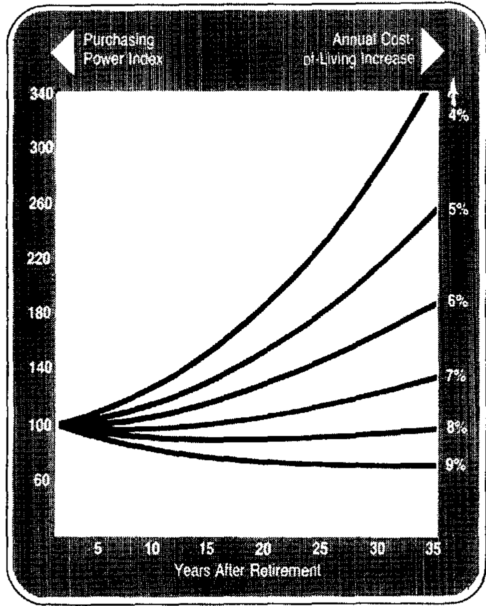


Exhibit 7

Private Pension Supplements Required To
Maintain at Least 90% of Initial Purchasing Power

Assumed Annual Increase In		Supplement as a % of CPI Increase When Portion of Initial Benefit Provided by Social Security Is:				
CPI	Cost of Living (80% of CPI)	50%	40%	30%	20%	10%
5%	4.0%	29%	47%	58%	65%	70%
6	4.8	29	47	59	66	71
7	5.6	29	47	59	67	72
8	6.4	29	47	59	67	73
9	7.2	29	47	59	67	73
10	8.0	29	48	59	67	73
11	8.8	30	48	59	67	73
12	9.6	30	48	59	67	73
13	10.4	30	48	59	67	74
14	11.2	30	48	59	67	74
15	12.0	30	48	59	67	74

Example: If Social Security provides only 20% of initial total retirement income, the required supplement is approximately two-thirds (67%) of the CPI increase each year—i.e., 8% when the CPI grows by 12% annually.

a relatively highly paid individual, 30% provided by Social Security, an ad hoc supplement of less than 60% of the CPI increase will generally suffice. These are, incidentally, very insensitive to the rate of CPI growth. There are a few minor differences which explain the range on the right.

There are a number of ways to supplement private pensions. Exhibit 9 shows how two of these might effect retiree purchasing power. We have assumed moderate inflation, in this case 9% as measured by the CPI, 6% as a true cost of living increase and a fairly high paid retiree. Social Security provides just 30% of the initial total retirement income. The top line on the left represents the purchasing power index over time, again starting at 1.00, assuming that the private plan is supplemented by an escalator annuity equal to 6% simple growth each year for 15 years and level thereafter. So 6% of the initial pension would be added in the second year, another 6% in the third year, and so on. This line represents the combination then of all income sources, the regular pension, Social Security, and that excalator annuity. The middle line on the left represents, or perhaps replaces, conceptually, the ad hoc increase. We assumed that, on average, that will represent one-third of the CPI increase over time. So adding that to the pension plus Social Security gives us the middle line. The line at the bottom represents the situation if there are no benefit increases provided by the sponsoring employer.

Exhibit 10 is the same chart for a lower paid pensioner. We assumed everything else the same except that now Social Security, for this individual, has an initial value equal to 70% of total retirement income. This chart is quite fascinating and remarkably different from the one that preceded it. What it tells us is that, no matter what kind of supplement is provided to the private pension, the results are comparable for this type of individual. Again, there is a hint that really no supplementation is needed. There is not that much difference between the ad hoc (middle line, left) and escalator annuity (top line, left) that do include a private pension supplement and the bottom line that does not.

I regret to say that these particular analyses have cost us a lot of business. What we have attempted to show is that in some cases, frankly, clients at large do not need to add, at least for some employees, an ad hoc increase to their private pension plans. We found these analyses thought provoking and I hope they have done the same for you.

MR. JAMES R. SWENSON: The premise on which these comparisons were made is that the CPI exceeds the true cost of living. At Prudential, we look at our pension plan periodically to see how retirees are faring in relationship to the cost of living. For these comparisons, we have concluded that a more appropriate measure of the cost of living than the CPI is the Personal Consumption Expenditure Deflator, which is one of the GNP deflators. During the past five years, the PCE Deflator has produced a rate of inflation that is in the range of 2% to 3% less each year than inflation as measured by the CPI.

MR. DONALD S. GRUBBS, JR.: Unless retirement income is adjusted to keep pace with the rising cost of living, retired workers will gradually have their standard of living reduced. However, what is the best measure of the cost of living increases?

Exhibit 9

Purchasing Power During Retirement
Under Alternative Supplementation Methods

Assumptions:
CPI Increase – **9%** per Year
COL Increase – **6%** per Year
Portion of Initial Benefit From Social Security – **30%**

