RETIREMENT INCOME RIGHTS AS A COMPONENT OF WEALTH IN THE UNITED STATES*

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Americans have accumulated a considerable amount of future purchasing power in the form of Social Security and employer pension rights. These rights are a form of wealth. In this paper, we ask how their inclusion alters the wealth portfolios of a sample of Americans at or nearing normal retirement age. Data from the 1973 wave of the longitudinal Retirement History Study suggest that, for many Americans, retirement income rights are the dominant component of wealth, and are often more important than all other entries combined, including home equity. We also find that this wealth can be seriously eroded during times of high inflation. Because of differences in marketability, pension and Social Security rights are not perfect substitutes for more liquid assets. Nonetheless, since they are so large in magnitude, and have been shown to be key determinants of the behavior of older workers, they should not be ignored.

Recent research on retirement in America has established beyond a doubt that financial circumstances play a very important role in individual retirement decisions.[1] Those with secure sources of retirement income are more likely to leave their jobs and withdraw from the labor force than are others. Work by Richard Burkhauser and me [1, 8] suggests that there are two key aspects of these retirement income promises that are important in determining behavior—the size of the benefits expected and how their magnitudes change with continued work (i.e. with delayed retirement).

Both Social Security and employer pension plans are basically rights to future income streams, contingent upon certain circumstances. Employer pensions require one to leave the job, and Social Security requires that earnings drop below a certain amount. Both of these systems are complicated contractual arrangements that contain many explicit and implicit incentives—encouraging or discouraging retirement. Though these systems are extremely difficult to summarize compactly, we have argued that these income streams are best described by their present discounted values—their asset or wealth equivalents. This summary measure incorporates the essential features of the plans—the age of eligibility (since the future stream consists of zeros until then), the size of the annual benefit flow and, as we shall see below, the degree of inflation protection after retirement.

The bulk of our research has concentrated on how this retirement income wealth affects behavior. Burkhauser and I [1] have found that individuals appear to understand these retirement incentives, and are more likely to leave a job once the asset values of their pension or Social Security rights begin to decline.

*This paper was presented at the Eighteenth Conference of the International Association for Research on Income and Wealth, Luxembourg, August 1983. I would like to thank Jean-Pierre Poullier and Richard Ruggles for thoughtful suggestions on an earlier draft, and James Cosgrove for excellent computer assistance.

[1]Summaries of this research can be found in reviews by Clark, Kreps and Spengler [2] and Mitchell and Fields [5].

This behavioral research has produced an excellent series on retirement income rights for a sample of older Americans. The major goal of this paper is to compare the magnitude of Social Security and pension wealth with that of traditionally defined wealth—financial assets and equity in a home, business or real estate. The data suggest that for many older Americans in the mid 1970s, retirement income rights were much more important than all other sources of wealth combined. For many elderly, Social Security and/or pension eligibility were the major items in their asset portfolios.

A second goal is to estimate the magnitude of the losses in pension wealth that accompany inflation after retirement. This depends, of course on the extent of inflation protection. The estimates suggest that inflation in the 8 percent range can cause significant harm to the asset portfolios of certain elderly.

The year of these data—1973—is important, because it follows a period of substantial increases in real Social Security benefits. Congress legislated benefit increases of 15 percent, 10 percent and 20 percent effective January 1970, January 1971 and September 1972. The 1972 legislation also indexed future increases to the cost-of-living.[2] At the same time, participation in private pensions was growing dramatically—by almost 50 percent from 1965 to 1975.[3] Both of these factors imply an increase in the relative importance of Social Security and pension wealth.[4]

The appropriate definition of wealth is a topic of considerable controversy. The most restrictive definition includes only marketable assets, such as financial instruments, household goods, home equity and real estate. Others have argued that future income streams are the flow equivalents of assets, and should be considered. The OECD, for example, in its list of social indicators [6, p. 38] suggests that accrued pension rights be included in the wealth concept, even though the benefits from these rights will not be received until later. Dunn and Hoffman [3] analyze the impact of including occupational and state pension schemes on the wealth distribution in the United Kingdom. They value the rights at the total accrued liability for funded plans, and at an hypothesized liability for unfunded schemes. Wolff [11], in a very thorough discussion of these definitional issues, proposes four concepts of household wealth. The most expansive, called household entitlements, includes the present discounted value of all future income flows, including earnings.

