Pension Vesting and Preretirement Lump Sums Among Full-Time Private Sector Employees

*by John R. Woods**

Vesting among full-time private sector employees has increased dramatically over the past two decades. With further increases expected, it seems likely that almost all workers covered by a pension plan will eventually receive some kind of benefit. Coverage, however, remains a problem. According to the most recently available data, only 46 percent of full-time private employees in 1988 were covered by a pension plan on their current jobs, 35 percent were vested, and an additional 4 percent were vested from a previous job. Vesting rates would have been higher if some workers had not cashed out their retirement benefits when they left previous jobs, but the impact is slight; most lump-sum recipients were also vested or covered on their current jobs. Vesting is higher among older workers and among men, though the gender gap has narrowed appreciably over time. Based on trends in vesting and 1988 rates for all types of workers aged 50-59, the analysis suggests that pension receipt rates among the elderly will continue to increase over the next decade.

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The number of aged Americans receiving private sector pensions—although still a minority—has been increasing steadily over the past 30 years. According to a survey of income sources in 1962, only 10 percent of persons aged 65 or older were receiving private pensions.[1] By 1990, comparable data showed that the receipt rate had more than doubled, to 25 percent.[2] Increasingly, then, private pensions are providing a supplement to Social Security benefits among the aged.[3]

Pension Coverage as a Predictor of Future Receipt

This increase in private pension receipt has come as no surprise to those who have monitored the historical pension experience of American workers. To receive pension benefits, a worker must first have been covered by a pension plan, and the three decades between 1940 and 1970 witnessed a dramatic expansion in the rate of pension coverage.[4] In 1940, only an estimated 12 percent of private wage and salary workers were participating in an employer-sponsored pension plan; by 1970, the coverage rate had risen to 42 percent.[5] It is this earlier increase in coverage that has been reflected in increased pension receipt over the past 30 years; almost all of the workers from this "boom period" in pension coverage had entered the ranks of the retired by the late 1980's.

What of the experience of more recent workers? And what can this tell us about the future course of pension receipt among the aged?

General coverage statistics by themselves are not encouraging. After reaching 42 percent by 1970, the pension coverage rate among private wage and salary workers essentially stagnated during the 1970's, and actually suffered a modest decline during the 1980's. Based on a survey of American workers—a special supplement to the Current Population Survey (CPS)[6]—the rate in 1972 remained unchanged from 1970, and increased only slightly, to 43 percent, based on a similar survey in 1979. A third CPS pension supplement in 1983 revealed a decline in coverage among private sector employees to 41 percent; and the most recent supplement in this series, in May 1988, showed a further slight decline, to 40 percent.[7]

But a series of broad coverage statistics—reporting the overall level of pension participation in current jobs at given points in time—does not tell the full story about the future of private pension receipt. As noted in an earlier study of full-time private sector employees, there are important variations in coverage trends for different groups, including variations by age and sex.[8] On the negative side, the recent decline in pension coverage has been concentrated among younger workers, especially younger men; on the positive side, there has been a steady increase in the coverage rate for women.

In addition, the labor force for which coverage statistics are calculated has not been static. Perhaps the most important change has been the significant increase in the number of working women. During the period for which we have coverage data by gender, women's labor-force participation rate increased a solid 13 percentage points, from 44 percent in 1972 to 57 percent in 1988.[9] Given the rise in pension coverage among women workers during the same period—from an estimated 29 percent to 34 percent for private sector employees[10]—it seems clear that a significantly larger proportion of aged women in the future will receive pensions based on their own employment.

Pension Vesting as a More Direct Predictor of Receipt

Another measure of workers' experience is even more useful as a predictor of pension receipt: the rate of vesting. And if the boom period in pension coverage was from 1940 to 1970, the boom period in vesting is of more recent vintage—and may be still underway.

"Vesting" is an intermediate stage between pension coverage and receipt, and is typically a function of time on the job. Just as an employer may require a new employee to complete a period of service before being allowed to participate in a pension plan, an additional period is usually required before the participant becomes vested in the plan—that is, gains a nonforfeitable right to eventually receive benefits from the plan. Thus, some sort of time lag might be expected in pension statistics of the past 50 years: an increase in the coverage rate, followed eventually by an increase in vesting, followed eventually by an increase in pension receipt.

In addition to this natural "maturation" of the pension system, trends in vesting and pension receipt have been significantly affected by another factor: the Federal regulation of private sector pension plans. Prior to passage of the 1974 Employee Retirement Income Security Act (ERISA), private plans were not required to have provisions for vesting. Theoretically, workers could participate in a pension plan for almost an entire career and still be legally denied benefits if they switched to other employment before reaching retirement age. Although the majority of plans did contain vesting provisions, many required long periods of continuous service—sometimes in excess of 20 years—before a worker attained the right to eventual benefits. Given the high job mobility in the labor force—and the special work experience of women, who balance spells of employment against family responsibilities—these requirements meant that a great many workers who were covered at some point by pension plans never became vested.[11]

With the passage of ERISA, private pension plans were required to implement one of several minimum standards for vesting in order to retain their favored tax treatment. In practice, the standard adopted by most plans provided full vesting for workers after 10 years of participation.

The apparent impact of these new standards was reflected in a 1981 study that analyzed data from the first two CPS pension supplements.[12] In 1972—prior to ERISA—only 32 percent of the full-time private sector employees who were covered by pension plans reported that they were entitled to eventual retirement benefits; by 1979 the comparable rate had increased 16 percentage points, to 48 percent. As shown later in this article, by 1988 the rate had increased by another 16 points, to 64 percent.

Thus, despite the stagnation and decline in pension coverage over the past two decades, growing proportions of workers are earning the right to future benefits. Among all full-time private sector employees in 1972 (not just those who were covered), only 15 percent were entitled to future retirement benefits; by 1988 the rate had almost doubled, to 29 percent.[13]

Furthermore, the actual rate of vesting is even higher than these figures suggest. The data reported above reflect expected retirement benefits only from plans on current jobs; additional workers may be vested from previous jobs. Moreover, the estimates above do not fully include eligibility for an alternative form of payment: lump-sum distributions. Both of these additional sources of vesting will be examined in this article.[14]

Finally, the upward trajectory in vesting should be reinforced by more recent legislation, particularly the new minimum vesting standards, effective 1989, that were mandated by the 1986 Tax Reform Act. Information provided by pension plans themselves shows that 5-year vesting has become the most common standard.[15] Although several studies have estimated the impact of this new standard on vesting rates among workers,[16] nationally representative data showing its actual impact will not be available until 1994.[17]

Purpose and Overview

The purpose of this article is to provide a benchmark on workers' vesting as of 1988, using data from the fourth CPS pension supplement. The article (1) presents several measures of vesting for 1988, including a cumulative measure of total vesting; (2) analyzes an outcome of vesting that may affect eventual receipt: the extent and uses of preretirement lump-sum payments; and (3) examines three different measures of trends in the rate of vesting for the period 1972 to 1988.