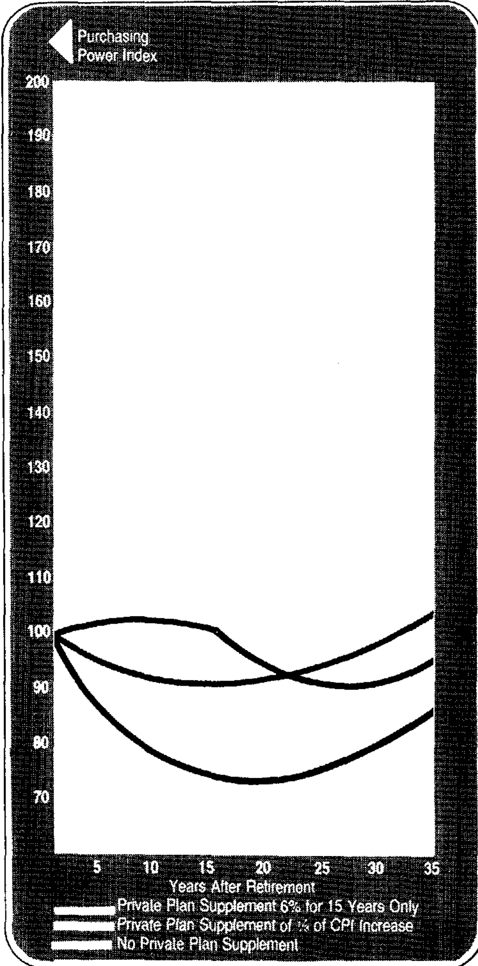
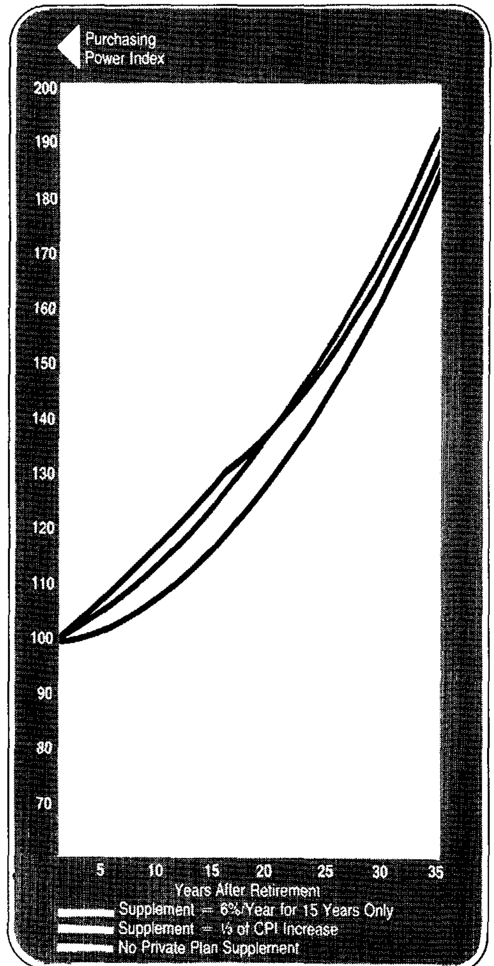


Exhibit 10

Purchasing Power During Retirement
Under Alternative Supplementation Methods

Assumptions:
CPI Increase – **9%** per Year
COL Increase – **6%** per Year
Portion of Initial Benefit From Social Security – **70%**



The most commonly used measure of this change in the United States is the Consumer Price Index published by the Bureau of Labor Statistics. Actually, there are a number of CPI's. The two most commonly used national indices are the CPI-W, representing all urban workers, and the CPI-U, which represents the entire urban population. Although the CPI-W is used for Social Security, the CPI-U would be more appropriate, since the CPI-U includes retired workers, who are exluded from the CPI-W. In fact, the choice between CPI-U and CPI-W would have had little practical effect. Since the inception of the two separate indices in 1978, the two have always remained within two-tenths of a percent of each other.

A widely recognized shortcoming of the CPI has been the use of the mortgage interest rate in the housing component. The index tends to slightly overstate the rate of inflation when interest rates are rising as they have in most recent years. However, in periods of falling interest rates, the index tends to understate the rate of inflation. To solve this problem, the Bureau of Labor Statistics plans to substitute rental equivalence for certain home ownership costs. Substitution of rental equivalence will begin in 1983 for the CPI-U and in 1985 for the CPI-W. The CPI-U will correct this problem two years sooner than the CPI-W, which is used for Social Security. It appears likely that the CPI-U and CPI-W may diverge significantly for the first time in 1983 and 1984, but no one knows which will rise less rapidly.

I recommend that Social Security and all other indexed pension plans change to the CPI-U beginning in 1983. The CPI-U is more appropriate than the CPI-W in any event, since it is a broader index, and in 1983 and 1984 the CPI-U will be a truer measure of inflation.

Some have questioned whether the rate of increase in the cost of living for retirees is the same as the rate for active workers. This question about the rate of increase is sometimes confused with the question of the relative needs for income of retired and active workers. The relative needs for income is key to the issue of appropriate replacement ratios at the time of retirement, but is irrelevant to the issue of post-retirement income adjustments. After a worker has retired - at whatever level of retirement income - the question becomes how much adjustment to his post-retirement income is needed to keep his new postretirement standard of living from declining?

The CPI is actually a weighted average of the increase for various components of a market basket of goods and services. Retirees spend a greater proportion of their income on food, medical care, fuel and utilities than do active workers, and a smaller proportion on other items. Therefore, it is argued, retirees may have increases in the cost of living which are either more or less than those for active workers. Some want to develop a separate CPI for retirees weighted by the relative amounts of items in the retiree's market basket.

In recent months, the General Acccounting Office has conducted a study of the need for a separate CPI for retirees. Their report is expected to be published in May. The GAO study is the most careful examination that has ever been made of this subject. Using the same data as is used for the CPI-W, the GAO simulated what the changes in the cost of living would have been over a 39-month period, using both the old method for the housing

component and the new rental equivalence method. The results were compared with the actual CPI-W and with the CPI-U adjusted to a rental equivalence basis, which they call the CPI-X1. Using the new rental equivalence basis for the period studied, there was little difference between the rate of CPI increase for retirees and that for active workers. So it would appear that there is not much difference once we get on the new rental equivalence basis.

The Bureau of Economic Analysis publishes a quarterly Implicit Price Deflator for personal consumption expenditures, the PCE deflator that was previously mentioned. Some have argued that the PCE Deflator is a better index than either the CPI-U or the CPI-W. Most of the difference between the CPI and the PCE Deflator, in the past, has been attributable to the housing component problem of the CPI, a problem that is going away and will be solved in 1983.

