**RECORD OF SOCIETY OF ACTUARIES
1978 VOL. 4 NO. 2**

SOCIAL SECURITY

*Moderator: A. HAEWORTH ROBERTSON. Panelists: ROBERT F. LINK, ALICIA H. MUNNELL**

The Social Security Amendments of 1977 are considered to be the most significant Social Security legislation since the 1972 Amendments and possibly those of 1950. Areas of interest resulting from this legislation include:

1. Major amendments
   a. Revised benefit formula
   b. Increases in the contribution and benefit basis
   c. Tax rate increases

2. Financial condition of Social Security after the Amendments
   a. Substantial reduction in OASDI actuarial deficit but significant remaining deficits after turn of century
   b. Hospital Insurance deficits unchanged

3. Benefit levels
   a. Replacement ratios under the new benefit formula
   b. Social Security's relative role in meeting income security needs

4. Possibly future legislation
   a. "Traditional" financing methods vs. alternative methods
   b. Other modifications considered by Congress but not enacted

MR. A. HAEWORTH ROBERTSON: The Social Security Amendments of 1977 made important revisions in the Social Security program.

Under the old law future generations of workers would have received progressively higher levels of retirement benefits, relative to their pre-retirement earnings, than today's generation receives. The amendments revised the method of determining benefits so this would no longer be true. In fact, benefits will be about 5 to 10 percent less generous for the majority of future recipients than for today's recipients. There will be an even greater reduction in the case of death and disability benefits payable with respect to relatively young insured persons. Of course, these changes reduced the future cost of the program.

The amendments provided for extraordinary increases in the maximum amount of earnings used for computing benefits and assessing taxes during the period 1979-81. Thus, in 1981 and later approximately 91 percent of the total payroll of persons in covered employment will be subjected to tax and recognized in determining benefits (compared with 85 percent at present).

*Dr. Munnell, not a member of the Society, is Assistant Vice President and Economist, Federal Reserve Bank of Boston. Her views do not necessarily reflect official positions of the Federal Reserve Bank of Boston or the Federal Reserve System.

This change increased the income more than it increased the benefit payments.

The amendments increased the tax rates themselves as well as the earnings which are taxable. The tax rate for both employees and employers under the Old-Age, Survivors, Disability, and Hospital Insurance programs combined is 6.05 percent in 1978. The new law provides for a gradual increase in this tax rate, beginning in 1979, to an ultimate level of 7.65 percent in 1990 and later. Tax rates for the self-employed are scheduled to increase from 8.10 percent in 1978 to 10.75 percent in 1990 and later.

But, even after all these changes, the Social Security program is still significantly underfinanced. To pay for the benefits which have been promised, taxes paid by the employee and the employer must continue increasing beyond the level of 7.65 percent in 1990. The tax rate must increase to approximately 8 percent by the year 2000 and 12 percent by the year 2025. The ultimate tax rate for the self-employed must become about 16 percent.

These future tax rates are based on the "intermediate" assumptions utilized by the Trustees of the Social Security program. Actual future tax rates will be different from these estimates but it seems more likely that they will be higher than the estimates than that they will be lower.

The Social Security program, however, is only one component of the myriad of employee benefit systems which have grown up over the years in an attempt to satisfy the needs generated by an individual's illness, disability, old age, or death. There are numerous other employee fringe benefit and income maintenance programs: worker's compensation, unemployment insurance, private retirement plans, group life and medical insurance plans, sickness benefit plans, etc. All of these employee benefit systems should be scrutinized and redesigned to the extent necessary to eliminate any gaps and duplications in satisfying these human needs, and to ensure that each fringe benefit dollar is being allocated wisely.

After all these changes have been effected, however, it appears that the problem will still be unresolved because it may well be impossible to satisfy all these human "needs" as they are now defined. The steadily growing cost of these systems may well be developing into an unsustainable burden. If this is true, the only conclusion is that the problem itself must be changed. Some way must be found to reverse the present trend - projected to continue in the future - whereby the inactive population is growing at a faster rate than the active working population. It seems highly unlikely that the active working population, already chafing under the yoke of today's burden, will be able and willing to assume the heavier burden projected for tomorrow.

In seeking ways to change the dimensions of the problem the nation's concept of work, education, leisure, and retirement should be reviewed carefully. It appears likely that this concept should be revised and that it should be presumed that an individual will engage in gainful employment suitable to his physical and mental condition until an age well beyond age 60 or 65, perhaps even until the end of his life. Such a trend may be a natural development as health and life expectancy improve, and as the growth in the work force slows because of the low fertility rates now being experienced and expected to continue in the future. For this trend to be consummated, however, significant changes will be required in existing social and economic arrangements.

The nation must take appropriate action to provide an environment in which the capabilities of each individual can be utilized effectively, an environment which fosters meaningful activity, not empty idleness. Both the incentive and the opportunity should exist to enable every individual to work and produce throughout his lifetime in a series of endeavors compatible with his changing physical and mental abilities. Governmental policies should be directed toward these goals and not toward the removal from the active work force of able-bodied persons who must then be supported by the remaining active workers.

Jobs must be structured so they are more meaningful and satisfying to the individual. Persons must undergo training and retraining to enable them to have not just second careers, but third and fourth careers. In some instances jobs must be designed to fit the capabilities of the human resources available. For older persons as well as disabled persons, less strenuous jobs and part-time employment must be made available. Significant advances will be required in our ability to match persons with jobs. Sometimes this complete utilization of an individual can be achieved with one employer but in some cases it will involve many different employers and may require geographical relocation as well. Attitudes must change to make this new concept possible.

These changes must begin to take place during the next 10 years, and they must be well underway by the turn of the century when the children of the post-World War II baby boom begin to reach their 40's and 50's. Bringing about these changes will be a slow process which will require the cooperation of many institutions, not just Social Security.

The first step in this process of change was the recent action by Congress prohibiting an employer from imposing mandatory retirement at an age lower than age 70 (with certain exceptions). This action was coincidental and was just another step in the direction of eliminating job discrimination altogether. Nevertheless it fits in well with the eventual need for a more complete utilization of the nation's human resources. As time goes by and health of the elderly improves, further increases in the mandatory retirement age may be advisable.