Because the first survey in the series of CPS pension supplements was restricted to full-time private wage and salary workers aged 16 or older, that group remains the focus of this analysis.[18] Additional tables in the Appendix provide estimates of vesting for part-time private-sector employees, government employees,

the self-employed, and persons who were not employed at the time of the 1988 survey.

Vesting of Full-Time Private Sector Employees, 1988

Conceptual Background and Measurements

Before focusing on the vesting data, it is useful to describe some background issues and measures.

Measuring employer-financed coverage.—Interviews for the 1988 CPS pension supplement were conducted with persons who were currently employed for pay. After being asked a series of questions about their primary job, respondents were asked if they were included in a pension or retirement plan provided by their employer or union. They were also asked about a specific type of plan—a tax-deferred "retirement savings plan" (including "401(k) plans"). As described in an earlier analysis, 31 percent of full-time private-sector employees were covered only by the basic "pension or retirement plan," 7 percent were participating only in a retirement savings plan supported by employers' contributions, and 8 percent reported coverage under both types of plans, resulting in a total coverage rate of 46 percent.[19]

Defined benefit and defined contribution plans.—Plan type is relevant to this analysis because of differences between the two basic types in vesting schedules and kinds of benefits. Under defined benefit (DB) plans, the worker is promised a specified benefit amount to be paid at retirement, vesting requirements tend to be as restrictive as allowed by law, and benefits are typically paid in the form of a lifetime monthly annuity. In contrast, benefits under defined contribution (DC) plans are based solely on the amount of money accumulated in the individual worker's account, participants usually earn vested rights more quickly, and benefits are typically paid in the form of a single lump sum.[20] Although defined benefit plans have long been the predominant type, coverage under defined contribution plans has grown dramatically in recent years. Much of this growth has been in the form of supplementary coverage for workers with primary coverage under DB plans. But increasingly, workers' primary—and sometimes only—coverage is provided by DC plans.[21]

The mix of DB and DC coverage in the 1988 survey cannot be fully determined. As a result, this analysis assumes that primary coverage approximates 1987 estimates for full-time private sector employees based on administrative data from the Department of Labor—roughly 70 percent under DB plans and 30 percent under DC plans.[22]

Three measures of vesting.—Workers who were covered on the current job were asked two questions about their vesting status: first, a general question about their eligibility to receive benefits at retirement; and second, a specific question about eligibility for lump-sum payments. In addition, respondents were asked about their vesting status from any previous jobs. These three measures provide the basis for this analysis, and are described more fully later in this presentation.

Several aspects of the analysis should be clarified. First, data from each of the three measures of vesting are presented separately, but are also combined to produce a total rate of "any" vesting. The analytical concern is not multiple sources of vesting for individual workers but a measure analogous to the rates of "any" pension receipt cited in the introduction.

Second, there are two statistics on vesting that are variously reported in the research literature: vested workers as a percentage of covered workers (v/c) and vested workers as a percentage of all workers (v/w). The emphasis throughout this study is on the broader-based statistic (v/w)—and the Appendix uses an even broader statistic: vested workers as a percentage of the working-age population (v/p). On the other hand, there are a couple of points where the analysis is concerned with the effectiveness of the pension system for those covered by it, and at these points, the v/c rate is used.

Finally, because of continuing concern about the differential pension experience of men and women—and of different age groups—most data are reported by age and gender.

Entitled to Benefits at Retirement, Current Job

The basic question on vesting was asked of all those participating in a plan on their current job (for those dually covered, the reference was to their primary plan): "If you were to leave your employer now or in the next few months, could you eventually receive some benefits from this plan when you reach retirement age?"

Sixty-four percent of these covered workers reported that they would be eligible for benefits. Since only 46 percent of workers were covered, this translates into a vesting rate of 29 percent for all full-time private sector employees (roughly .64 x .46), as shown in table 1. Sixty-six percent of all workers either responded "no" or were not asked the question because they were not covered, and 5 percent didn't know about their eligibility for benefits at retirement. Previous research suggests that the latter group is probably not vested, since they are quite similar to nonvested workers on a variety of personal and job-related characteristics.[23] Thus, if the "don't know" responses create any undercount in the number of vested workers, the effect is probably very slight.

It should be noted that the type of retirement benefit is left unspecified in this measure. However, based on our earlier assumption that roughly 70 percent of covered workers were in a primary defined benefit plan, it can be further assumed that the majority of these vested benefits will be lifetime annuities, the typical form paid by DB plans.

Historically, men have been more likely to be both covered and vested than women, and this continued to be the case in 1988. Among full-time private employees, men and women had coverage rates of 49 and 43 percent, respectively, and vesting rates of 31 and 25 percent (table 1). Expressed as female/male ratios, the gender gap in vesting (0.81) was slightly worse than the gap in coverage (0.88).

Entitled to Lump-Sum Payment, Current Job

The second common form of expected benefit payments—lump-sum distribu-

tions—was explicitly measured in the 1988 survey. After the first question on vesting, covered workers were also asked, "If you left your employer now, could you receive a lump-sum payment from this plan?" The time referent for benefit receipt is ambiguous in this question—whether immediately upon leaving the job or at retirement age. In any case, 23 percent of respondents indicated that they were vested for this type of payment,[24] with women reporting only a slightly lower rate than men (table 2).

Most of these workers eligible for a lump sum (17 out of 23 percent) had already reported that they were eligible for benefits at retirement (table 2); as a result, they do not represent a net gain in the overall rate of "any" vesting. Of greater interest for our purposes are the remaining 6 percent for whom lump-sum eligibility was the only form of vesting (table 2). Added to the 29 percent who were vested according to the first measure (table 1), this group raises the total vesting rate from current employment to 35 percent. Both men and women picked up an additional 6 percentage points due to lump-sum eligibility, raising their total vesting rates to 38 and 31 percent, respectively.

There are at least a couple of reasons why lump-sum entitlement may be a less meaningful indicator of vesting than the first measure described earlier. First, while the traditional concept of vesting has signified entitlement to benefits based on employers' contributions, a lump-sum payment may represent nothing more than a refund of the employee's own contributions; such contributions are, by law, immediately vested. Second, it may be argued that lump-sum payments are a less reliable source of retirement income than traditional annuities, simply because recipients are free to divert these payments to other purposes.

Again, however, lump-sum eligibility is a much less important component of total vesting than eligibility for "benefits at retirement." Less than one-fifth of those vested (6 out of 35 percent) were eligible only for a lump-sum payment.