The PCE Deflator itself has two types of shortcomings. First, it excludes several components of the CPI that are a real part of cost of living for retirees, for example, used cars. Second, and more important, the PCE deflator fails to reflect reductions in the standard of living forced upon people by inflation. If the rising cost of meat forces retirees to eat less meat and more tuna fish, the PCE Deflator fails to reflect this. It may indicate there was no price increase at all. However, the objective is to have an index that best measures the amount needed for retirees to maintain the same standard of living. While no index is perfect, the CPI-U, with the new rental equivalence basis, appears to be the best available measure of real changes in the cost of living.

All of the TPF&C illustrations were based upon the assumption that the real cost of living was 3% or 5% less than, or 80% of, the CPI. My examination of this indicates that, in periods of the past, the differences were in the nature of 1 to 1 1/2%. Therefore, even based upon the past, the assumptions used in that study were not valid, but with respect to the future they are not applicable, because the problem has been solved with the shift to the housing rental equivalence basis.

Congress is currently considering proposals to give less than full cost of living adjustments under Social Security. One proposal would omit the COLA entirely for 1982 and would limit any benefit adjustments in 1983 and all later years to the rate of inflation minus three percent. A second proposal would make no change in 1982 but would limit the increases in 1983 and later to two-thirds of the increase in the CPI. Since full CPI increases, when the CPI is properly adjusted to rental equivalence, are needed to maintain the retiree's standard of living, these proposals would clearly decrease the standard of living.

Data Resources, Inc. used computer simulations to investigate the effect of these two proposals on income distribution to the elderly. In 1980 there were 4.1 million persons age 62 or over who were below the official poverty line. That is about $4,000 a year for single people and $5,000 a year for couples. For various reasons, if no change is made in the present 100%-of-CPI COLA adjustments, the number of elderly persons in poverty is projected to drop from the 4.1 million in 1980 to only 3.7 million in 1990, a little bit of progress. However, if the two-thirds of CPI proposal is adopted, the number of persons below the poverty line is projected to rise to 5

million or 1.3 million more than if full CPI adjustments were continued. If the inflation-less-3% proposal is adopted, the results are projected to be even more disastrous; in that case the number below the poverty line in 1990 is projected to be 5.7 million or 2 million more than if full CPI adjustments are continued. This is not merely statistics. It is millions of individual human beings living at a level of degradation and poverty that most Americans cannot imagine.

The President's Commission on Pension Policy, the National Commission on Social Security and the Advisory Council on Social Security have each recommended that the normal retirement age for receiving full Social Security retirement benefits be increased from 65 to 68. While differing in detail, all three recommend that Congress act now to schedule a phased-in increase in the retirement age, beginning at a future date. The eligibility age for reduced early retirement benefits would also be increased from the present age 62 to age 65. Such a change is needed to assure the financial integrity of the Social Security system. The reasons for the change are well documented in the reports of the three bodies noted above, and I shall not repeat them here. I endorse these recommendations and encourage Congress to enact them this year. Putting off the decision will only make the decision more difficult, delay corrective action, and exacerbate the financial problems of the system.

Private pensions and Social Security are closely interrelated. Private plans are designed to supplement Social Security. Both the amount of benefits and the retirement age under Social Security are directly or indirectly reflected in the design of private pension plans. The laws governing private pension plans directly recognize this interrelationship. The most important of these is the requirement that the normal retirement age of private pension plans not exceed the later of age 65 and 10 years of participation. This age 65 maximum, which is the normal retirement age under most private plans, was geared to mesh with Social Security. Therefore, Congress cannot consider changing the retirement age under Social Security without weighing the effect on private employer pension plans. Appropriate changes must be made in laws concerning private plans. It makes sense to have benefits begin at the same time under both Social Security and private pension plans.

The real goal of both Social Security and private pension plans is to enable retired people to maintain an adequate retirement income. When the price of the goods and services they must buy increases, the goal of meeting income needs is defeated unless the sources of income keep pace with the cost of living. The total income of retired Americans from all sources is only about half that of full-time workers under age 65. Retirees are the ones least able to bear any reduction in their already meager standard of living. Social Security benefits are fully indexed to the cost of living. Maintaining full indexing of Social Security is essential if retired people are not to have their standard of living further reduced.

Most private pension plans, on the other hand, are not indexed for inflation. Some employers have voluntarily granted increases to those already retired; this is to be commended, but even these employers have not been able to afford increases anywhere near the huge increases in the cost of living in recent years. Thus, the purchasing power of private pensions

decreases each year after retirement. If the cost of living rises 8% per year, the fixed pension for a person who retires at age 65 is cut in half by age 74, and reduced to one-fourth by age 83.

This problem must be solved if private pensions are to be an effective partner with Social Security in meeting retirement income needs. Vincent M. Tobin has prepared an excellent analysis of alternatives to adjusting private pensions. Tobin explores the use of inflation-related high interest rates to finance postretirement adjustments. He concludes, "One wonders if we will look back with surprise a generation from now on the hesitancy of employers to confront the issue of inflation protection - much as we recall today the similar situation of 25 or 30 years ago when companies were frightened by the prospect of average-final-pay plans."

An upward adjustment to the retirement age substantially reduces the cost of providing pensions under both Social Security and private pensions. Under Social Security, such cost reductions are needed to offset the rising costs resulting from demographic shifts. Private pension plans are advance funded and not subject to demographic shifts. Increasing the normal retirement age from 65 to 68 would reduce the cost of providing a fixed pension by approximately 29%. This cost reduction would pay for the cost of increasing the amount of pension by approximately 5% per year after age 68. Thus, raising the retirement age from 65 to 68 can enable private plans to largely overcome their greatest problem. If both Social Security and private pensions provide full retirement benefits beginning at age 68, and if both provide for inflation-related adjustments after age 68, the combination will be better equipped to meet retirement income needs than the present system. In addition, both systems will have acceptable costs.