The Social Security program effectively dictates the retirement policy of the nation and, since the program itself fosters a policy of relatively early retirement, Social Security must be revised. The mere existence of the Social Security program in its present form sets a standard, and thus creates an expectation which then fosters a presumption of entitlement, for retirement in a person's early to mid-sixties, regardless of the condition of his health and his ability to continue as a productive and useful member of society. The Social Security program thus creates some of the needs it purportedly exists to serve.

MR. ROBERT F. LINK: In general terms, a replacement ratio is the ratio of the income benefit after retirement to the rate of pay before retirement. In more specific terms, these figures assume that the monthly benefit starts on January 1, and that a cost of living adjustment occurs on June 1. A one-year benefit total on this basis is divided by the assumed total pay in covered employment in the calendar year before the benefit starts. The result is expressed as a percentage.

This specific approach is consistent in principle with that used by the Office of the Actuary in the Social Security Administration to obtain the ratios that they have published, with one exception. They ignore any pay in excess of the maximum when they are dividing. It is more enlightening to divide by all pay in covered employment, and my figures are done in this way.

Replacement ratios are numbers, and I am going to roll a lot of numbers over you very rapidly. To start, look at the traditional replacement ratio for a single individual retiring at sixty-five who has earned the average wage during a full career under Social Security.

Table 1

Replacement Ratios for a Single Person with Average Earnings History, Retiring at Sixty-Five in Indicated Year

1955	1965	1970	1975	1978	1979	1990	2000	Ultimate
34	31	34	44	47	47	42	42	42

These figures give a pretty good perspective of what has happened and what is expected to happen. The replacement ratios hovered in the low thirties until the early seventies. Then they received a major upward shove and simultaneously were indexed, arriving at a much higher level in 1975 and continuing an upward drift until 1978. The 1977 amendments take effect in 1979. However, the full effect of these amendments is not felt for age sixty-five retirements until 1983. After 1983, the replacement ratios are lower than those prevailing just before the change, but significantly higher than those prevailing before the seventies.

Now examine some cases that are perhaps more typical.

Table 2

Selected Replacement Ratios for Individuals with a History of Average Earnings under Social Security

Case	Benefit	1978	1979	1990	2000	Ultimate
Retirement at 65	1.375 PIA	64	64	57	57	57
Disability/Death						
at 25	FMB	109	80	80	80	80
at 35	FMB	100	78	79	79	79
at 45	FMB	86	78	79	79	79
at 55	FMB	83	78	79	79	79

Here retirement is shown at sixty-five with a spouse who is sixty-two, producing a 137-1/2% benefit. The family maximum benefit (FMB) that would be associated with death or disability at various ages is shown also. These figures show the aggravated distortion of benefits at young ages under the former law (note the 109% replacement ratio at age twenty-five in 1978).

This distortion is substantially but not entirely eliminated in the new law. These figures also reflect that the new benefits for death and disability become effective in 1979, without transition.

Look at the replacement ratios for a person with an earnings history at the 85th percentile level.

Table 3

Selected Replacement Ratios for an Individual with a History of Earnings under Social Security at the 85th Percentile Level

Case	Benefit	1978	1979	1990	2000	Ultimate
Retirement at 65	1.375 PIA	48	48	44	45	46
Disability/Death						
at 25	FMB	82	61	62	62	62
at 35	FMB	72	59	61	61	61
at 45	FMB	61	56	61	61	61
at 55	FMB	59	55	58	61	61

Based on Social Security Administration data, I have arbitrarily assumed that the 85th percentile pay is always 167.5% of the average; this equates to $17,700 in 1978. The ratios behave much like the others, except that they are lower. All the same features appear. In addition, there is a little climb as the effect of the lower maximum on covered pay in the past gradually washes out.

Similarly, here are replacement ratios for the 95th percentile case, which I assumed to be 239% of the average, or $25,300 in 1978. The climb is more pronounced, reflecting the major increase in the maximum under the 1977 Act.

Selected Replacement Ratios for an Individual with a History of Earnings under Social Security at the 95th Percentile Level

Case	Benefit	1978	1979	1990	2000	Ultimate
Retirement at 65	1.375 PIA	33	34	33	35	38
Disability/Death						
at 25	FMB	58	43	51	51	51
at 35	FMB	50	41	50	50	50
at 45	FMB	43	39	47	50	50
at 55	FMB	41	39	43	48	50

You may wonder how the replacement ratios would change if we used typical histories of earnings in covered employment, rather than arbitrary histories with a flat ratio to the average. In The Equitable, we looked at this question, constructing supposedly typical wage histories based on data generated by the Hsiao panel for the Congressional Research Service. In brief summary, the replacement ratios that we got differ from what I have

already shown you to only a very minor extent. This work suggests that the replacement ratios based on earnings histories that are flat in relation to the average are a pretty good indication of what is happening over-all. We should of course always remember that there is much variation - an average will not apply to a large proportion of actual cases.

Now we come to the bottom line as far as replacement ratios are concerned. How do these replacement ratios relate to the income requirements of the various cases? To answer this question, you have to define "income requirement." I have assumed that the income requirement is represented by a replacement ratio of 70% for the average case, 60% for the 85th percentile case, and 50% for the 95th percentile case. These target ratios are loosely based on various investigations that aimed to determine the amount of income required after earned income stops, in order to maintain the same standard of living. The target ratios depend heavily on the non-taxability of Social Security and would not apply if the replacement income were taxable.

Table 5

Social Security Income as a Percent of "Target" Income
at Various Ages and Income Levels
(Entitlement in 1990)

Case	Benefit	Average	85th Pctl.	95th Pctl.
Retirement at 65	1.375	82	73	65
Disability/Death				
at 25	FMB	114	103	101
at 35	FMB	113	102	100
at 45	FMB	113	101	93
at 55	FMB	111	97	87

With this pyramid of tenuous assumptions, we find that for typical cases with average earnings histories, Social Security meets most of the retirement income replacement need. On the death and disability side, it overprovides. For the 85th and 95th percentile cases it meets a large part of the retirement need and almost all of the need at death or disability.

One more very important piece of information about the Social Security law is the level of contributions which I show here as a percent of pay in covered employment.