Which is the appropriate definition of wealth? Should future pension rights and future earnings be included? There is no correct answer. It depends on the use to which the wealth concept is being put. It also depends, as Dunn and Hoffman [3] point out, on one's ability to quantify the values of the assets and on the availability of data on which to base the estimates.

In this paper, the traditional definition of wealth is expanded to include future pension streams, but not future earnings. The broader purpose of this research is to analyze the retirement decision. At issue, therefore, is the size of

[2]See Social Security Bulletin [10], p. 22.

[3]See Schieber and George [9], Table III-1, p. 54.

[4]An early version of this paper analyzed the wealth portfolios of this same sample in 1969 prior to the dramatic increases in real Social Security benefits. Retirement income wealth was important then, too, but less important than it is in the more current 1973 data. See Quinn [7].

the asset portfolio the respondent would own *if* he were to stop working and retire. A major source of wealth in retirement, as we will see, derives from public and private pension benefits. Given the definition of retirement used here—labor force withdrawal—future earnings are not relevant, and are excluded.[5]

The inclusion of future income in current wealth is consistent with a life-cycle view of decision making—that current decisions are based on past, present and expected future circumstances. People lend and borrow to create consumption patterns that are smoother than annual incomes. For example, future pension rights could be partially consumed before receipt by borrowing today and repaying when the pension benefits arrive. This is most easily accomplished when the borrowing is done from more liquid assets in the person's own portfolio; for example when bank accounts are depleted in anticipation of pension benefits in the years ahead. When these other assets do not exist, the intertemporal shuffling is more difficult, since pension rights are not marketable in the usual sense. Given the age distribution of the sample here (62 to 67), however, it is more reasonable to include than to ignore these rights, since they do permit consumption and retirement decisions which could otherwise not be made, even prior to the age of first receipt.

The valuation of retirement promises is more difficult than for more easily marketable assets.[6] The size of the benefits to be received is uncertain, since both Social Security and employer pension rules are subject to change. In the case of underfunded plans, even the receipt of benefits may be in doubt. These problems are minor in this paper, however, since the respondents in the sample are aged 62 to 67, and already at or very near the normal age of retirement. In this paper, the retirement promises are taken at face value and assumed to be correct.[7]

Data and Methodology

The primary data source for this paper is the Retirement History Study (RHS), an extraordinarily rich longitudinal survey of the retirement process undertaken by the U.S. Social Security Adminstration. Over 11,000 men and non-married women aged 58 to 63 were interviewed in 1969 and then reinterviewed every other year through 1979. Married women were excluded from the sample as primary respondents, and appear only as spouses of the married men. In addition, the Social Security Adminstration appended the entire covered earnings

[5]Prior to 1982, the earnings test (the benefit reduction for earnings over an exempt amount) was waived for beneficiaries 72 and over. In 1982, this age was dropped to 70. Those 70 and over, therefore, can continue to work and claim the full present discounted value, though few choose to do so. If some of the sample in this paper anticipated doing this, the exclusion of future earnings may understate current wealth.

[6]The liquidity of these assets falls along a more continuous spectrum than the labels marketable and unmarketable suggest. For example, stocks, a home and a valuable painting are all marketable, but the first can be sold more easily than the other two. On the other side, one could sell or bequeath pension or Social Security wealth by applying the monthly benefits to a life insurance policy with the purchaser or heir of the rights as beneficiary. This is not to deny that vast differences in marketability do exist, but only to argue that the concept is not dichotomous.