Private pension plans which have acceptable post-retirement adjustments should be allowed to have a normal retirement age of 68 rather than 65. Benefit adjustments would not be required for plans which keep age 65 as a normal retirement age. To be acceptable, benefit adjustments should be required at least annually. Plan sponsors could elect more frequent adjustments if they prefer. The amount of each annual adjustment should be the lesser of the increase in the Consumer Price Index for the prior year or 5%. A maximum on the annual increase is needed for cost control; no employer is willing to write a blank check. Five percent was chosen as the maximum, because that is the approximate amount which can be financed by the cost saving of increasing the retirement age from 65 to 68. There is no reason to require increases larger than the CPI, even if that is less than 5%, because the whole object is to keep pace with inflation, not surpass it. Of course, some plan sponsors might elect to use a higher limit than 5%. Some employers might elect to provide 5% increases regardless of the CPI increase, an approach that is amenable to certain types of annuity contracts issued by insurance companies to provide guaranteed benefits at guaranteed costs.

Plans could, as now, allow early retirement with actuarially reduced benefits. However, annual benefit adjustments should not be required before age 68, since otherwise a greater reduction would be needed in the early retirement benefit. Present law forbids any plan amendment which reduces any benefit already accrued. An increase in normal retirement age from 65 to 68 which simultaneously adds these post-retirement benefit adjustments should not be regarded as a reduction in the accrued benefit, because the

value of the benefit would be approximately the same, and because an important social objective would be accomplished. This change is a socially desirable one that should be encouraged currently. Early retirement benefits would be available at age 65 for those who elect to retire early. Therefore, private plans should be able to effectuate the change in retirement age immediately, and not be required to follow the deferred phase-in contemplated for the retirement age change under Social Security. This proposal would provide encouragement for plans to change their retirement age and add cost-of-living adjustments, but not require any plan to be amended.

I recommend that these changes be made as part of an act increasing retirement ages under Social Security.

MR. SWENSON: First, I agree that the substitution of the rental equivalence in the CPI will be a vast improvement. Second, with respect to Social Security indexation, it is important to note that during the past three years Social Security benefits have increased by 40%, whereas average wages increased by only 30%. If Social Security benefits had been increased by 30%, the Social Security program would not now be faced with a short term financial problem. Congress is obviously very much concerned about that problem not only because they are now forced to take difficult actions, but also because they are concerned about their credibility. Public confidence in the program is at an all time low, and one of the reasons for that is that Congress, after enacting the 1977 amendments, assured the public that the program would be financially sound well into the 21st century.

MR. DALLAS L. SALISBURY : The presentation that I put together today is based on a study which the institute recently concluded. It takes a slightly different tack than the previous two presentations. What we were attempting to do in our analysis was to look a bit more fully at what the future likely was going to be for pension benefits and the degree to which you are able to get a better handle on the types of national policies that might be appropriate if you segment the elderly population.

An example of that segmentation can be found in the Data Resources, Inc. study cited previously. Part of the analysis which they did not include in the press accounts includes a segmentation of the elderly population to see how future retirement income would affect different age groups. The principal results of our study illustrate that if you applied the same measures to those individuals over age 72, principally widows retired and living exclusively on spouses' benefits, as to the 65 to 69 age group, there would be a dramatically different picture in terms of achievement.

In many of these areas of policy that have been discussed here and in much of the debate in Congress, there is a tendency to look at the entire population and to try to reach solutions based on a picture of the whole population. What we have been trying to do in many of our studies is to segment the population and to see how policies might be targeted more directly.

In the study on retirement levels and adequacy, we looked first at the question of what is an adequate income as well as an appropriate measure of income. What we have tried to put forth in this study are arguments for the careful development of frameworks for answering these questions as well as an analysis of the full societal impact. Breaking that impact analysis into specific age cohorts of the population reveals various trends now developing. With 64% of households now being two-income families, future pension receipts and future household income patterns will change dramatically from the experience of prior years.

There has been a tendency to look only at cash income for retirees. This practice ignores the value of assets that individuals own. For example, close to 72% of today's elderly own their own housing outright without any mortgage indebtedness. Thus, making assessments of mortgage interest in cost of living measurements is somewhat irrelevant to the vast majority of that retired population.

Also, it ignores in-kind benefit programs, which, particularly for those in the worst shape, such as the elderly widow over age 72, are frequently a major source of income. That type of analysis of poverty rates, including only cash income, places 18.5% of today's retired population in poverty. If you add in in-kind benefits, that percentage declines to 12.4%. If you add the value of assets, you get down to 7.8%. It is noteworthy that the Benefit Research Institute analysis considered only the cash income measures and not the secondary measures. The study also provided a breakdown between poverty and non-poverty population, of income sources:

Table I
Elderly Sources of Income
1979

	Poverty	Other
Social Security	86%	93%
Employer Pensions	5%	41%
Earnings	9%	36%
Public Assistance	31%	6%
Assets	36%	79%

As Table I indicates, and this is where the COLA becomes particularly relevant for the poverty population, Social Security is practically the total and primary source of retirement income. Changes in Social Security benefits will make a tremendous difference to the poverty and low income population. For retirees above the poverty level, 41% receive private pensions. In many recent analyses, it has been stated that only 25% of current retirees receive pensions, and therefore we have to do certain things. In fact, if you segment the population economically, that number rises from 25% to 41%.

Similarly with public assistance and assets, we find that there is that same type of break between the low income population and other segments of the retired population. This perspective should move one very much in the direction of setting different types of policies for different groups. Table II illustrates the percentage of the elderly receiving benefits from each source and the average level of those benefits.