Table 6

Employees' Social Security Taxes as Percent of Pay in
Covered Employment

Pay Level	1955	1965	1970	1975	1978	1979	1990 & thereafter
Average	2.0	3.6	4.8	5.9	6.1	6.1	7.6
85th Pctl.	1.5	2.2	3.6	5.7	6.1	6.1	7.6
95th Pctl.	1.0	1.5	2.5	4.0	4.2	5.2	7.5

These figures show how individual resources for financial security are being increasingly preempted by Social Security. The increase is striking for the average case. It is even more dramatic for the 85th and 95th percentile cases.

The Life Insurance Marketing and Research Association has recently issued a report on security expenditures in the United States. It contains figures on spending for life, health and retirement coverages, including their forecast through 1990. All programs, including health, are covered. Here is a percentage breakdown of total expenditures, roughly in accordance with whether the money was paid into private programs or into government programs.

Table 7

History and Projections of Security Expenditures in the United States
(percent of total)

	1960	1965	1970	1975	1980	1985	1990
Private	58%	59%	49%	48%	43%	36%	32%
Public	42	41	51	52	57	64	68

While other definitions could be used and other assumptions made, I would assume that these figures are at least reasonable. They show a strong trend away from the private sector and toward the public section, with the public sector operations being double those of the private sector by 1990.

All of this information hints strongly at a commanding role for Social Security in the future, with the private sector playing a supporting part. How one views this picture is less a matter of professional inquiry and more a question of ideology and affiliations. My views tend to be conservative, oriented toward a limited role for government, and my comments will reflect that prejudice.

We used to speak of Social Security as a program to provide a floor of protection. It was expected that private programs would supplement that basic program to supply the levels of protection that society desired. We seem now to have gone way beyond that definition of the role of Social Security. And people are suddenly becoming aware of some serious problems. There is concern with the projected levels of Social Security taxes. There is concern that private coverages are being preempted. Going along with this is a concern about continued capital formation if the role of private pensions is greatly reduced.

One problem with Social Security that is aggravated as the role of Social Security becomes a relatively larger part of the total is that the tax rates under Social Security are heavily affected by population dynamics. The Social Security taxes were tolerable during a period when the ratio of beneficiaries to taxpayers was relatively low. This condition persisted for a long time, as the population and economic bubble kept expanding. Now the bubble is not expanding as fast, and inflation and rising living standards have been cancelled out of the equation by the indexing. The

intergenerational inequities that my former boss Ray Peterson predicted many years ago are now coming home to roost. As a result, people are desperately casting about for ways to pay the bill without undue pain.

Prescriptions for the problem have included shifting Medicare to general revenues, rolling back the ad hoc base increases, raising the taxes on employers, using one-third general revenues, etc. Out of this melange of suggestions will doubtless come some answer - conceivably a better answer than we have now. However, the suggestions tend to concentrate on the collection side. They affect the incidence of the burden among different income classes, and they affect the visibility of the burden. Most of them do not affect the total amount of goods and services that must be transferred from workers to beneficiaries. The goods and services side is the crucial one. As Haeworth Robertson recently said in a landmark paper, "Less time should be devoted to studying how to pay for the programs we now have, and more time should be devoted to determining whether our programs are what we really need and want and whether in the long run they are the best for our nation."

In this spirit, I will enumerate some approaches to redesign. They range from tinkering all the way to philosophical redesign. Only the first relates to any active legislative proposal. I will go roughly in ascending order of degree of change.

A first obvious suggestion comes from the grabbag of suggestions for fixing the taxes. It is to roll back the ad hoc base increases in the 1977 Act. Look at what this would do, using the Primary Insurance Amount (PIA) at sixty-five for the 95th percentile case.

Table 8

Projected Replacement Ratios under the 1977 Act, with and without the Ad Hoc Wage Base Increases Provided for in the Act
(95th Percentile Case - PIA at 65)

	1979	1990	2000	Ultimate
With Ad Hoc Increases	24	24	25	27
No Ad Hoc Increases	24	22	23	24

If we roll back the ad hoc increases, there would be a significant ultimate reduction in replacement ratios for individuals at maximum earnings levels. In the ultimate situation, this would reduce total program costs by about 4 or 5%.

If there is a desire to pull replacement ratios gradually down, we might reconsider cost-of-living indexing, as proposed by the Hsiao panel, in lieu of the average wage indexing introduced by the 1977 Act.

Table 9

Inflation Indexing Compared with Average Pay Indexing
(Average Wage History - PIA at 65)

	1979	1990	2000	2020
Pay Indexing	47	42	42	42
Inflation Indexing	47	37	33	29

These figures show clearly the downward trend in replacement ratios that the Hsiao panel hoped to achieve. Bear in mind that even these reducing replacement ratios represent, for the affected beneficiaries, a rising standard of living; the rate of increase just is not as fast as that for the working population.

A third area for consideration is retirement age. More precisely, the thought is to increase the earliest age at which the full benefits defined by the law for retirement may be received. The general effect is to reduce replacement ratios at most or all possible retirement ages, and perhaps to defer the earliest age at which a person may become entitled to retirement benefits. It seems very likely that something will be done in this area eventually.

A fourth area of possible change has to do with how benefits for family members relate to the primary benefit. Observers have offered rationales for major cuts in the extra benefits awarded for children or a qualified spouse. Changes in this area might be particularly helpful in pulling down the high replacement ratios for death and disability cases.

Fifth, Haeworth Robertson has recently proposed that Social Security should be gradually changed to a flat benefit basis. It seems that this approach might well produce a major reduction in benefit costs.

Finally, there may be an entirely different way of approaching this subject. Suppose we could establish a national goal for the amount of goods and services to be set aside by the working population for defined classes of beneficiaries such as those under Social Security. Such a goal could be expressed in terms of a payroll tax rate. Or it might be expressed more generally in terms of some percentage of gross national product. Assume the latter for the moment. Also assume the goal is really accepted by the population and considered binding by the government. We could then concentrate on design questions, subject to this overriding constraint. What is the best way to collect the specified amount, now that everyone knows what it is? How could the collections best be allocated to meet our national income security needs? Under this approach, questions of retirement age and benefit levels would be to some extent merged together in a single determination. This is extremely visionary; I do not expect to see it happen, but I could not resist at least floating it in front of you.