[7]By concentrating on just older Americans, we also avoid another difficult subject that should be discussed in a broader income distribution study. These rights represent positive wealth to their owners, but negative wealth to those who will pay for them; for example, taxpayers and stockholders. We ignore these negative entries, since they primarily apply to people outside the scope of this study.

history for each respondent, permitting precise estimates of potential Social Security benefits. Richard Burkhauser and I have calculated private pension and Social Security wealth as of 1973, and this is the basis for this paper.

A major advantage of this data set is that we know the details of the traditional wealth portfolios and Social Security and pension rights of each individual in the sample. The data are microeconomic in nature. In contrast, Dunn and Hoffman [3] were working with more aggregate data, and had to experiment with creative allocative schemes to distribute the value of the pension liabilities to the different cells of the wealth distribution [3, pp. 252-253]. These difficult decisions are not necessary in this paper, since the data describe individuals.

The calculation of the 1973 present discounted value of a pension income stream requires 5 pieces of information: the age of the individual in 1973, the earliest age of eligibility (or the 1973 age, if the respondent was already eligible by then), the size of the benefit entitlement, a discount rate and survival probabilities. The RHS data include the first three, and Census Bureau publications provide the last.

The choice of an appropriate discount rate depends on three factors: the real rate of interest, the expected rate of inflation, and the degree of inflation protection (or indexation) of the retirement benefits. The indexation factor is easily handled via the discount rate. Benefits that are fully indexed for inflation (i.e. fixed in *real* terms) are discounted by the real rate of interest only. Those fixed in *nominal* terms, and not adjusted at all for inflation after retirement, are discounted at the nominal rate. This equals the real rate plus the expected rate of inflation. Benefits that are only partially indexed are discounted by the real rate, plus the *uncovered* portion of inflation. Obviously, the lower the degree of indexation and the higher the rate of inflation, the lower the present discounted value of a given income stream.

There is considerable variation in inflation protection after retirement in the United States. Social Security and federal civil service and military pensions are automatically and fully indexed. Many state and local government employee plans are also indexed, but with a cap—a maximum adjustment—most often in the 3 to 5 percent range. Finally, private pensions are frequently not indexed at all. In some cases, employers unilaterally raise the benefits of the retired, or agree to do so in a union-bargaining situation, but such adjustments are done on an ad hoc basis and are not automatic. Such adjustments are ignored here. To the extent they are important, the estimates in this paper will understate the size of pension wealth and exaggerate the wealth losses that accompany inflation.

The U.S. has had considerable variation in recent inflation experience. After two decades of annual rates near 2 percent, prices rose an average of 6.5 percent per year in the 1970s, with two year-to-year changes (1974 and 1979) in double figures. Since then, inflation has slowed considerably, and the latest December (1983) to December (1984) data show a rise of about 4 percent.

In this paper, three inflation scenarios are considered: no inflation (used for comparison purposes only), low inflation (3 percent) and high inflation (8 percent).

Since Social Security and other government benefits are fully indexed, they are always discounted by a real rate of interest, assumed to be 2 percent. Private

pensions are assumed to be fixed in nominal terms, and therefore discounted at 2 percent plus the rate of inflation (0, 3 or 8 percent). State and local government workers are assumed to be protected for the first 5 percent of inflation only.

In summary, the inflation scenarios and the discount rates are as follows:

DISCOUNT RATE

Inflation Scenario	Social Security	Other Pensions, by Sector		
		Federal	State and Local	Private
None (0 percent)	2%	2%	2%	2%
Low (3 percent)	2%	2%	2%	5%
High (8 percent)	2%	2%	5%	10%

The wealth equivalent (present discounted value) of a private pension income stream is defined as

$$W = \sum_{i=0}^{n} \frac{B_i \cdot p_i}{(1+r)^i}$$

where B_i = the annual pension benefit (0 prior to eligibility), p_i = the probability of surviving the ith year, r = the discount rate, and $n = 100 -$ current age (the calculation ceases at age 100).