Total Vesting from Current Job and Vesting as a Percent of Coverage

It is useful to examine further the total rate of vesting on the current job and the total rate among covered workers, since these are comparable to rates typically reported in the research literature.

Total vesting and components of vesting, current job.—The total rate of vesting from current employment is shown in column 6 of table 3, presented by gender and age.[25] The two components of vesting from the current job—entitlement to retirement benefits and to lump-sum payments—are also shown in table 3 (columns 3-5). And some interesting patterns emerge among the different age groups.

Given the relationship between years of plan participation and vesting in traditional defined benefit plans—and given the assumption that the first component primarily reflects vesting in DB plans—it is not surprising to find a clear positive relationship between age and entitlement to retirement benefits, at least up to the age of 60 (table 3, column 3). Among workers under age 30, fewer than 15 percent were vested for benefits at retirement, but the rate increases with age, reaching 44 percent among those aged 50-59.[26] This pattern is found for both men and women, but is much stronger among men. Thus, while the gender gap is relatively small among workers under the age of 40, it diverges sharply among older workers—a profile found in an earlier study of 1988 coverage rates, and one presumably reflecting changing patterns of labor-force participation among younger cohorts of women. Workers aged 60 or older represent a special case. Labor-force participation drops sharply with increasing age, [27] and this shrinking pool of workers includes a larger proportion who are not covered by

Table 1.—Vesting for retirement benefits from pension or retirement plan on current job, by sex: Percentage distribution of full-time private wage and salary workers aged 16 or older, May 1988

Vesting status on current job	Total	Men	Women
Number (in thousands)	71,485	43,188	28,296
Total percent [1]	100	100	100
Entitled to benefits at retirement	29	31	25
Not entitled	66	64	69
Don't know	5	4	5

[1] Includes workers not responding on benefit entitlement—less than 1 percent of men, women, and all workers.

Table 2.—Vesting for lump-sum payment from pension or retirement plan on current job, by sex: Percentage distribution of full-time private wage and salary workers aged 16 or older, May 1988

Vesting status on current job	Total	Men	Women
Number (in thousands)	71,485	43,188	28,296
Total percent [1]	100	100	100
Entitled to lump-sum payment	23	23	21
Entitled to lump sum only	6	6	6
Also entitled to retirement benefits	17	18	15
Not entitled	70	69	72
Don't know	6	7	6

[1] Includes workers not responding on lump-sum entitlement—less than 1 percent of men, women, and all workers.

a pension plan or not yet vested. Among full-time workers in this age group, only 39 percent were vested for benefits at retirement.

In contrast to the first measure of vesting, eligibility for lump-sums (table 3, column 4) is not clearly related to age, except among the youngest cohorts, who have very low levels of coverage. Among workers aged 30 or older, the number vested for lump-sum payments ranges only from 24 to 29 percent; and a similar "flat" relationship is found among men aged 30 or older and women aged 30-59. This finding is consistent with our earlier assumption that lump-sum eligibility is primarily from defined contribution plans, and the fact that vesting in DC plans typically requires fewer years of participation.

As noted earlier, most of the workers entitled to lump-sum payments were also vested for benefits at retirement. Those who were vested only for lump sums—and who thus represent a net gain in the total rate of vesting—are shown in column 5 of table 3; and the total rate itself (the sum of columns 3 and 5) is shown in column 6. Among all workers, 29 percent were vested for benefits at retirement and an additional 6 percent were vested only for lump-sum payments, yielding a total vesting rate of 35 percent. For men, the respective figures were 31, 6, and 38 percent (rounded); for women, 25, 6, and 31 percent. Among the age groups, the highest rate of total vesting (49 percent) was for those aged 50-59, a pattern found both among men (53 percent) and women (42 percent).

Total vesting as a percent of coverage.—Although the emphasis in this article is on the proportion of all workers who are vested (as in column 6, table 3), another statistic is useful in showing how well the pension system is serving those who are participating in it: the proportion of *covered* workers who are vested. The coverage rates for full-time private employees are shown in column 2 of table 3, and the proportions of covered workers who are vested are shown in the final column.

These statistics clearly suggest that most workers, once covered by a pension or retirement plan, will eventually receive a pay-off. Overall, 76 percent of covered workers were vested, and among older age groups of covered workers the vesting rate approaches 90 percent. The vesting rate for men was slightly higher than women's (78 to 74 percent), but in the oldest age groups the rates for both men and women were impressively high—for example, 87 and 86 percent, respectively, among those in their fifties. Even among younger workers, more than 60 percent of those covered were vested (albeit with a larger component due to

Table 3.—Pension coverage and vesting on current job, and components of vesting, by age and sex: Full-time private wage and salary workers aged 16 or older, May 1988

Age	Number (in thousands) (1)	Percent covered by employer-financed plan (2)	Percent vested for benefits at retirement (3)	Percent vested for lump-sum payment (4)	Percent not vested for (3), but vested for (4) (5)	Total percent vested, current job [1] (6)	Total vested as percent of covered [2] (7)
Total	71,485	46	29	23	6	35	76
Under 20	1,887	11	5	3	2	7	63
20–29	21,829	34	14	15	7	21	62
30–39	21,051	50	30	25	8	38	75
40–49	14,421	57	40	28	6	46	82
50–59	8,950	57	44	29	5	49	87
60 or older	3,347	47	39	24	3	42	89
Men	43,188	49	31	23	6	38	78
Under 20	1,129	12	4	4	3	7	58
20–29	12,468	34	15	15	6	21	62
30–39	13,112	52	31	26	8	39	76
40–49	8,639	61	44	30	6	51	84
50–59	5,679	62	49	30	5	53	87
60 or older	2,162	51	42	27	3	45	90
Women	28,296	43	25	21	6	31	74
Under 20	758	9	6	2	1	6	[3]
20–29	9,361	34	14	16	7	21	63
30–39	7,939	48	28	25	7	35	73
40–49	5,782	50	32	26	6	39	78
50–59	3,272	49	35	27	6	42	86
60 or older	1,185	40	32	18	3	35	87

[1] Not always equal to sum of components (col. 3 + col. 5) due to rounding.
[2] Not always equal to ratio of factors (col. 6/col. 2) due to rounding.
[3] Not shown; base is less than 75,000.

lump-sum eligibility), and it can be expected that their vesting rates will increase with age and job tenure.

These figures represent a dramatic improvement since the first CPS pension supplement. According to estimates from that survey (comparable to the first measure of vesting in the 1988 survey), only 32 percent of covered workers in 1972 were vested. By 1988, even without counting the somewhat uncertain component due to lump-sum eligibility, almost two-thirds of covered workers were vested for retirement benefits.