Summarizing, Social Security benefits appear now to be higher than those called for by some of the traditional concepts of the role of Social Security. Also, there is serious concern with the tax burdens associated

with providing these benefits, and problems in this area are going to get worse. The tax burdens can be shuffled around, but shuffling will not eliminate them. Reducing benefits can help, and I have reviewed some broad approaches to how the problem might be attacked from this side.

Last of all, it would be wonderful if our systems for providing for retired people and other beneficiaries could also carry some of the burden of producing the necessary goods and services - that is, actually contribute something to the total pie of goods and services that must be divided among producers and beneficiaries. This is the area in which private funded arrangements have a crucial contribution to make. The capital accumulated by them creates the jobs and produces goods to help fill the gap, and funded pensions tend not to have the intergenerational inequities of a transfer payment system such as Social Security. It appears that there are strong economic and social arguments for maintaining a significant role for private arrangements, particularly in the retirement area.

DR. ALICIA H. MUNNELL: The development of the nation's Social Security program and private pension system, in the wake of the Great Depression, reflected a shift in the nation's preference toward organized retirement savings. The two systems developed simultaneously since initially neither program alone provided adequate retirement income. In the 1970's, however, the climate for private pensions has changed dramatically. Social Security benefits have grown rapidly as a result of ad hoc increases and automatic cost-of-living adjustments. The two systems clearly represent alternative mechanisms for accomplishing the same goal - namely, an adequate retirement income. The private pension system as we know it today would not exist if the average Social Security replacement rate had been established initially at the current level of 45 percent.

Despite the expansion of Social Security, ample room still exists for private pensions to supplement the retirement income of workers with earnings above the median. However, this more limited role may be endangered by the persistent high rates of inflation which have been experienced during the 1970's. The percentage of retirement income derived from private pensions will certainly decline if private plans are unable to preserve the real value of the employee's benefits both as they accumulate during his working years and after retirement. In view of both the enormous cost to private firms of providing inflation adjusted benefits and the discouraging outlook for inflation itself, the future of private pensions seems uncertain.

First I will discuss the role for private pensions in view of the expansion of the Social Security program. Next I will examine the impact of inflation on private plans and the difficulties of providing inflation adjusted benefits. Finally, I will explore the tradeoff between Federal participation to provide indexed private pension benefits compared to the option of providing additional benefits to high-wage workers through Social Security.

The potential role for private pensions is determined by the gap between the income requirements of the elderly and the amount of benefits provided by Social Security.

Retirees require considerably less than 100 percent of their pre-retirement income to maintain their standard of living. While pre-retirement earnings are subject to the Federal income tax, the Social Security payroll tax,

as well as state or municipal income taxes, a large portion of retirement income is not taxed. Retirement also leads to reductions in work-related expenses such as transportation, clothing and meals purchased away from home. There also might be reductions in expenditures for services, such as cleaning and cooking, which were purchased while a person worked, but which retirees can perform for themselves. Furthermore, at age 65 most persons are eligible for Medicare which reduces their out-of-pocket medical expenses. Studies have generally concluded that, due to lower taxes, reduced work expenses, and Medicare, retirees generally require 65-80 percent of pre-retirement earnings to maintain their pre-retirement living standards.[1] (See Table 1).

In 1977, the Social Security program provided the average worker who retired at age 65 with a benefit equal to 45 percent of his earnings in the year before retirement. Low-wage workers received 58 percent of pre-retirement earnings, while workers who earned the maximum taxable amount received 32 percent (see Table 2). For couples with a non-working spouse, replacement rates are 50 percent higher.[2]

For the median worker, Social Security benefits alone provide approximately the intermediate budget (as calculated by the Bureau of Labor Statistics)[3] and yet replacement rates are low enough to encourage private supplementation through pensions or individual saving. At higher income levels, Social Security alone does not provide adequate replacement and must be supplemented by private provisions.

The important question is how much of the additional support required for workers who earn above the median should come from Social Security and how much from federally subsidized private pensions. The issue is essentially which program does the job best. In an inflationary environment an important characteristic to consider is the ability of each program to maintain the real value of benefits as they accrue and to adjust them for cost-of-living increases after retirement.

The issues involved in maintaining the value of pension benefits before and after retirement are quire different. The types of pension plans and their vulnerability to inflation are important in preserving the value of benefits before retirement. Since wages tend to rise with inflation, only final earnings plans effectively preserve the real value of workers' benefits. The real purchasing power of benefits calculated on the basis of career average is diminished by rising prices, unless the benefit formula of the plan is liberalized periodically. In response to the high level of inflation during the 1970's, the relative importance of final earnings plans has increased substantially.

[1]Peter Henle, "Recent Trends in Retirement Benefits Related to Earnings," Monthly Labor Review (June 1972), p. 18. Jane L. Ross, "Maintenance of Pre-retirement Standards of Living After Retirement," Technical Analysis Paper No. 10, Office of Income Security Policy, Office of the Assistant Secretary of Planning and Evaluation, HEW, August 1976.

[2]Less than 3 million dependent spouses received these gratuitous payments in 1977 compared to over 17.8 million retired workers. Social Security Bulletin, Vol. 41, No. 4 (April 1978) Table M-10, p. 45.

[3]U. S. Department of Labor, Bureau of Labor Statistics, "Three Budgets for a Retired Couple, Autumn 1976," August 4, 1977.

Table 1. Retirement Income Equivalent to Pre-Retirement Income for Married Couples Retiring January, 1976, Selected Income Levels

Pre-retirement income (dollars)	Pre-retirement tax payment (dollars)			Reduction in expenses at retirement[b] (dollars)	Equivalent retirement income[c]	
	Federal income	OASDHI	State & local income[a]		Dollars	Percent of pre-retirement income
$ 4,000	$ 28	$234	$ 4	$ 544	$3,190	80%
6,000	330	351	43	816	4,460	74
8,000	679	468	89	1,088	5,676	71
10,000	1,059	585	139	1,360	6,857	69
15,000	2,002	824	262	2,040	9,872	66

Sources: Commerce Clearing House, 1976 U.S. Master Tax Guide (CCH, 1975); Bureau of Labor Statistics, Revised Equivalence Scale for Estimating Equivalent Incomes or Budget Costs by Family Type, Bulletin 1570-2 (GPO, 1968), p.4; estimates of state and local income tax receipts as a percentage of Federal income tax from Bureau of Economic Analysis.