Two factors complicate the calculation of Social Security wealth—the source of the data and the issue of survivors' benefits. The Social Security benefits are not derived from survey responses, but from internal Social Security files. The advantage of this is that the benefit estimates are extremely accurate. A possible disadvantage in behavioral work is that these figures may diverge from what the respondents *expect* to receive. An interesting methodological point, not addressed here, is the usefulness and legitimacy of an explanatory variable that the researcher knows more accurately than the decision-maker does. This paper is descriptive, and does not attempt to explain behavior, so the Social Security data are ideal.

A major component of Social Security coverage is the survivor's and dependent's benefit.[8] A retired worker's benefit is increased by 50 percent if there is a spouse who is at least 62 years old (and not eligible for higher benefits on his or her own). If the primary beneficiary dies, the spouse continues to receive a benefit equal to two-thirds of the combined amount. We include the spouse's benefit, and the probability of the spouse outliving the beneficiary, and then living each year up to 100. This requires the spouse's age, which we have. Of course, this complication does not arise for unmarried members of the sample.

THE IMPORTANT OF RETIREMENT INCOME RIGHTS

The standard definition of wealth includes net financial assets (such as stocks, bonds, checking and savings accounts and annuities, minus debts) plus the net

[8]Since we did not know the details of employer pension plans, we assumed that there were no spouse's or survivor's benefits, and that the benefits ceased with the respondent's death.

TABLE 1

WEALTH DISTRIBUTION[1] ($000) EXCLUDING SOCIAL SECURITY AND PENSION RIGHTS, MEN AND NONMARRIED WOMEN, AGED 62-67, 1973
(horizontal percentage)

	Less than 10	10-24	25-49	50-74	75-99	100-149	150-199	200-249	250+	Median[2]	*N*
Married Men	25.2	21.5	25.5	11.7	5.3	5.4	1.9	1.4	2.2	$27,620	2753
Nonmarried men	50.9	16.3	17.8	7.8	3.4	2.8	0.6	0.3	0.1	$9,400	907
Nonmarried women	57.9	20.1	13.0	5.0	1.9	1.5	0.4	0.1	0.1	$5,710	1433

[1]Net financial assets, plus net equity in home, business, farm and real estate.
[2]Calculated with intervals of $5,000, and rounded to nearest $10.

equity held in a home, business or real estate.[9] The wealth distributions and median values for those respondents with complete data are shown in Table 1. Although this table is largely for comparison purposes later, there are two important points to be made here. The first is the dramatic impact of sex and marital status. The median wealth for married men ($27,620) was three times that of nonmarried men ($9,400), and five times that of nonmarried women ($5,710). Married men were much more likely to be in the top wealth categories. Nearly 11 percent had over $100,000 in wealth, compared to only 4 and 2 percent of the others. These variations are probably due to differences in human capital characteristics and to the existence of the working spouses of some of the married men.

The other striking point in Table 1 is the large proportion of this age group with almost no assets in 1973. About a quarter of the married men, and over half of the nonmarried men and women had less than $10,000 (1973 dollars) in traditionally defined wealth.

In Table 2, the wealth definition is expanded to include the present discounted value of future retirement benefits. The three sections refer to three inflation scenarios, and therefore to different sets of interest rates used in the discounting process. The contrast with Table 1 is dramatic. The proportions in the lowest category drop substantially. The proportions of married men, nonmarried men and nonmarried women with assets below $10,000 drop from 25 to 2, from 51 to 6 and from 58 to 20 percent, respectively. Those still in this category are people ineligible for Social Security. The median comprehensive wealth for married men is over $100,000, and is almost four times the value under the narrower and more traditional definition. For nonmarried men and women, the medians increase by factors of 6.7 and 6.0, respectively.