While some analysts have argued that Federal regulation of pension plans has had a depressing effect on the coverage rate, it seems clear that vesting standards first mandated by ERISA—and strengthened in subsequent legislation—have had a salutory effect in ensuring that most workers covered by retirement plans will eventually receive benefits. And even further improvements in vesting are expected. As noted earlier, legislation in 1986 mandated faster vesting schedules for private pension plans. These new standards—most commonly, reducing the requirement of 10 years of participation to 5 for a worker to become vested—took effect in 1989, and thus are not reflected in the data being analyzed here.

Indeed, given relatively high vesting levels in 1988 and further increases expected, the "problem" of vesting among covered workers may have virtually been solved. At the same time, however, the practical implications of vesting may be undergoing both a qualitative and a quantitative change. With the shift toward defined contribution plans and the shorter periods required to vest, a worker's vested status may represent nothing more than entitlement to his or her own contributions, payouts may increasingly be in the form of lump-sum distributions, and the average amount of vested benefits may decline. All of these suggest a new focus for research and policy concerns—away from vesting *per se* and more on the actual outcomes of vesting.

Furthermore, the ostensible resolution of the problem of vesting should draw even greater attention to the larger remaining problem—that less than half of all private sector workers are covered by pension plans and that even this level is declining. For policymakers concerned with further increasing the proportion of vested workers—and the eventual rate of pension receipt—the most fruitful approach would probably be one aimed at increasing the rate of coverage.

Vesting from Previous Jobs and Total Vesting, Current and Previous Jobs

Following the questions about pensions on their current jobs, workers were also asked about their participation and vesting in "any other pension or retirement plan on a *previous* job." Eighteen percent reported that they had been covered on a previous job (data not shown), and 6 percent said that they were already receiving benefits or were expecting to receive benefits when they reached retirement age (table 4). While all of these workers were currently employed in the private sector, the survey did not determine whether this previous coverage and vesting came from private or public sector employment.

As was true with lump-sum eligibility, much of the vesting from previous jobs was duplicative vesting. Fully half of the workers covered on a previous job were also covered on their current jobs, and one-third of those previously vested were also vested on current jobs. Rather than 6 percent, then, only 4 percent can be added to the number with any vesting (table 4). Among men, the net gain was 5 percentage points; among women, 2 points.

Data on this third measure and its contribution to total vesting are presented more fully in table 5. With 35 percent of all workers vested from current jobs (column 2) and an additional 4 percent vested from previous jobs (column 4), the cumulative total was 39 percent (column 5). Consideration of prior vesting also slightly widens the gender gap in total vesting. For men, the cumulative total was 42 percent; for women, 34 percent (column 5).[28]

As might be expected, benefit entitlement from previous jobs was strongly correlated with age (table 5). Among workers in their twenties, for example, only 2 percent reported vesting from a previous job (column 3); among those in their fifties, the rate of previous vesting was 12 percent. Furthermore, the net gain in vesting was higher among older workers (column 4). While 49 percent of workers aged 50-59 had reported vesting from their current jobs, an additional

Table 4.—Vesting for retirement benefits from pension or retirement plan on a *previous* job, by sex: Percentage distribution of full-time private wage and salary workers aged 16 or older, May 1988

Vesting status from previous job	Total	Men	Women
Number (in thousands)	71,485	43,188	28,296
Total percent [1]	100	100	100
Entitled to retirement benefits	[2]6	8	4
Entitled from previous job only	4	5	2
Also entitled on current job	2	3	1
Not entitled from previous job	93	92	96

[1] Includes workers not responding and those who didn't know about their entitlement from previous jobs—less than 1 percent of men, women, and all workers.

[2] Includes 1.4 percent currently receiving benefits and 4.9 percent not receiving but expecting benefits.

7 percent were vested from a previous job, bringing their cumulative total vesting rate to 56 percent (column 5), the highest of any age group. This rate would undoubtedly be even higher if the cohort included former workers who were no longer employed. Labor-force participation rates begin dropping in the mid- to-late fifties, and it is likely that many of these early retirees were vested or already receiving benefits.

Once again, workers over the age of 59 constitute a special case. Unlike the pattern found for the first measure of vesting, however, workers aged 60 or older reported the highest rate of previous vesting (18 percent). Clearly, this group includes a number of workers who had retired from their primary career jobs and were receiving or expecting retirement benefits from that prior employment while continuing to work full-time at other, "postretirement" jobs.

The relationship between age and previous vesting is particularly pronounced for men (increasing from 2 percent for men in their twenties to 24 percent for those over 59), but is hardly a factor for women (table 5, column 3). On the other hand, because of a higher rate of duplicative vesting among men under age 60, their net gain in total vesting is only a few percentage points more than the net gain for women. Among workers in their fifties, for example, men picked up an additional 8 percentage points from previous vesting, while women gained 5 points (column 4). Nonetheless, this additional source of vesting widens the gender gap in total vesting among older workers. Again using the 50-59 age group as an example, the 11 percentage point gender gap in vesting from current jobs (column 2) is increased to 15 percentage points in the cumulative rate (column 5)—61 percent of men vested compared with 46 percent of women.

A Note on Anticipated Receipt

The first survey in the series of CPS pension supplements included only one question on vesting—the first of the three measures described above—and this is the measure most often reported from later surveys. As we have seen, however, when lump-sum eligibility and vesting from previous jobs are taken into account, the proportion of workers with any vesting increases considerably. For those nearing retirement, the total vesting rate in 1988 is rather impressive, reaching 56 percent among workers aged 50-59, and 61 percent among men in this age group.

Because these workers comprise only a portion of the population aged 50-59, their vesting rates are not easily translated into projected rates of pension receipt among the aged. Furthermore, because vesting from previous jobs was not identi-

Table 5.—Vesting on current job, from previous job, and total percent vested, by age and sex: Full-time private wage and salary workers aged 16 or older, May 1988

Age	Number (in thousands) (1)	Total percent vested on current job [1] (2)	Percent vested from previous job [2] (3)	Percent vested from previous job only (4)	Total percent vested, current or previous jobs [3] (5)
Total	71,485	35	6	4	39
Under 20	1,887	7	1	1	7
20–29	21,829	21	2	2	23
30–39	21,051	38	5	3	41
40–49	14,421	46	9	5	51
50–59	8,950	49	12	7	56
60 or older	3,347	42	18	11	53
Men	43,188	38	8	5	42
Under 20	1,129	7	2	1	8
20–29	12,468	21	2	2	22
30–39	13,112	39	6	3	43
40–49	8,639	51	11	6	57
50–59	5,679	53	15	8	61
60 or older	2,162	45	24	15	60
Women	28,296	31	4	2	34
Under 20	758	6	(4)	(4)	7
20–29	9,361	21	2	1	23
30–39	7,939	35	4	2	37
40–49	5,782	39	5	3	42
50–59	3,272	42	6	5	46
60 or older	1,185	35	5	3	38

[1] Vested for benefits at retirement or for lump-sum payment (from table 3).
[2] Currently receiving benefits or expecting to receive benefits when they reach retirement age.
[3] Not always equal to sum of components (col. 2 + col. 4) due to rounding.
[4] Less than 0.5 percent.

fied according to sector, we cannot with any precision predict receipt rates for private as opposed to government employee pensions. These issues will receive further attention in a later section on trends, and also in the Appendix, where population data first available in 1988 are presented.