[a]In 1974 state and local income tax receipts were 13.1 percent of Federal income tax receipts. This percentage probably rose in 1975 because Federal taxes were decreased while state taxes increased. Therefore the percentage of preretirement income needed to maintain living standards is probably slightly overstated.

[b]Consumption requirements for a two-person husband-wife family after retirement are 86.4 percent of those for a like family before retirement (aged 55 to 64). Savings are therefore estimated at 13.6 percent of pre-retirement income.

[c]Assumes that retirement income is not subject to tax. If retirement income is subject to taxation, a larger pre-retirement disposable income would be needed to yield the equivalent retirement income.

Table 2. Monthly Benefits, Replacement Rates and Family Benefit as a Percent of Primary Insurance Amount, by Type of Beneficiary, January, 1977

Type of Beneficiary	Family Benefit as Percent of PIA	Monthly Benefit			Replacement Rate[a]		
		Low[b] ($4,416 in 1976)	Median[c] ($8,832 in 1976)	Maximum[d] ($15,300 in 1976)	Low[b]	Median[c]	Maximum[d]
Worker							
Aged 65	100.0%	$214	$329	$413	.582	.447	.324
62	80.0	171	263	330	.466	.358	.259
Worker Aged 65 with Wife							
Aged 65	150.0	320	493	619	.873	.671	.486
62	137.5	294	452	567	.800	.615	.445
Worker Aged 62 with Wife							
Aged 65	130.0	278	427	537	.756	.582	.421
62	117.5	251	386	485	.684	.526	.380
Widow Aged 65, Spouse Retired at							
Aged 65	100.0	214	329	413	.635	.447	.324
62	82.5	176	271	340	.480	.369	.267

Source: Social Security Administration, Office of the Actuary.

[a]The ratio of the PIA at award to monthly taxable earnings in the year just before retirement.

[b]Assumes annual income equal to half the median for males.

[c]Assumes annual income equal to the median for all male workers covered under Social Security. Median income figure for 1975 is preliminary from the Social Security Administration. Median earnings for 1976 estimated by increasing the 1975 figure by 7.3 percent which is the factor of increase in average weekly earnings for 1976. See *Economic Report of the President 1977*, p. 227.

[d]Assumes income equal to the maximum taxable amount each year.

According to the Bankers Trust study (which does not include collectively bargained multi-employer plans) only 22 percent of conventional plans in the 1970-1975 period utilized a career average formula exclusively, while more than half of those plans based full benefits on final pay. Final pay generally represents 5-year average compensation. With 6 percent inflation, even the 5-year average is about 11 percent below the salary in the final years. Nevertheless, final earnings plans are the only form of pension which preserves on a contractual basis the pension benefit of employees as they accrue.

However, the ability of even final earnings plans to offset the effects of inflation is limited by the lack of portability. Consider a worker who enters the labor force at age 25 and changes jobs every ten years until he retires at age 65. Even if each of his employers sponsors a final earnings plan and his benefits are fully vested, his final pension will resemble that of a career average plan. The erosion of benefits occurs because there are no provisions for indexing benefits between termination of employment and retirement. Employers would certainly resist such an indexing procedure since it would increase costs substantially.

Alternative measures to protect the value of a worker's pension during his career have obvious disadvantages. A simple scheme which would allow workers to transfer credits between plans when they changed employment would not constitute a solution unless some complex contribution schedule were designed so that the last employer would not be forced to pay almost the entire cost of the inflated benefits. Furthermore, the diversity of pension plans in the United States makes any type of portability almost impossible.

An alternative means of gaining portability is to replace private pensions with individual retirement accounts, to which employees would make contributions. While portability is assured, such a proposal would be equivalent to instituting a defined contribution plan, rather than a defined benefit plan. Workers would then be protected against inflation only to the extent to which the real yield on their assets was unaffected by inflation.

The preservation of the value of pension benefits between termination and retirement appears to require the participation of the Federal Government. The experience of Great Britain is instructive. Recent legislation has established provisions to insure the real value of pension benefits as they accrue. All private plans are now required to be the final earnings type, and after five years of service accrued pensions must be earnings indexed until retirement. Employers are permitted to limit their indexing to 5 percent if they make a lump-sum payment to the National Insurance Fund when an employee leaves the company.[4] This provision constitutes a government subsidy of the private pension system.

Maintaining the value of pension benefits prior to retirement is only half the issue. The key difference between OASI and private pension benefits is that the former is indexed for inflation after retirement while the latter is not. With an inflation rate of 6 percent, the real purchasing power of

[4] James E. Pesando, "Private Pensions in an Inflationary Climate: Limitations and Policy Alternatives," (1978 mimeo).

a $2,100 private pension benefit (the average in 1975) is reduced to $1,173 in ten years. Private plans, however, have been cognizant of the erosive power of inflation and have generally provided some adjustments to beneficiaries. The Bankers Trust study estimated that 71 percent of the conventional plans in their sample extended increases to retired employees. The average increase during the 1969-1975 period for a person who had retired in the mid sixties was 16 percent. While the 16 percent increase in benefits obviously relieved some of the pressure on retirees, it is clearly only partial compensation in face of the 47 percent increase in the CPI during the same period.

Can private pensions provide fully indexed benefits and remain actuarially sound in an inflationary environment? Simple numerical examples reveal that full indexation would be possible only if the returns on the plans' assets were not affected by inflation. Unfortunately, most of the recent evidence in the economics literature suggests that the real returns to equities and fixed income securities decline in response to an increase in the rate of inflation. In the case of corporate equities, the decline in the real rate of return reflects the increase in the effective corporate income tax rate. In periods of rising prices, conventional rules for calculating business expenses understates both depreciation allowances and the material costs of products sold. Consequently, corporate tax liabilities increase considerably faster than realistic assessments of operating profits. In the case of fixed income securities, interest rates generally rise by an amount equal to the rate of inflation, but this results in a lower real return to individuals facing a progressive tax structure. With an inverse relationship between real rates of return and inflation, private pension plans would require support from the Federal Government to provide fully indexed benefits.