The choice of inflation scenario is only of modest importance here. The distributions and medians decrease as higher inflation rates are considered, but they are all substantially higher than those in Table 1.

The inclusion of retirement income rights in these asset portfolios increases their magnitudes considerably. In fact, as shown in Table 3, many older Americans hold a significant portion of their total wealth in these forms. Over half of the men and 40 percent of the women in this sample have 60 percent or more of their wealth in expected Social Security benefits (Table 3, part A). Private pension rights are less important (Table 3, part B), both because over half of the sample is not covered by a pension, and because the benefits to those who are eligible are usually smaller than Social Security payments.[10]

The statistics for Social Security and employer pensions combined are very interesting (Table 3, part C). For men, these two types of wealth completely

[9]One deficiency of the Retirement History Study (RHS) is its treatment of insurance. One should include among assets the cash value of any life insurance policies. Unfortunately, the RHS asked only for the face value of the policy—the amount the beneficiary would receive upon the death of the respondent. This is not an asset of the respondent, so the insurance component of wealth is excluded from the calculations.

[10]With U.K. data, and a very different methodology, Dunn and Hoffman draw similar qualitative results. Together, employer and state pensions comprised 44 percent of total household wealth in 1980. Of these, state pensions were three times more important in the aggregate (33 percent of total wealth) than employer pensions (11 percent). (See [3], Table 4.)

TABLE 2

WEALTH DISTRIBUTION ($000), INCLUDING SOCIAL SECURITY AND PENSION RIGHTS,[1] MEN AND NONMARRIED WOMEN, AGED 62-67, 1973
(horizontal percentage)

	Less than 10	10-24	25-49	50-74	75-99	100-149	150-199	200-249	250+	Median[2]	*N*
A. No Inflation Scenario (0%)											
Married men	1.7	1.7	7.7	14.9	17.6	31.5	14.0	4.7	6.1	$108,170	2,753
Nonmarried men	6.0	11.9	19.6	20.8	13.0	20.3	5.0	1.7	1.8	64,190	907
Nonmarried women	19.8	17.9	29.3	14.4	7.8	7.3	2.2	0.9	0.3	34,500	1,433
B. Low Inflation Scenario (3%)											
Married men	1.7	1.7	8.1	14.8	18.6	31.9	13.0	4.2	5.9	$106,590	2,753
Nonmarried men	6.1	11.9	19.7	21.5	13.9	19.0	4.7	1.5	1.7	63,070	907
Nonmarried women	20.1	18.2	29.7	14.1	7.9	6.6	2.1	0.9	0.3	34,220	1,433
C. High Inflation Scenario (8%)											
Married men	1.8	1.7	8.6	15.1	19.6	32.3	11.8	3.7	5.4	$103,660	2,753
Nonmarried men	6.3	11.9	20.7	22.5	13.2	18.3	4.4	1.4	1.3	60,590	907
Nonmarried women	20.2	18.5	30.4	14.2	8.0	5.7	2.0	0.6	0.3	33,390	1,433

[1]Net financial assets, plus net equity in home, business, farm and real estate, plus present discounted value of Social Security and private pension rights.
[2]Calculated with intervals of $5,000, and rounded to nearest $10.

TABLE 3

PROPORTION OF TOTAL ASSETS IN SOCIAL SECURITY RIGHTS, PENSION RIGHTS AND BOTH,[1] MEN AND NONMARRIED WOMEN, AGED 62-67, 1973
(horizontal percentage)

	0%	1-19%	20-39%	40-59%	60-79%	80%+	*N*
A. Proportion of Wealth in Social Security Rights							
Married men	9.0	2.8	12.0	26.8	28.8	20.5	2,753
Nonmarried men	12.6	1.2	11.7	17.9	22.1	34.5	907
Nonmarried women	35.2	1.2	8.2	15.5	12.9	26.9	1,433
B. Proportion of Wealth in Pension Rights							
Married men	43.7	33.3	14.6	4.1	3.2	1.0	2,753
Nonmarried men	57.7	18.6	15.0	4.9	1.9	2.0	907
Nonmarried women	70.9	9.5	9.9	3.9	2.4	3.3	1,433
C. Proportion of Wealth in Social Security and Pension Rights							
Married men	2.4	1.6	6.9	17.3	36.5	35.2	2,753
Nonmarried men	6.8	0.5	5.5	13.1	23.8	50.1	907
Nonmarried women	26.8	1.1	4.2	13.4	16.5	38.1	1,433