For now, another issue should again be raised about the use of vesting statistics to predict future receipt: the uncertainty about what happens to lump-sum payments taken at retirement. In this cohort of workers aged 50-59, 5 percent were vested only for lump sums, and others among the remaining 51 percent vested may be given the option of a lump sum at retirement. To the extent that these payments are not converted into annuities, the eventual rate of pension receipt will be less than vesting rates would suggest. The incidence and disposition of lump-sum payments at retirement remains an issue in need of data, and it is likely to become an even more important research priority in the future.

On the other hand, the 1988 survey does provide data on a related—and perhaps equally important—issue: the incidence and disposition of lump sums *prior* to retirement. Because these data shed light both on measures of total vesting and on possible outcomes at retirement, we now turn to an examination of this issue.

Preretirement Lump-Sum Distributions: A Limited Loss in Vesting

In addition to questions about current or expected receipt, the 1988 survey also asked workers about another outcome from prior coverage: whether or not they had ever received a lump-sum distribution. For those who reported such payments, followup questions determined the year of the most recent lump sum, the amount of the payment, and the use to which it had been put. While some lump-sum recipients may have been retired from their primary career jobs (a status that cannot be determined from the data) the very fact that they were currently employed full-time suggests that the bulk of these lump sums were "preretirement" distributions.

The receipt and use of preretirement lump-sums has drawn increasing policy concern in recent years, to some extent paralleling the growth in DC plans, where they most commonly occur.[29] While these preretirement payments have the advantage of "portability," enabling the worker to transfer the money to an individual retirement account or, if available, to another employer-sponsored plan, policy concern has focused on the issue of "preservation" of benefits—that is, whether lump sums are actually saved for retirement or are spent in other ways. The 1986 Tax Reform Act imposed a 10-percent penalty tax on preretirement lump sums that are not rolled over into an IRA or other qualified retirement plan, and additional legislation has been proposed to discourage or prohibit their dissipation.[30]

The incidence and disposition of preretirement lump sums have been studied in some detail, based on a limited set of questions in the 1983 CPS pension supplement and the more informative set of questions in the 1988 supplement described above.[31] In general, these studies have emphasized the gross losses to potential retirement income, focusing on the total number of workers who have taken preretirement cashouts, the aggregate or average amounts, and the failure of most recipients to invest their payments in other retirement plans.

The perspective developed here is somewhat different. Having established that 39 percent of full-time private employees were vested in 1988 for some kind of benefits, the analysis focuses on the *net* loss in vesting due to these preretirement cashouts. The presentation (1) examines the incidence and amounts of preretirement lump sums among full-time private sector employees; (2) distinguishes between recipients whose lump sums would represent duplicative vesting and those with no other pension protection; and (3) examines the uses made of lump sums by those not otherwise vested to determine if their lump sums may eventually yield retirement income.

Incidence and Amounts of Preretirement Lump Sums

Among full-time private sector employees in May 1988, 7.7 percent reported that they had ever received a lump-sum payment from a plan on a previous job (table 6). Three-fourths of the most recent distributions had been made during the 1980's, and most were relatively small amounts (table 6). The payments reported by nearly one-third of the recipients were less than $1,000 (in 1988 dollars), and the median payment was only $2,200.[32]

The lump-sum experiences of men and women were quite similar in some respects. About 8 percent of both groups reported receipt of a lump-sum payment, and the timing of the most recent lump sums was also similar (table 6). On the other hand, women reported significantly lower amounts than men—a median payment of only $1,660 compared to $2,830. Gender differences were especially pronounced at the lower end of the distribution. Almost 40 percent of women recipients reported amounts of less than $1,000, compared to 25 percent of the men. But fewer women also reported large amounts, the kind of payments that might produce significant income in retirement. Only 2 percent had received a lump sum of $20,000 or more, compared with 9 percent of the men.

The statistical distribution of lump-sum amounts provides a good example of the relative utility of two different statistics that are often used to describe an "average": the median and the mean. In this case, the distribution is highly skewed, with amounts heavily concentrated at the lower end and trailing off at the upper end (table 6). The median more accurately describes the "typical" amount in this distribution: half the payments were below $2,200 and half were above that amount. In contrast, the arithmetic mean (the sum of all payments, divided by the number of recipients) is inflated by the relatively small number of very large amounts, yielding an "average" of $6,380.

These two statistics convey rather different messages about the potential loss to retirement income if preretire-

ment lump sums are not preserved. One of the studies cited earlier, for example, emphasizes the mean amount ($6,800 among all civilian worker recipients, in 1988 dollars), presenting it as "the average amount" and concluding that the potential gains in retirement income could be "substantial" if these payments were preserved.[33] While this conclusion may apply to the aggregate, it is less descriptive of the potential gains for the typical individual. Only about one-fifth of the recipients in that analysis actually received a payment as high as $6,800. Instead, half of them got less than $2,400 (the median amount),[34] and 28 percent received less than $1,000—amounts that generally would serve as a weak foundation for meaningful annuities in retirement.

Assessing the Net Loss in Vesting

Concern among policy analysts about the incidence and preservation of preretirement lump sums takes a variety of forms. The primary issue addressed here is the loss of vested benefits among individual workers and thus a lower rate of pension receipt among future cohorts of the aged.

Studies of preretirement lump sums typically focus on the total number of recipients—in this case, 5.5 million, or 7.7 percent of all full-time private employees. Compared to the number of vested workers identified earlier—27.9 million, or 39 percent (table 5)—this incidence of preretirement lump sums appears to represent a substantial loss in the total vesting rate, suggesting that, had the lump sums not been taken, the rate would be 47 rather than 39 percent.

This, however, is the gross loss in vesting, not the net loss. As was true in our earlier analysis of "any" vesting, lump-sum payments represent a duplicative form of vesting for many recipients: nearly one-half (3.5 percent out of 7.7 percent) reported that they were also vested for benefits on their current or previous jobs (table 7). In addition, about one-eighth (0.9 percent out of the 7.7 percent) were at least participating in a pension or retirement plan on their current jobs (table 7), and, as demonstrated earlier, will probably become vested in time.