Table II

Source	% Receiving	Average Benefit
Social Security	92	$4,300
Pensions	34	4,100
Earnings	31	9,500
Assets	71	3,000
In-Kind	95	2,200

You see that even though a smaller percentage of the whole is receiving private pensions, the average benefit tends to be almost equal to the average Social Security benefit, with assets also providing a significant amount. In addition, in-kind benefits for the low income population provide a significant supplement to Social Security.

It is also noteworthy that recent proposals have assumed very little future growth in private pensions. The conclusion of the President's Commission on Pension Policy was that we can expect no increase in benefit receipts, and that is why they recommended certain policies. A recent article in Consumer Reports reached the same conclusion.

In fact, from the analysis that we have done, making use of data and models developed by the President's Commission, there appears to be the likelihood of positive future growth at a significant level with substantial increases in employer pension receipts. One of the segments we examined is those who are now retired between ages 65 and 69. How do their benefits compare to those for people over age 69 and how will that likely change in the future? Thirty-four percent of individuals age 65 to 69 now receive benefits. Based on current programs and the President's Commission models, assuming that no new programs will be created by any employer that does not now have one, by the year 2000, 66% of individuals will have some private pension supplementation.

Of elderly couples between 65 and 69, 53% now have private pension supplementation. This compares to about only 31% of couples over the age of 72, a very dramatic difference! By the turn of the century, fully 85% of households will have private pension income to supplement Social Security and other benefits, again largely as a result of the tremendous increase in two income households and female labor force participation.

With regard to some of the programs and initiatives that the Congress is now considering, we find that, for the poor in today's society, public assistance, whether it be in in-kind benefit programs or through the tilted benefit formula of Social Security, is the principal means of provision. The characteristics of those individuals from our analyses and current population surveys indicate that they have little or no work history and that they depend upon government for their income. About 21% of the current "work force," for example, depends on government assistance for most of their current income. So 21% of that population is likely to continue into retirement and to be buffeted by inflation at whatever level, not capable of being helped by private pensions. Those most likely to be in poverty, from the BRI analysis, have four major characteristics: single, over age 72, widowed, and female. In most cases, these are individuals who

are the recipients of spouse benefits and whose work force participation dates well before the current changes in the makeup of the work force.

We urge, in the analysis of the COLA adjustments, whether for private plans or public plans, an assessment of how the proposals assist the lowest income group specifically. How do the proposals influence human behavior within this group and others? Whatever the assumptions as to the gap between the CPI and the real cost of living, the effect of inflation and the lack of private indexing on the low income groups is dramatically different than on those who have other sources of income.

How do the proposals affect the current low income elderly? If you make a distinction between age groups and income levels, you discover the need for very different policies on Social Security indexing. If you take the over-age-72 population, you find that Social Security indexing at the full level can probably be viewed as absolutely essential. Whereas if you look at the age 65 to 69 group, you find that the composition of their total income is substantially different and that they may well be able to get along without full indexation. Such policy distinctions by the government are very feasible and possible. In short, what we have tried to do with these studies is some segmentation that would help policy makers better evaluate proposals for pension indexing and other changes. Only if we get to the point where we begin to look at the effect of policies on various groups of current retirees and age segments and distinguish clearly what is going to happen in the future, when far more people will have other sources of incomes available to them, can we expect to have rational solutions and rational policy related to pension indexing.

MR. EDWIN C. HUSTEAD: The federal government has had indexation for quite a few years now. It has had almost twenty years of full indexation, and it is becoming more and more of a budgetary problem, although less so than Social Security. Nonetheless, indexation of civil service and the military retirement system next year will still increase the deficit by about $3 billion. As our paper* shows, the change to full indexing resulted from a culmination of forces in the 1950's and 1960's. Now, as we realize what full indexing has done, we have a drive for reductions in the indexing that is just as strong. The liberalization of the indexing formula peaked with the infamous "1% kicker" in 1969, when we not only gave an increase matching the cost of living, but also decided to add 1% to each one. The reductions in the formula began with the removal of the kicker in 1976. More recently, we have changed twice a year indexing to once a year, and now there are strong pressures to limit full indexing, just as in the case of the Social Security system.

Before 1963, the Civil Service Retirement System had helped annuitants keep up with inflation through a series of ad hoc increases. The military system used an even more liberal method of "recomputation," whereby annuities were increased according to the rate of salary increase. The 1963 law moved to full CPI indexing for both systems, which was a liberalization for

*The paper, "Indexing of Federal Retirement Systems for Inflation," by Edwin C. Hustead and Toni S. Hustead will appear in Volume XXXIV of the *Transactions*.

civil service but actually a deliberalization for the military system. With some variation, we have now had full indexing for 20 years. A nostalgic footnote is that the original formula required 3% inflation in a year to trigger an increase. When we failed to get 3% inflation in 1963 an amendment was passed that guaranteed an increase each year even if we did not get 3%.

One aspect of the federal system that will be of interest to those dealing with formal indexing is the potential discontinuity created by the interaction of service, salary growth, and inflation. If cost-of-living increases are given to all retirees on a certain date, employees can lose value by retiring or dying immediately after an increase. The problem compounds if salary growth is lower than inflation as it has been for the last five years. In this case, an employee who delays retirement loses future annuity value with each delay in the retirement. The economic and political conditions of the last five years have left tens of thousands of federal employees in this anomalous situation. By continuing to work, they are losing substantial future annuity dollars. We even have retirees now who are receiving larger annuities than the salaries of the people who have replaced them. The original solution to the discontinuity problem in the federal program was to give each retiree at least as much as he would have gotten if he had retired in the last year. That solution has been replaced by the much less expensive and more logical approach of grading in the first increase for new retirees.

A couple of comments on the valuation of fully indexed systems are in order, in particular for large indexed systems. They present several unique problems. One is dealing with large numbers which become unreal even to an actuary and the potential misuse of the numbers by readers, in our case Congress and the press. The costs are high enough without popularizing compounded liabilities projected fifty years into the future.