[1]Low inflation scenario discount rates (see text).

dominate the more traditional sources, such as financial assets and home equity. Well over three-quarters of the men have more wealth in retirement rights than in all other forms. Many are almost completely dependent on them. The distribution for the nonmarried women is bimodal. A quarter anticipate no pension or Social Security income at all, and another third are almost completely dependent on them.

This bimodal distribution is a sign of economic distress. Table 4 combines the three demographic groups, and then disaggregates them by level of broadly defined assets. Those in the lowest wealth category (less than $25,000) either have no retirement wealth (the 55 percent in the 0-19 category), or have some (nearly always Social Security) and nothing else (the 40 percent in the 80+ column). In the intermediate wealth rows are those eligible for Social Security and frequently an employer pension as well. They are heavily dependent on retirement income, though the importance decreases with total wealth. In the richest categories, retirement rights are less important as a proportion of the

TABLE 4

PROPORTION OF TOTAL WEALTH IN SOCIAL SECURITY AND PENSION RIGHTS, BY LEVEL OF TOTAL WEALTH,[1] MEN AND NONMARRIED WOMEN AGED 62-67, 1973
(horizontal percentage)

Total Assets	0-19%	20-39%	40-59%	60-79%	80%+	*N*
Less than $25,000	55.0	0.5	1.1	3.6	39.7	807
$25-49,999	4.2	1.5	8.9	16.9	68.3	828
$50-99,999	1.7	3.3	12.9	31.4	50.7	1,556
$100-149,999	1.6	5.4	19.6	51.0	22.5	1,144
$150-199,999	1.2	12.8	41.2	38.5	6.5	432
$200,000+	15.0	35.0	31.6	15.3	3.0	326

[1]Low inflation scenario discount rate (see text).

portfolio, because they are dwarfed by other assets. It is ironic that the two groups with the least reliance on pension and Social Security income are the richest, who have great stores of other wealth, and the poorest, who have almost nothing at all.

The Impact of Inflation on Retirement Income Wealth

One popular concept to describe the adequacy of retirement benefits is the replacement rate—the ratio of post- to pre-retirement income.[11] Among the deficiencies of this measure as an index of relative well-being is the fact that it does not differentiate between pensions that are indexed against inflation and those that are not. It ignores what happens to the real value of income in the future. During times of modest inflation (like the 1950s and 1960s) this deficiency was not important; recently, however, it has been. With the high rates of inflation recently experienced in the U.S., the real value of fixed money flows can decrease quickly; for example, at a 10 percent rate of inflation, the real value of a benefit is halved in less than seven years. High inflation combined with unindexed (or only partially indexed) pensions can have severe impacts on the well-being of older citizens.

The magnitude of the impact on this component of wealth can be conveniently summarized by using these asset equivalents.[12] Since the discount rate for a fixed dollar benefit equals the real rate plus a premium for inflation (future dollars buy less than current ones), one can compare the retirement income wealth of individuals under different inflation scenarios simply by varying the discount rate. For benefits that are fully indexed, of course, the rate of inflation is irrelevant to its real value, and only the real rate is used. For partially indexed streams, only the uncovered portion of the inflation rate is included.