These two groups are not irrelevant to policy discussions on the "problem" of

Table 6.—Receipt of preretirement lump-sum payment from pension or retirement plan on previous job, and percentage distribution of recipients by year of most recent receipt and amount received, by sex: Full-time private wage and salary workers aged 16 or older, May 1988

Receipt, timing, and amount of lump-sum payment	Total	Men	Women
Ever received a lump-sum distribution			
Number (in thousands)	5,536	3,299	2,237
As percent of all workers	7.7	7.6	7.9
Year most recent lump sum was received			
Total percent	100	100	100
Before 1970	5	4	7
1970–79	20	19	20
1980–86	51	53	49
1987–May 1988	22	22	23
Year not reported	2	2	2
Amount of most recent lump sum, in 1988 dollars[1]			
Total percent	100	100	100
Less than $1,000	30	25	37
$1,000–$1,999	17	17	17
$2,000–$2,999	11	10	11
$3,000–$3,999	8	8	8
$4,000–$4,999	5	6	4
$5,000–$9,999	14	15	13
$10,000–$19,999	9	11	7
$20,000–$49,999	4	6	1
$50,000 or more	2	3	1
Mean amount[2]	*$6,380*	*$7,690*	*$4,490*
Median amount[3]	*2,200*	*2,830*	*1,660*

[1] Based on the 84 percent of men and 85 percent of women recipients who reported an amount.
[2] Rounded to nearest $10. The actual mean would be higher if responses had not been top coded at $99,999.
[3] Rounded to nearest $10. Not affected by top coding.

preretirement lump sums. But we should be clear: for these workers—nearly 60 percent of the lump-sum recipients in this analysis—the "preservation" issue concerns *how many* pensions they will receive and marginal differences in total pension income, *not* whether they will eventually receive some kind of benefits. Furthermore, while analysts may express concern about the ostensible lack of "planning for retirement" among lump-sum recipients,[35] it seems likely that many of these recipients would not share that concern. Whether the cashout was their choice or imposed by an employer, the fact is that they have other forms of retirement coverage. Indeed, some may have chosen the lump sum *because* they had other sources of coverage—for example, as they moved from one pension-covered job to another. Particularly for young people in this group and for those with small amounts of vested benefits, taking a lump-sum payment may have seemed quite rational in an overall approach to "retirement planning."

Surely of greater concern are the lump-sum recipients who were neither vested in nor covered by any other retirement plan at the time of the survey—a total of 2.4 million, or 3.3 percent of all workers (table 7). Adding this group to the 0.9 percent who were covered but not vested yields the net loss in the rate of vesting due to preretirement lump sums: 4.2 percentage points. Among men, the net loss was 3.9 percentage points; among women, 4.7.

But the issue needs to be examined further. While having technically lost their vested status, the question now becomes, What did these recipients do with the money? And as a result, what are the likely implications for their long-term economic security?

A Further Look at Gains and Losses

Table 8 presents additional data on the three groups of lump-sum recipients identified earlier: the 2.5 million who were also vested from their current or previous jobs, the 0.7 million who were covered but not yet vested, and the 2.4 million who were neither vested nor covered—a group of clear winners in the private pension system, a group of probable winners, and a group of apparent losers.

The first group not only had the advantage of being vested, they were also advantaged in several other ways: their median lump-sum payment was the highest of the three groups ($2,830), and they had the highest annual earnings ($28,800 median). The relative advantages of the other two groups were mixed. The group with no other pension protection had received a somewhat higher median lump sum than the group currently covered ($2,080 compared to $1,650), but their median earnings were significantly lower ($19,500 compared to $26,000). These patterns were essentially repeated for both men and women in the three groups, with highest median lump-sum amounts in the vested group and lowest median earnings in the "no protection" group. At the same time, men had consistently higher earnings than women and had received larger lump sums.

Of greater interest for our purposes are the uses made of the lump-sum payments, particularly by the 4.2 percent of workers in the second and third groups. Although these workers were no longer vested, some of their lump sums may not, in fact, have been "lost" for purposes of retirement security.

In asking recipients about the disposition of their payments, the 1988 survey included 10 precoded response categories and a catch-all "other" category. These have been consolidated into five categories in table 8. The first four represent single uses of the money—that is, recipients had used all of their lump sums for (1) tax-qualified retirement savings (IRA, annuity, or other retirement program), (2) other savings or investments (savings account, other financial instruments, invested in a business, bought a house or paid off a mortgage, or paid off other debts), (3) consumption (paid expenses during a period of unemployment, bought a car, or paid educational expenses), or (4) some "other" use (labeled here as "unknown"). The fifth category represents multiple uses that included at least some savings.[36]

The implications for long-term economic security which stem from these classifications are, at times, unclear. For example, paying off debts, classified here as a form of savings, may actually represent short-term consumption, while educational expenses, classified here as consumption, may yield long-term financial benefits. Clearly, further research is needed on these kinds of issues.

Given that caveat, usage patterns among the three groups were fairly similar. The group without pension protection reported the lowest rate of investment specifically for retirement, but not by much—11 percent compared with

Table 7.—Current pension status of preretirement lump-sum recipients, by sex: Full-time private wage and salary workers aged 16 or older, May 1988

Current pension status of lump-sum recipients	Total	Men	Women
Number of lump-sum recipients (in thousands)	5,536	3,299	2,237
As percent of all workers	7.7	7.6	7.9
Percent—			
Vested on current or previous job	3.5	3.8	3.2
Not vested, but covered on current job	.9	.8	1.0
Neither vested nor covered[1]	3.3	3.1	3.7

[1] Includes workers not responding and those who didn't know about their coverage or vesting—less than 1 percent of lump-sum recipients.

14-15 percent in the other two groups. Moreover, 48 percent of the "no protection" group had used all of their lump sums for other savings or investments (some of which would presumably pay off in retirement), and another 7 percent reported multiple uses that included at least some savings. Corresponding to this 66 percent total with at least some savings were 65 percent in the vested group and 69 percent in the covered group. Remaining usage rates were also similar: 10-12 per- cent in the three groups had spent their entire payments, and 19-23 percent had used the money for some purpose other than the 10 precoded categories.

These data provide additional perspective on the issue of "lost" vesting among the 4.2 percent of workers who comprised the second and third groups, identified earlier. Although these workers had given up their vested status by taking preretirement cashouts, they may be further categorized according to the extent of benefit preservation. At one extreme, the group can be divided into those who preserved their entire payment in the form of tax-qualified retirement savings (0.5 percent) and those who did not (3.7 percent).[37] At the other extreme, they may be divided into those who reported any savings or investments (2.8 percent) and those for whom there is no evidence of savings (1.4 percent).