One technical aspect that you might find of interest, particularly in the military system, is the possibility that a pure valuation may show that costs can be reduced by reducing the full retirement age. If this is true, it reduces to the absurdity that the cheapest military retirement system would be to retire everybody on full retirement after one year of service. In fact, the actuary must deal very carefully with all of the interrelated assumptions to avoid showing this incorrect solution. You have to look carefully at the withdrawal, disability, mortality, and retirement assumptions to reflect the actual facts of the situation. Even after this step, the higher cost of the lower retirement age can only be fully recognized through an open group projection.

MR. BARNET N. BERIN: The purpose of this particular paper*, "Constant Replacement Ratios in Retirement," is to identify a planning model which can be applied when improving pension benefits for retirees. The basic issue is, of course, of considerable importance to actuaries and is of general interest to a wide audience today. Recognizing the increase in the

*The paper, "Constant Replacement Ratios in Retirement: A Theoretical Approach," by Barnet N. Berin and Anthony B. Richter will appear in Volume XXXVI of the <u>Transactions</u>.

rate of inflation over recent years in the U.S.A. and around the world, pension plans have been improving benefits for retired employees.

A planning model is developed for such increases based on a periodic examination of the increase in pension necessary in order to keep a replacement ratio constant. This replacement ratio is initially related to the private pension plus the Social Security benefit divided by the final average salary. The replacement ratio is calculated in retirement years, and the interrelationships between the various elements that are involved in keeping this ratio constant are discussed. This includes a discussion of the relationship between increases in average wage and increases in the CPI. These thoughts are central to the ideas presented in this paper. The meaning and significance of the model are discussed.

Both philosophical and practical issues are explored, and there are examples of this approach over the period 1970 to 1979 inclusive, quite a turbulent period during which the CPI varied from 0% to 20%. The paper states the method clearly and simply, and the paper is readable. The function SSB divided by P, Social Security benefit divided by private pensions, is introduced, I think for the first time, and appears useful in addressing this problem. The ideas presented are quite practical and can represent an interesting consulting assignment.

MR. LAWRENCE J. RUPP: Was there any consideration given to the number of active employees who would go under the poverty level by continuing the price to pay full indexing?

MR. GRUBBS: To my knowledge that was not studied at all. It of course is related to the larger question of where the economy is going. In most periods of the past we have had productivity growth in this country, which has resulted in wages rising faster than prices. In the last five years, as has been noted, that trend has been reversed. Hopefully we can solve the basic economic problems of this country, so that we can both keep retirees up to the cost of living and return to the growth in productivity and real wages. Unless we can return to productivity growth in this country I think every proposal is going to fail.

MR. RUPP: Did the proposal to increase the retirement age to age 68 providing, *ostensibly*, an actuarial gain which could suffice for a 5% increase in annuity, take into account the additional salaries and increased salary levels that would have to paid at 68 as opposed to 65 and/or the additional benefit accruals for the additional three years? In my company we did a study to determine whether or not we could, in fact, pay additional pensions based on either crediting accrual service beyond age 65 or additional salary, and we found that either one by itself could be offset by the actuarial gain from working later and deferring the pension, but when both were included, there was a definite cost to the company.

MR. GRUBBS: The number that I gave varies greatly with the alternative chosen to adjust for deferred retirement. It is an approximation. Nevertheless, there is cost saving in any of the three alternatives that we have currently with respect to deferred retirement. The savings are larger in those plans where the benefit is frozen, but there are also savings from those that give either an actuarial increase or that recognize additional salary and service.

MR. FIELDING LEWIS: It seems that retiree assets are becoming particularly important in light of the tax incentives for individual savings and a whole emphasis toward encouraging personal savings for retirement. What comments does the panel have on what possible effects that change, if it is a change, is really to going to have?

MR. GRUBBS: That is difficult to project. In particular, take as an example the IRAs. There are about 12 million people eligible for them, but we find that there is a rather low percentage participation in those saving opportunities, even though there are existing tax incentives, except at the highest income levels. For people earning at about the average level of income, we only have about a 3% participation rate in IRAs currently, and that doesn't mean that they are bad. They will help people, including the above average earners, and that is a good thing. However, I am more hopeful about programs where there are matching employer contributions, as in the thrift plan approach, or when we combine the thrift plan approach with salary reduction under 401(k). We get very good savings.

MR. SALISBURY: Obviously, anything that we do with existing benefit programs for those accumulating benefits today does absolutely nothing to solve the adequacy problems for those that are retired. Having said that, the analyses we have done indicate that, by the turn of the century, close to 85% of households will be receiving some type of employer-sponsored pension income. Any increase in what goes into thrift/savings plans or into matched 401(k) plans or into individual retirement accounts presents dramatically growing opportunities. It cannot be refuted that these savings will make a major contribution 15 or 20 years from now toward increased benefits. That is all the more reason that one needs not only to segment the retired population in discussions of what we should be doing with policy but also to clearly distinguish between addressing the problems of today's elderly and the problems of tomorrow's elderly. They are going to be very different sets of problems, whether it relates to indexing or just income provision per se.

MR. SWENSON: Basically, it is very clear that this country does respond to tax incentives in a major way when you look at the fact that we have such a high incidence of home ownership. It is really unparalleled in any other country. Our tax system has been designed to encourage home ownership, and we have responded to those incentives.

With respect to IRAs specifically, I am encouraged by the bourgeoning interest in them. Our company alone has sold over 100,000 of them just since the first of the year, and we really have not begun to market them on a group basis to employers. The experience in Canada with something similar, Registered Retirement Savings Plans, showed very slow growth when initially introduced, but has continued to expand and grow.