In short, the erosion of the value of pension benefits by inflation represents a serious limitation of private plans. Furthermore, it appears that private plans are not in a position to preserve the value of pension benefits either as they accrue or after retirement. The fundamental question is whether bolstering the private pension system through tax expenditures and through subsidies to index benefits is an effective way to provide for the financial needs of retirees.

The advantages and disadvantages of Social Security and private pensions are well known. Social Security provides universal coverage, portability and benefits which keep pace with inflation. On the other hand, increasing payroll taxes add to business cost and may create inflationary pressures. Social Security may also have a slight negative impact on saving although recent evidence suggests that the early allegations that Social Security has reduced the capital stock by 50 percent are completely unfounded.[5] Finally, a further expansion of the Social Security program raises the philosophical issue of the right of government to infringe upon individual freedom beyond assuring a basic retirement benefit.

[5] Michael R. Darby, "The Effects of Social Security on Income and the Capital Stock", American Enterprise Institute, Discussion Paper Number 95, (July 1977, memeo), Martin S. Feldstein, "Social Security, Indexed Retirement and Aggregate Capital Accumulation," Journal of Political Economy, Vol. 82, (Sept./Oct. 1974).

Private pensions, on the other hand, offer variety and flexibility and contribute toward national capital accumulation. While these plans represent primarily private initiative for the provision of retirement income, plan participants are subsidized heavily by the Federal Government. Currently, pension contributions made by an employer are a deductible business expense. At the same time, they are not regarded as taxable income to employees until the benefits are paid out. The earnings in pension funds are also allowed to accumulate without payment of any income tax. In fiscal 1978, these tax savings to individuals amounted to a $9.9 billion loss in revenues to the Treasury.

The contribution of private pensions to capital accumulation must be interpreted in light of this large tax subsidy and new evidence which indicates that individuals covered by private pensions tend to reduce savings in other forms.[6] Preliminary empirical work by Feldstein tends to confirm such behavior since he finds that pension saving has not had any net effect on private saving. Although private pensions probably have a more favorable impact than the unfunded Social Security system, the capital accumulation argument is less persuasive than it first appears.[7]

The most compelling argument against replacing private pensions with an expansion of Social Security for high wage workers is that their welfare cannot be well served by a program which is heavily weighted with redistribution toward the lower end. For this reason, it is necessary to consider the following politically unrealistic proposal. Social Security could be redesigned as a proportional wage replacement program insuring 40-45 percent of pre-retirement earnings for the 85 percent of the labor force whose wages fall under the 1978 taxable maximum.[8]

[6] Alicia H. Munnell, "Private Pensions and Saving: New Evidence", Journal of Political Economy, Vol. 84, No. 5, Oct. 1976.

[7] Martin Feldstein, "Do Private Pensions Increase National Saving?", Harvard Institute of Economic Research, Discussion Paper No. 553, May 1977.

[8] Aside from the relative efficacy of private pensions and Social Security, two additional reasons exist for transforming Social Security into a proportional wage replacement program. (1) Social Security is inefficient as a welfare system - many of the progressive benefits accrue to people who were not primarily dependent on earnings in covered employment during their working life. (2) A proportional system would ensure that all workers receive an equitable return on their contributions. In the past, the expansion of coverage and the growing labor force yielded adequate revenues to allow Social Security simultaneously to provide a positive return to all workers and to pursue the goal of income support. However, coverage is no longer expanding and population growth is expected to cease; therefore, the real rate of return on Social Security contributions will be substantially lower for future retirees. In this setting, the goals of income support and a fair return will come into direct conflict: high returns for low-income individuals may lead to no returns for high-wage workers.

Individuals with histories of low wages would receive additional benefits from an expanded supplemental security income (SSI) program. For median and high wage workers Social Security benefits would be augmented by individual saving and income from contributory pension plans. Federal subsidization of these plans would no longer be necessary. In lieu of nontaxable employer contributions, employees would make their own contributions out of after-tax income, which would insure instant vesting and portability. It might be desirable to allow the interest to accumulate tax free (as is done for Individual Retirement Accounts) in order to encourage saving for retirement.

Clearly, it is not politically feasible to increase Social Security benefits at this time, in light of the poorly-received recent tax increases and the large deficits projected after the turn of the century due to demographic shifts. Nor is a proposal to divest the program of its welfare attributes any more realistic. Nevertheless, if the Federal Government is called upon to assist private plans in providing indexed benefits, an expanded and nonredistributive Social Security program should at least be considered as an alternative mechanism to provide retirement benefits to workers with income above the median.

MR. HENRY BRIGHT: Dr. Munnell, I do not understand your concern with the indexing of private pensions while at the same time you make no mention of the large segment of the population that is without private pension coverage. Also, there is a great disparity in the level of private pensions. It seems to me that the government's first concern should be in these areas rather than the indexing of benefits.

DR. MUNNELL: Even though you have all my words, I did not get across exactly what I was trying to say. The government is foregoing about $10 billion in revenue now to subsidize private pension plans through favorable tax treatment of their participants. Would it not be better to spend that money by raising benefits for those workers earning between the median and the 1978 maximum? One of the reasons is the reason that you brought up, that only a fraction of those people have private pension coverage. Spending that money through Social Security would ensure that everyone received some additional benefits. Today I was just trying to focus on a failing of the private pension system, which is that it does not and cannot provide inflation-adjusted benefits. I was not trying to advocate that the government should spend whatever meager funds it has available to provide cost of living adjustments for that select group that already has private pension coverage.

MR. KENNETH P. SHAPIRO: The best solution that the government could provide to the private pension industry would be to keep the inflation rate down.

MR. JOHN A. MacDOUGALL: Dr. Munnell, are you not criticizing the system of taxation rather than the private pension industry?

DR. MUNNELL: Yes, it is a flaw of the tax system that we forego that much revenue which benefits primarily upper income people, and may not increase savings that much.