While the latter group may represent the smallest estimate of the "real" loss in the rate of vested benefits, there are two additional factors which may make this loss even less significant. First, we do not actually know what happened to most of their lump sums, since a majority of the 1.4 percent reported a use other than the 10 precoded categories and may have saved or invested the money in some other form. And second, most of their lump sums were small—almost half were for less than $1,000.

In sum, this analysis suggests that some of the policy concerns about preretirement lump sums may have been overstated. Almost one-half of the lump sums in this analysis represented duplicate vesting; an additional 12 percent of the recipients were at least covered by a pension plan on their current jobs; and a majority of the remaining recipients had saved or invested all of their payments. Using the most stringent definition of "preservation," only 3.7 percent of workers had lost all retirement benefits by taking a lump sum; using a liberal definition, only 1.4 percent had done so—and even this estimate might be lowered with additional data.[38] While continuing research is certainly needed in this area, a

Table 8.—Amounts received, uses of lump sums, and selected characteristics of preretirement lump-sum recipients, by current pension status and sex: Full-time private wage and salary workers aged 16 or older, May 1988

Median amounts and uses of lump-sum payment	Current pension status								
	Currently vested			Not vested, but covered			Neither vested nor covered		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Number of recipients (in thousands)	2,516	1,621	895	651	357	294	2,368	1,320	1,048
As percent of all workers	3.5	3.8	3.2	0.9	0.8	1.0	3.3	3.1	3.7
Median amount of most recent lump-sum payment (in 1988 dollars)[1]	$2,830	$3,130	$2,160	$1,650	$2,340	$1,060	$2,080	$2,210	$1,630
Use of lump-sum payments									
Total percent	100	100	100	100	100	100	100	100	100
Tax-qualified retirement savings[2]	15	15	15	14	18	8	11	12	9
Other savings, investments[3]	42	42	41	52	53	51	48	48	48
Consumption[4]	10	8	14	12	9	15	10	10	10
Unknown[5]	23	23	23	19	15	23	23	22	25
Multiple uses, at least some savings	8	10	5	3	3	3	7	7	6
Use not reported	2	2	1	1	1	(6)	1	(6)	3
Other characteristics of recipients									
Median age, 1988	40	41	39	37	36	37	37	38	36
Median estimated annual earnings[7]	$28,800	$31,800	$21,800	$26,000	$31,200	$23,300	$19,500	$24,700	$15,600
Percent with an IRA	19	21	17	18	20	14	19	20	17
Median years of education completed	14	15	14	14	15	14	13	13	13

[1] Calculations based on reported amounts and rounded to nearest $10. The rate of missing data was very similar for the three groups, ranging from 14 to 17 percent.

[2] IRA, annuity, or other retirement program.

[3] Savings account, other financial investments, started or purchased a business, bought house or paid off mortgage, or paid off other debts.

[4] Paid expenses during unemployment, bought a car, or paid educational expenses for self or others.

[5] Response did not fit any of the 10 pre-coded categories on questionnaire, and was thus coded as "other."

[6] Less than 0.5 percent.

[7] Rounded to nearest $100.

tentative policy conclusion emerges from our analysis—that if further efforts are made to regulate the incidence and use of preretirement lump sums, perhaps they should be targeted on those distributions that could yield meaningful levels of retirement income.

Finally, another note on perspective. The small percentage of "losers" in table 8 are clearly better off than a much larger group not shown in the table: the 48 percent of all full-time private employees who were neither vested nor covered—*and* who had never received a lump-sum payment. Although some of these workers will undoubtedly become covered and vested in time, it is this group—with median annual earnings of only $14,400—that, potentially, constitutes the real losers in our present system of private pensions. Policymakers concerned with marginal improvements in vesting and with the preservation of small lump sums might consider focusing their energies, instead, on the much larger problem of coverage.

Trends in the Rate of Vesting, 1972-88

Unlike estimates of pension coverage—which have been extended as far back as 1940—there is no long-term time series on vesting. The best available data are provided by the four CPS pension supplements, conducted in 1972, 1979, 1983, and 1988. But even with this data series, the analysis to date has been limited.[39]

One difficulty in developing comparable measures over time has to do with the changing nature of vesting (for example, the increase in lump-sum availability which has accompanied the growth of defined contribution plans) and the efforts of survey designers to capture those changes. As noted earlier, the only measure of vesting included in all four CPS supplements concerns entitlement to retirement benefits from the current job. Starting in 1979, a second measure was added—entitlement to retirement benefits from a prior job; and in 1983, a third—entitlement to a lump-sum payment from the current job. These, of course, are the three measures of vesting examined earlier in the analysis of total vesting, 1988.

In order to deal clearly with these differences between surveys, and to take full advantage of available data, the analysis that follows presents data for three different trends: (1) vesting for retirement benefits from the current job (for the years 1972-88); (2) vesting for retirement benefits from current or previous jobs (1979-88); and (3) vesting for retirement benefits from current or previous jobs, or for a lump-sum payment from the current job (1983-88).[40] The analysis continues to focus on total rates of any reported vesting and the net gains in vesting from the measures added in 1979 and 1983.

The Three Measures of Vesting

Despite a modest decline in the proportion of workers who were currently covered by a pension plan, the rate of vesting on the first measure (retirement benefits from the current job) increased dramatically over the course of the four surveys, from 15 percent in 1972 to 29 percent in 1988 (table 9).[41] The greater part of this increase (9 percentage points) occurred between 1972 and 1979, a period when ERISA regulations went into effect, but the vesting rate also grew markedly (5 percentage points) between 1983 and 1988.[42]

The general increase in vesting has also begun paying modest dividends for workers who experience job mobility, as indicated by the second measure. In 1979 (the first year these data were gathered), 4 percent of workers reported vesting from a prior job, a rate that increased to 5 percent in 1983 and 6 percent in 1988 (data not shown). Again, many of these workers were also vested on their current jobs, so the net gains from prior vesting were somewhat less. But the positive trend remains. In 1979, 2 percent of workers were vested only from prior jobs; by 1988, the rate had increased to 4 percent (table 9).

Finally, despite the shift toward defined contribution plans, the percentage of workers vested *only* for a lump-sum payment did not increase between the two surveys in which it was measured. In 1983, 7 percent of workers reported that they were not vested for "retirement benefits" from current or prior jobs but would be entitled to a lump-sum payment;[43] the comparable rate in 1988 was actually one percentage point lower.

Trends in Total Vesting

Although table 9 includes total rates of any measured vesting, the only totals that include all three measures are for 1983 and 1988. Based on these data, it is now clear that the 39 percent total vesting in 1988, described earlier, represents a significant increase since 1983, when the rate was 34 percent.