With respect to the notion that IRAs are primarily a means for high income people to set aside savings, it should be noted that, in 1977, three-quarters of all Registered Retirement Savings Plans in Canada were owned by those with incomes of less than $25,000. People at all levels of income are able to save.

I would expect tremendous growth in retirement income saving once mandated employee contributions to pension plans are permitted tax deferral treat-

ment. That will encourage not only the adoption of new plans but also the expansion of existing plans.

MR. NORMAN S. LOSK: In discussing measures of the cost of living, the various measures that were discussed today each left out one item that is significant, and that is the effect of taxes at all governmental levels on the cost of living. This is obviously an item that affects the active working population very differently from the retiree population.

MR. BERIN: I think we are very busy studying and measuring and getting upset about the wrong statistic. Whether it is the CPI or the variations of the CPI, it is the wrong statistic. Very briefly, the CPI came into being in 1917 when the economy was quite different than it is today. It was not feasible to track sample groups around the country and to find out how people spent their money. So what we are busy doing is looking at a bread basket of goods that is not realistic, does not change often enough, and maybe very roughly follows the overall trend. If you speak privately or publicly to people in the Department of Labor about getting representative samples for groups, regions, and areas across the country that would be a better measure of inflation, a better measure of cost of living, a better measure of retiree needs, they admit quite freely that they would. As a matter of fact, that is one of their projects, but it turns out to be project number 43, and it will never be done. So I agree that these are measurements that are not capturing what we should be capturing. The shame of it all is that it has such enormous significance to the economy.

MR. GRUBBS: Taxes are a real part of the cost of living, not just federal income tax, but the whole range of taxes on the state and local level. An increasing proportion of income in this country has been spent on taxes, and I do not see any potential reversal of that trend even with current decreases in the federal income tax level. That means that we have really had inflation higher than that measured.

MR. ALDEN: This whole business of keeping people whole in the face of growing taxation bothers me a bit. It is rather like the employee who says that the CPI went up 14% last year, so why can't my raise start there and go up. We cannot protect ourselves from taxes. If taxes were an element of an index used to increase pension benefits, then it would feed on itself. What we would really be doing to retirees or to anybody else affected by such an index (there are, of course, many millions of people affected directly by the CPI who are not retired) is to simply add another excuse for government to raise taxes, because millions of people would be insulated very directly from the effect of those tax rises by a comparable increase in their incomes. So, although taxes are very much a component of the cost of living, it would be a fatal flaw for us to attempt to index folks out of that problem by building taxes into some sort of measurement of inflation that is used to adjust incomes.

MR. RICHARD B. SIEBEN: There is a popularity to the perception that substituting rental equivalence for the distortion that has been in the cost of living index over the years is overdue. Is this the time for that reform? We all realize that there has been a flattening or even a dip in real estate prices. In my community, in particular, all the apartments have been converted to condominiums. The real inflation is caused by the limited supply of rental property. What if we project the patterns of what

is happening to real estate now? If the political consensus remains to not try to guarantee us the price increases that we expected in the value of our homes, is there not almost a self-reforming correction coming, where the CPI increase will, by using the real estate factor, the cost of homes, be less than what rental equivalence would indicate over the course of the next couple or three years? Could political battle be avoided? Aren't we solving last year's problem or imposing a penalty when a solution or remedy is just about to occur?

MR. GRUBBS: It is very uncertain whether the rental equivalence basis is going to provide more or less of an increase. The CPI-U and the CPI-W may well diverge in 1983 because of this, and some people are considering whether we should switch from W to U. The reason you cannot get any concensus on that is that nobody really knows which is going to be higher. If you can tell me for sure whether interest rates are going up or down in 1983 and 1984, I can tell you.

MR. BERIN: I would like to describe briefly how you would get the right measure, which sounds atrocious, but I think you will realize that we are measuring the wrong thing, and that a discussion about U, W, dropping this and adding that, is all roughshod kind of approximations to the real thing. If you would keep records of any purchase over $5.00, credit card or personal check, even if you pay weekly to the appropriate agency, at the end of the month it would be very easy to take these proofs of expenditure, rather than memory, and allocate them into slots: food, entertainment, rental, automobile, and so on. If you kept that month to month, and it is not a big chore, you would have your own personal CPI. Now if you could get representative sample groups across the nation to do that, you would be able to have a CPI for whatever component you want.

MR. GRUBBS: I disagree with that. If the price of everything rose 20% and I were forced to buy five-sixths as much of everything (spending the same number of dollars if my income didn't change), your index would indicate that nothing had happened, that there had been no cost increase at all. What really happened was that my standard of living just went down by a ratio of five-sixths.

MR. BERIN: How we shift our expenses is how we react to our own cost of living. There would be a massive discontinuity from one month to another and then a flat plateau, but we would certainly be allocating differently, less gasoline, less of a certain kind of commodity in replacement for another. Then for the first time we would be able to understand whether the government should entertain supplements or not.

MR. SWENSON: There has been, indeed, an upward bias in the CPI because of housing. If interest rates begin to decline, and if housing prices have peaked, for whatever reasons, there would be a self-correcting feature in the CPI as it is currently constructed. That might cause the CPI to understate, in a few years, the true cost of living, whereas it has overstated the true cost of living during the past several years.

The CPI is based on a fixed market basket constructed in 1972. People are no longer buying the big gas guzzling cars that they drove back in 1972. People are turning down their thermostats and using less energy. You might suggest that that indicates a deterioration in the quality of life, but

while you really cannot look at an individual to determine a CPI, you can look at a broad cross-section of the population, at their puchases in total. If their purchases in total are shifting, then I believe that it would be appropriate to factor that in. That would reflect the cost of living increase that the country as a whole is experiencing. The Personal Consumption Expenditure Deflator, rather than using an old fixed out-of-date market basket, reflects changes in consumption and, therefore, does not have the upward bias of the CPI. Because of that and the more appropriate treatment of housing prices, the Personal Consumption Expenditure Deflator is a more equitable and appropriate basis to measure the cost of living.