Table 5 documents the size of the wealth loss (in 1973 dollars) that these respondents suffer as we compare a zero inflation scenario to one of three percent (part A of the table) or eight percent (part B). In the first scenario, the only losers are those with unindexed private pensions. Social Security recipients and government pensioners are unaffected—federal recipients because their benefits are fully indexed, and state and local pensioners because the indexation caps exceed the low rate of inflation. The magnitudes of the losses are modest. Most of the losers are in the lowest category (less than $5,000), and the vast majority lose less than $10,000 in wealth.

The onset of high inflation (part B) causes more damage. First, fewer people remain unaffected, since state and local government retirees are now only partially covered—for five of the eight points of inflation. Second, the magnitude of the losses grows dramatically. Nearly 22 percent of the married men would lose over $10,000 and eight percent would lose $20,000 or more. The proportions are smaller for the other groups, whose pensions are generally more modest to begin with.

[11]See Alan Fox [4] for an excellent discussion of the issues behind the replacement rate concept.

[12]Inflation may also affect the value of other assets, such as stocks, bonds and real estate. The impact of inflation on these other forms of wealth is an important topic, but far beyond the scope of this paper. Here we ask what would happen to total wealth if the real value of all other assets were unaffected by the price change.

TABLE 5

WEALTH LOSS DUE TO INFLATION, MEN AND NONMARRIED WOMEN, AGED 62-67, 1973
(horizontal percentage)

	$0	$1-4,999	$5,000-9,999	$10,000-14,999	$15,000-19,999	$20,000-24,999	$25,000-49,999	$50,000+	*N*
A. Low Inflation Scenario (3%)									
Married men	56.8	25.7	11.3	4.6	0.9	0.3	0.4	0.1	2,753
Nonmarried men	67.7	21.2	7.7	3.1	0.2	0.0	0.0	0.1	907
Nonmarried women	80.1	12.4	5.8	1.2	0.3	0.1	0.1	0.0	1,433
B. High Inflation Scenario (8%)									
Married men	46.6	16.4	15.5	8.8	4.9	3.7	3.7	0.5	2,753
Nonmarried men	59.5	12.9	13.8	6.8	2.8	2.9	1.2	0.1	907
Nonmarried women	72.2	8.6	8.2	4.9	3.2	1.3	1.3	0.3	1,433

Nonetheless, 14 percent of the nonmarried men and 11 percent of the nonmarried women stand to lose at least $10,000.

The size of these losses may be better gauged as proportions of total (zero-inflation) wealth. Table 6 tells a familiar tale in relative terms. With low inflation

TABLE 6

PERCENTAGE[1] WEALTH LOSS DUE TO INFLATION, MEN AND NONMARRIED WOMEN, AGED 62-67, 1973
(horizontal percentage)

	0%	1-4%	5-9%	10-14%	15-19%	20-29%	30%+	*N*
A. Low Inflation Scenario (3%)								
Married men	56.8	31.8	9.0	1.5	0.8	0.1	0.0	2,753
Nonmarried men	67.7	18.9	10.4	1.8	1.3	0.0	0.0	907
Nonmarried women	80.1	8.0	6.9	2.4	1.3	1.3	0.0	1,433
B. High Inflation Scenario (8%)								
Married men	46.6	20.5	18.7	8.7	2.9	1.6	1.0	2,753
Nonmarried men	59.5	10.7	14.1	9.4	3.1	1.9	1.4	907
Nonmarried women	72.2	4.0	9.0	5.6	4.0	2.6	2.7	1,433

[1]As a proportion of zero inflation wealth.

most of the losers lose less than five percent of their wealth (Table 6, part A) and very few lose more than 10 percent. The exception to this is those women relying heavily on private pensions. With high inflation (part B), the losses are more widespread and more severe. Three to five percent of these respondents lose over a fifth of their wealth, and 15 percent lose over a tenth. The losses as a proportion of just their pension wealth, of course, would be much higher, as they would be if inflation in excess of eight percent were considered.