MR. LINK: The $9.9 billion is calculated by a certain process which may be right or wrong, but it seems not unreasonable to me. But the whole Social

Security system enjoys a tremendous tax subsidy to say the least in that the Social Security benefits are not at all taxable to the beneficiaries. The tax subsidy in the private sector arises from the fact that the taxes are delayed and delay does involve true revenue loss. But in the Social Security system, taxes are not paid at all.

DR. MUNNELL: The cost of not taxing the Social Security benefits is estimated at $3 billion. You would not want to tax the full benefit anyway because people contribute part out of their after-tax dollars. A large number of people favor taxation of Social Security benefits or partial taxation and I agree with that.

MR. ROBERTSON: I have been known in the past to say that if we have sustained inflation at high levels the private sector would fall behind and not be able to keep its present share of the total income maintenance market. Dr. Munnell is saying that with sustained inflation at high levels it is very difficult, if not impossible, for the private sector to keep up.

MR. LINK: Dr. Munnell has said some rather severe things about the capacity of the private pension system to deal with the ravages of inflation and I guess I agree with her. She makes particular reference to the fact that with inflation the yield on the funds decreases when inflation increases. This is true over the short-term, but the loss occurs from a change in the inflation rate. With increased inflation the fund loses money, but when the inflation rate comes down the fund makes money. The only trouble is that it loses money when it needs to make money and makes money when it could stand the loss. If you could invest in short-term securities that yielded as much as long-term securities, and whose yields would be sensitive (as interest yields tend to be) to the rate of inflation, you could probably index pensions very well. You would still have a little problem with the vested pensions of people who move from one job to another but you could have very good indexing that way. It is a terrific challenge for the private pension industry to find ways of dealing with this mismatch so as to do a better job of dealing with the problems of inflation. I do not like the suggestion that if the private pension cannot do a perfect job of indexing, indexing should be done through Social Security. Most of the inflation has been caused by government policy and I do not like the idea that the government has created a situation which then leads to the need for the government to do more in this area. Secondly, this massive indexing is not desirable because I fear that it will add to the fires of inflation.

MR. BRIGHT: I agree that the adverse investment experience results from a changing inflation rate, not from the existence of inflation.

DR. MUNNELL: We have to approach this like scholars searching together for the truth because this whole area of the effect on the real rate of return during inflationary periods, at least in the economic literature, is just beginning. I am not a pioneer in this particular aspect of work but as I understand it gross pre-tax profits are incorrectly calculated because you are only allowed to depreciate the purchase price of assets. Theoretically, you would want to be able to depreciate them at their inflation-adjusted price. It is really a flaw in the tax system which also involves the way you price inventory and raw materials. Corporate

profits look too high from any reasonable way that you would want to calculate them, and yet they are taxed fully. This has the effect of the corporate tax rate increasing when prices rise. Therefore, real corporate profits fall and through that the real return on corporate equities also falls. This analysis is from somebody who has historical data to show that this is what is happening.

MR. MARC M. TWINNEY: I would like Dr. Munnell to comment on the fact that the Federal Government has kept its own employees out of the Social Security system.

DR. MUNNELL: They have an absolutely wonderful pension plan and people can receive Social Security coverage in addition. It is not in their self-interest to join the Social Security system. Nevertheless, I cannot see any justification for them staying out.

MR. SHAPIRO: Has your office done studies on the financial effect of bringing Federal Government employees into the Social Security system?

MR. ROBERTSON: If all civil servants were brought into the Social Security program, and if the 30% of state and local employees who are not now in Social Security were brought into the program, on the average over a period of the next 75 years, the cost of the program, expressed as a percentage of taxable payroll, would decline by less than 1/2%; therefore, the tax rates for employees and employers in the future could average about 1/4% less than they would otherwise.

MR. IRWIN T. VANDERHOOF: The problem of inflation can be looked at from two points of view. The first is that it is a problem of our society which has many complex sources. The other point of view is that it is a problem created totally by the government in the use of the printing press, in the use of the power of the government to buy things with money that it does not have. If we view inflation as solely a creation of the government, the principle criticism of the private pension plan involves the inability to protect the individual from the excesses of the government. The question becomes whether or not it is possible for the private pension plan to protect us from the government. It is possible subject to the government not changing the rules again. If the real return falls during an inflationary period, manufacturers can raise their profit margin until there is a real return on capital. How does the government change the rules? It changes the rules by invoking price control, by considering these profits, which are now real profits, to be excess profits so it can continue taxing capital. If capital is being taxed and it is not possible to develop a real return, then there is a substantial negative incentive to have any capital. The next step is that there is no reason to save; if there is no reason to save there is no reason for capital accumulation to develop. The latest issue of the Journal of Political Economy had an interesting article on the effect of insufficient capital accumulation. If there is not enough capital accumulation, then the marginal product of labor is lower. What does that mean? That means that labor is less well compensated.

MR. ROBERT J. MYERS: Dr. Munnell seems to believe that private pension plans cannot preserve the value of their benefits in times of inflation.

However, her presentation today seems somewhat less certain on this subject than some of her earlier works. In my opinion, indexing of private pensions is feasible - and is essential if their role is not to be taken over by Social Security. Such a result can be obtained if investment earnings in excess of 2-1/2% or 3% are utilized to preserve the value of pension benefits both as they accrue and after retirement. In any event, if the country as a whole can afford the cost of indexing retirement incomes for changes in the cost of living, this can just as readily be done through the private sector as through the Social Security system.

Dr. Munnell makes the statement that private pension plan participants are subsidized heavily by the Federal Government because the employer contributions are a deductible business expense. This frequently-used statement is not true if one traces through the incidence of taxes. Certainly, it is no more true to say this than that the federal government subsidizes salaries of workers because these too are a deductible business expense.

Dr. Munnell proposes that Social Security should be transformed into a proportional wage replacement program. This "would ensure that all workers receive an equitable return on their contributions." Such a proposal would remove the social adequacy basis of the system between workers at different earnings levels (which I consider to be a desirable feature of the program), but it would still leave unchanged the distributional elements between those of different generations and those with different family compositions (both of which I consider desirable features).