MR. LEWIS: I am curious to know if the panel has any thoughts on going one step further, from modifying indexes to try to meet a very volatile situation to some extent eliminating indexing altogether.

MR. BERIN: You eliminate indexing in this frame of reference by reducing or eliminating inflation.

MR. GRUBBS: Dollars are really a pretty artificial measurement in which to make payments. The whole purpose of providing income programs is to enable people to buy groceries and pay the rent, and these other things. If I suggested that we pay pensions in Mexican pesos, for example, and the rate of exchange varied, and these were being paid to people in the United States, you would say, "That is an inappropriate index because the exchange rate is changing all the time." What we are really trying to get at is an income that provides groceries and the other essentials of life.

MR. SWENSON: Back in the late 1960s and early 1970s, it was conservatives who suggested that the Social Security system should be indexed. The reason they suggested indexing is that the Social Security system was undergoing a series of ad hoc benefit improvements that produced benefit increases greater than the rate of inflation. Between 1967 and 1971, ad hoc benefit increases were put into effect that exceeded the CPI by roughly 50%. In 1972 a benefit improvement of 20% was granted in what could best be called an election year extravaganza. Also at that point of time, the benefit formula was improperly indexed for future benefits, and the benefits of those persons who were retired were then indexed to the CPI.

I think a question that needs to be asked is: Does indexation cause or exacerbate inflation? When you have inflation caused by external sources, such as we had during the 1970s when OPEC price increases created problems for the entire economy, the fact that there was a large segment of the population protected by CPI indexation caused the remainder of the population to bear a disproportionate share of the burden.

MR. BERIN: In England, for about 6 to 9 months they have had bonds that were what we would call "CPI adjusted," issued by the government in fairly sizable amounts, but not sizable in terms of the British budget. What the British government is doing is testing the water for a massive issue of "CPI-adjusted" bonds open to everybody in the United Kingdom. The problem with any response like that to inflation is simply that if the rate of inflation decreases, the government has found an inexpènsive way of borrowing. If the rate of inflation remains high or increases, the government might be brought down, which would be somewhat, if not truly, catastrophic.

The problem with any sort of a genuine response to indexing is that it leads you away from the problem. The problem is doing something about inflation. The problem we are discussing is largely out of the realm of the actuary. This is a very political discussion.

MR. SIEBEN: Consider a couple of government actions which are really increasing the price of a couple of pieces of that proverbial market basket. If we deal with the deductible increases last year in Medicare, which was approximately 30% on part A of Medicare, the individual either eats or goes out and purchases a Medicare supplement. With the withdrawal of federal funding of mass and urban transportation, it is the old people and the poor who take the buses. Now the inflation in that sector is 25 - 30%. What thoughts have you had concerning the needs of the retired and the unique things that are happening to them, partially on account of government action.

MR. GRUBBS: Some people have the idea that, with Medicare, the needs of the retirees are met. Actually, retirees spend a higher proportion of their income on medical care costs than active workers, and current cutbacks in various governmental programs are going to hit the elderly harder.

MR. SALISBURY: That is going to get worse rather than better. For example, the HI program, in the long term, is going to be in very serious difficulties. The rates of cost and tax increase are going to have to be very high, and in programs like that there is going to be a continuing attempt to slow down the relative rates of increase. The President's budget is not making real cuts in those programs between now and even the 1983 Fiscal Year budget. What the Administration is basically doing is cutting back on the rate of growth. Yet by cutting back the rate of growth in gross expenditures, you end up hurting the pocketbook of the lower income elderly, because year in and year out there are so many more of them. Elderly women are beginning to live much longer than the Social Security actuaries for health or retirement ever expected, and they are getting very heavy doses of care. Invariably, many of these changes are increasingly going to create a group of the elderly that are poorer and poorer relative to the remainder of the elderly. This is why I stress the danger in the approach now being taken by the government (and traditionally taken) of setting out general guidelines and making them applicable to everyone. There is always a great deal of hysteria when you use the word "welfare," but it may well be that the only way to accommodate many of these contradictory pressures is to provide much more targeted benefits to those people who are severely in need. Until the politicians are willing to deal with that, as long as they try for the generalized solutions and across the board budget cuts, and this, that and the other, these kinds of problems are likely to just continue getting worse.

MR. ALDEN: We have used a shot gun instead of a rifle. We have in effect said, "Every retiree out there receiving social Security Benefits has an equivalent need for indexation of his or her benefits," and that is clearly not the case. The fine tuning of that system, perhaps accompanied by a much more realistic rate of indexation, is the way we are almost going to have to go. Curiously, there is, among a lot of younger people, a recognition of the inevitability of all of this, and it is beginning to show itself both in the growth and the number of IRAs and in the intense interest on the part of individuals to save for their old age, something

that, if it ever happened in this country, at least in my memory, was a generation or more ago. So we are seeing a shifting of balance, and people are getting to the point, or have gotten there already, where they are willing to assume a much greater individual responsibility, and that comes at a most fortuitous time, when it clearly is no longer possible for the government to do so for everyone, but perhaps only for those in the direst kind of need.

MR. SWENSON: I'd like to conclude by mentioning that Prudential's Chairman, one of the 15 members of the National Commission on Social Security Reform, has been receiving a barrage of letters from the elderly. Most of them recognize that there are problems facing our economy and the Social Security program. They recognize that they may have to accept less than full CPI indexing. The one thing that they are asking, almost uniformly, is that any actions not be precipitous. There is a recognition that there are problems, that those problems need to be solved, and that they are willing to be a part of the solution.