TABLE 7

PERCENTAGE WEALTH LOSS DUE TO INFLATION, BY LEVEL OF TOTAL WEALTH,[1] MEN AND NONMARRIED WOMEN, AGED 62-67, 1973
(horizontal percentage)

Total Wealth[1]	0%	1-4%	5-9%	10-14%	15-20%	20-29%	30%+	*N*
A. Low Inflation Scenario (3%)								
Less than $25,000	95.4	0.5	0.9	0.8	1.5	1.0	0.0	798
$25-49,999	85.2	6.0	4.2	1.2	2.0	1.3	0.0	810
$50-99,999	66.3	20.8	8.0	3.2	1.5	0.2	0.0	1,520
$100-149,999	42.8	44.2	11.6	1.2	0.2	0.0	0.0	1,155
$150-199,999	40.2	38.0	21.0	0.9	0.0	0.0	0.0	463
$200,000+	53.9	30.0	13.8	2.3	0.0	0.0	0.0	347
B. High Inflation Scenario (8%)								
Less than $25,000	94.6	0.0	0.8	0.6	0.8	0.8	2.5	798
$25-49,999	81.1	4.2	4.0	4.2	1.7	1.5	3.3	810
$50-99,999	57.1	14.8	12.8	7.0	3.2	3.2	2.0	1,520
$100-149,999	30.1	25.5	27.7	10.7	4.4	1.3	0.2	1,155
$150-199,999	25.5	19.4	29.4	17.9	6.7	1.0	0.0	463
$200,000+	32.3	21.6	23.6	15.3	4.3	1.9	0.0	347

[1]No inflation scenario discount rates (see text).

The final table illustrates how the losses vary with overall (zero inflation) wealth. A number of interesting points emerge. First, the poorest of these individuals are very unlikely to be adversely affected by inflation, as measured here. The reason is that they rarely have employer pensions. Those who also have no Social Security may be harmed by inflation, but one would have to know how the income sources they do have respond to changes in the cost of living. The proportion unaffected drops as the asset levels rise, reflecting the increasing likelihood of private pension coverage. The exception to this is the last and richest group, which may be disproportionately populated with the self-employed. Those most likely to be hard hit are those in the intermediate wealth ranges—those who have pensions and do depend on them. Those poorer are less likely to have pensions, and those richer are likely to have significant other sources of wealth to depend upon.

Summary

This paper has made several points. For certain purposes, the traditional definition of wealth is too narrow. To analyze labor supply or consumption decisions for older workers without explicitly considering the wealth accumulated in pension promises would be to ignore a key behavioral determinant. Although there are differences in the degree of certainty associated with the receipt of these assets, the differences diminish as one approaches retirement age. There are also differences in marketability that make these assets less than perfect substitutes for more liquid forms of wealth. Nonetheless, the aggregation of these various components, done with these caveats in mind, yields interesting insights on the patterns of wealth accumulation.

The rights accumulated under Social Security and pension programs are the dominant components of the asset portfolios of older Americans. For the average elderly person, they are more important than all other components, including the value of the home. Inflation can seriously erode the value of pensions and, therefore, the level of wealth to be consumed in old age. The damage rises with the rate of inflation for two reasons. The loss to each uncovered recipient increases and the proportion of the population not fully indexed rises as inflation exceeds the cap in some adjustment formulas.

Pensions are complicated contractual phenomena, and are difficult to summarize. The best single indicator of the size of a pension right is the present discounted value of the future income stream. This measure depends on the current age and age of eligibility of the recipient (and spouse, if applicable), the amount of the annual benefit and the degree of inflation protection after retirement. It has been shown to be a useful concept in understanding individual retirement behavior [1, 8]. It could also be used to quantify the impact of recent changes in the U.S. Social Security law, such as the six month delay in the 1983 cost-of-living adjustment, the increased delayed retirement credit for retirement after 65, or the gradual delay in the age of eligibility for full benefits from 65 to 67. In this paper, the concept was used to analyze the portfolios of older Americans, and to illustrate the importance of components not traditionally included in the definition of wealth.

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