Mr. Link is concerned with the high cost of the Social Security program in the future. This is a legitimate concern. He points out that, if price indexing had been legislated instead of wage indexing, the long-range costs would have been much lower and, in fact, they would have been maintained at approximately a level rate relative to payroll. This is only a very academic view of the matter, because the deteriorating benefit level (as compared with earnings) would inevitably produce pressures of an irrestible nature for ad hoc increases in benefits. Those who advocate the wage-indexing procedure really "walk on both sides of the street at the same time" by claiming that long-range future costs will be low, while at the same time recognizing that there will be ad hoc increases.

I believe that one favorable element with regard to the increasing relative costs of the Social Security program over the long-range future is that simultaneously there will be a much smaller child population. Correspondingly, lower taxes will be required for programs involving children (such as public education). In other words, the higher taxes which are needed for retirement purposes will be at least in part offset by lower tax needs for children.

Although the recent amendments did not eliminate the windfalls in the Social Security program that are available to government employees who are not covered (the House Ways and Means Committee made a valiant attempt to take such action by providing for compulsory coverage beginning in 1982 but the House as a whole reacted to political pressure) some small steps in this direction were taken. Specifically, the extent of such windfalls was reduced by the provision freezing the minimum primary benefit at the level which it will be in June ($122), and by the provision offsetting

against spouse's benefits any governmental-employee pension based on such spouse's earnings under a system not covered by Social Security.

MR. LINK: On the matter of the old people and the children, there is something involved in bottling the gain from the children so that it can be made politically available for the old people. It is not easy because the number of children tends to be an individual choice which involves some trade-offs and people want those trade-offs. To some extent they are not going to feel very good about the idea that they should provide more money for the retired.

MR. ROBERTSON: It is interesting how we say that private industry cannot keep pensions up to date but the government can do so. How does the government do that? Effective next month the Social Security benefits paid to some 34 million people are going to be increased 6-1/2% because the rate of inflation between the first quarter of 1977 and the first quarter of 1978 was 6-1/2%. Since Social Security benefits are not subject to income tax, that means the level of benefits received from Social Security will have been adjusted and kept completely up to date with the change in the Consumer Price Index (CPI). How many of you are going to increase your gross salaries this year by enough so that after you pay taxes you will have a 6-1/2% increase in your net take-home pay? Many of you may be able to say yes, but many of the nation's workers will have to say no. The only way we are protecting the people who are inactive and receiving Social Security benefits from the ravages of inflation is at the expense of the people who are still working and paying taxes. I am not sure we can continue to do that indefinitely. Is there any possibility that we will decide that we should not increase Social Security benefits to take into account full CPI changes? President Ford proposed this a couple of years ago. He did not get re-elected.

MR. MYERS: It is interesting to note that there is some movement toward deliberalizing the very generous indexing provisions in the several pension plans for civilian and military employees of the Canadian Federal Government. These proposals by the government involve: no indexing for retirement before age 60 until such age is reached (but then prospectively with the same amount of indexing as if it had begun at the time of retirement); only pro rata indexing for the year of retirement; and, most importantly, not providing full indexing unless it can be financed (over 3-year periods) by the funds available from the combined employer-employee contribution rate of 2% for this purpose, plus the interest earnings on the portion of the accumulated fund allocated to pensioners in excess of a 4% interest rate.

MR. MacDOUGAL: I want to emphasize a point that is sometimes forgotten. We lose sight of the fact that many of our benefit programs are designed for income replacement, not income additions. In the police systems and many government systems are early retirement benefits replacing income or adding income? Is it proper for a system and for a society to provide additional income solely by virtue of the fact that an employee has spent a certain amount of time in a certain place? As an example of this, we remove the mandatory retirement provision in order to permit people to work and we reduce the income test under Social Security.

Inflation is a symptom of an illness and indexing is not the solution. Indexing is utilized primarily in government areas. In the private area,

we have to meet certain requirements. You cannot fund a plan in the same manner as the civil service retirement system or the military retirement system. Again, it gets back to the income replacement concept and the responsibilities of a society to take care of its individual members.

MR. BRIGHT: I want to go back to a point that Bob Link made in his discussion of the inflation indexing approach as compared to the wage indexing approach. Would you elaborate on decreasing replacement ratios representing an increased standard of living.

MR. LINK: There is a set of replacement ratios that for the affected individual would represent no increase in the standard of living. The replacement ratios under the 1977 Act represent an increasing standard of living on the conventional assumption that wages are increasing faster than inflation by 1-3/4%. There are infinite sets of replacement ratios which represent an increase in the standard of living less than the 1-3/4% rate.

MR. BRIGHT: I understand the point you are trying to make, but when you talk about an increasing standard of living, are you talking about increasing inflation-adjusted gross income or are you talking about the net income?

MR. LINK: Gross earnings and net earnings are the same in the example because Social Security income is not taxable.

MR. ROBERTSON: It might be well to point out that two days ago the Trustees of the Social Security System issued their annual report on the financial status of the program. The financial condition of the program according to the report is not significantly different from the status of the program as reported earlier this year after the amendments of 1977.

To some observers, major changes in the Social Security program are out of the question because of the size and scope of the program and because it is so firmly established. On the other hand, 53 percent of the present population consists of those born after World War II, persons who are now under age 33. These young persons will begin reaching their sixties just 28 years from now in the year 2006. It is today that a general framework should be constructed regarding the retirement of this generation - the type and level of benefits to be provided, the source of benefits, the approximate age at which benefits will commence, etc. In making these choices the nation must not be influenced unduly by decisions made in the past by and for different generations of people living under different circumstances.

An extremely important element in facilitating all the changes necessary to rationalize the nation's overall system of employee benefits is that the public have a much clearer understanding of the problems. With particular regard to the Social Security program, the rationale as well as the cost - now and in the future - must be acknowledged and explained clearly to the public which will then be in a position to reaffirm the program or effect a revision.

It will not be easy for the nation to move in the direction of full utilization of its human resources and thus bring under control the rising cost of supporting the inactive population. The alternative, however, will be even more difficult: continued high unemployment and under-employment, an ever increasing pool of idle "disabled persons" and "aged persons", and a total cost to society which will become increasingly unbearable and which will eventually become destructive.

Although the magnitude of the nation's income maintenance problems will not become evident to everyone until many years in the future, and although the solutions to these problems need not be implemented completely for another 25 to 30 years, the time to design the solutions and to begin implementing them is not the future, it is now.