On the other hand, the 8 percentage point increase in total measured vesting between 1979 and 1983, and the 11 percentage point increase between 1972 and 1979, are undoubtedly overestimates, since lump-sum eligibility was not measured in the first two surveys and prior vesting was not measured in 1972. The rate of prior vesting was probably lower in 1972 than in 1979, given the lower general rate of vesting prior to ERISA; and lump-sum eligibility was undoubtedly a less important factor prior to the dramatic growth in defined contribution plans that occurred during the 1980's.[44] But their contributions to total vesting in these earlier years are impossible to quantify.

Using strictly comparable data, we can describe three trends in vesting based on (1) the first measure for 1972-88, (2) the sum of the first two measures for 1979-88, and (3) the sum of all three measures for 1983-88 (table 9). According to this formulation, the rate of vesting among full-time private sector employees nearly doubled (from 15 to 29 percent) between 1972 and 1988, with the largest part of that increase occurring during the 1970's; it grew by about one-fourth (26 to 33 percent) between 1979 and 1988, with almost all of that increase occurring during the mid- to-late 1980's; and it grew by about one-seventh (34 to 39 percent) between 1983 and 1988. Forthcoming data from a 1993 CPS supplement will include all three measures of vesting and

will thus provide a clearer picture of trends since 1983.

These trends in vesting are not easily translated into predictions about private pension receipt. Among other complexities, the subset of full-time private sector employees is not fully representative of the population of potential private pension recipients; we have no data on differential mortality rates of vested and nonvested workers; and the data on previous vesting do not distinguish between private and public sector plans.

Projections for younger workers are particularly difficult, since coverage and vesting should increase over the course of their careers but may never attain the levels enjoyed by their predecessors. On the other hand, we can reasonably speculate about near-term trends in employment-based pension receipt for respondents who were approaching retirement age. Based on increases in vesting among full-time private employees aged 50-59 in 1979 and 1988 (data not shown), we can expect some increase in private pension receipt—perhaps on the order of 10 to 20 percent—between 1994 and 2003, when these two cohorts, respectively, will have reached the ages of 65-74.[45]

Vesting Trends Among Men and Women

Increasing proportions of both men and women workers have reported being vested over the course of the four surveys (table 9). However, while men have maintained an advantage, the gender gap has narrowed significantly.

These changes are reflected primarily in the first measure of vesting, but the pattern of change using this measure is different for the two sexes. Both men and women experienced substantial increases in the 1970's (55.6 and 60.0 percent, respectively), but only women sustained that rate of growth between 1979 and 1988. In part, this pattern is due to changes in respective coverage rates (table 9). Increases in coverage were fairly similar for men and women between 1972 and 1979; between 1979 and 1988, however, men's coverage declined from 55 to 49 percent, while the rate for women increased from 40 to 43 percent.

Differences between men and women on the second component of vesting were slight, as were changes over time. Men gained two percentage points in additional vesting from prior jobs between 1979 and 1988, and maintained a 2-percentage point advantage on this measure in 1983 and 1988 (for example, 5 percent compared to 3 percent in 1988). As for the third component—additional vesting due to lump-sum eligibility—the rates for men and women were identical: 7 percent in 1983 and 6 percent in 1988.

While total rates of measured vesting are not strictly comparable over time, as discussed earlier, it is valid to compare the changing gender gap in these measures over time. In 1972, the total vesting rate of full-time private women employees was only 56 percent of men's; by 1988, the female/male ratio had increased to 0.81 (table 9).

The greater equality in anticipated pension receipt suggested by these statistics is reinforced by another change reflected in table 9: the increased labor-force participation of women and the narrowing gender gap in full-time em-

Table 9.—Percent vested in pension or retirement plan from current or previous job, and components of vesting, by sex, 1972, 1979, 1983, and 1988: Full-time private wage and salary workers aged 16 or older

Components of vesting	1972 [1]	1979	1983	1988
Total number (in thousands)	48,000	59,197	59,938	71,485
Percent covered, current job	48	50	48	46
Percent vested for benefits at retirement, current job	15	24	24	29
Additional percent vested from previous job	(2)	2	3	4
Additional percent vested for lump-sum payment, current job	(2)	(2)	7	6
Total percent with any measured vesting	15	26	34	39
Men, total number (in thousands)	33,000	38,185	37,123	43,188
Percent covered, current job	54	55	52	49
Percent vested for benefits at retirement, current job	18	28	27	31
Additional percent vested from previous job	(2)	3	4	5
Additional percent vested for lump-sum payment, current job	(2)	(2)	7	6
Total percent with any measured vesting	18	31	38	42
Women, total number (in thousands)	15,000	21,550	22,814	28,296
Percent covered, current job	38	40	42	43
Percent vested for benefits at retirement, current job	10	16	18	25
Additional percent vested from previous job	(2)	2	2	3
Additional percent vested for lump-sum payment, current job	(2)	(2)	7	6
Total percent with any measured vesting	10	18	27	34
Ratio women/men, total measured vesting	.556	.581	.711	.809

[1] Estimates for 1972 (except the number of all workers) were calculated based on data in Kolodrubetz and Landay, 1973.
[2] Data not available.

ployment. In 1972, the rate of full-time employment among women was only 46 percent of men's; by 1988—holding the men's rate constant—the female/male ratio had increased to 0.60.[46] With increases both in full-time employment and vesting, then, future generations of aged women will include larger proportions of retired workers than in the past, and larger proportions of those retired women workers will be receiving their own pensions.

Summary and Conclusions

Private employer-sponsored pensions in the United States are undergoing important changes. Whereas the system could once be reasonably described in terms of defined benefit plans, employer financing, and predetermined annuity amounts payable for life, we may be witnessing a fundamental shift toward defined contribution plans, increasingly financed by employees, and with benefits at retirement paid in the form of lump sums. These changes have important implications—not yet fully understood—for the economic well-being of workers who will be retiring in the first few decades of the 21st century.

The statistics presented in this article are, for the most part, encouraging. Despite the stagnation and slight decline in coverage rates over the past two decades, the proportion of covered workers who are vested on their current jobs has increased dramatically, resulting in increased vesting among the entire population of full-time private sector employees and probable increases in the rate of future pension receipt. Vesting from previous jobs has also increased—both among workers also vested on current jobs and among those not currently vested—while eligibility for lump-sum distributions remains largely a secondary form of vesting. Finally, the receipt of preretirement lump sums—because much of it occurs among persons with other pension protection and because typical payments are small—does not appear to be as serious a problem as is sometimes suggested in the research literature.

The data on women are particularly encouraging. Increasing proportions are working full-time, and increasing proportions from this growing pool are covered by pension plans and are vested for benefits. As a result, future cohorts of elderly women should receive more pensions based on their own employment, and the rate of pension receipt among married couples should also increase. In addition, other research suggests that widows in the future will be more likely to receive survivor benefits, based not only on increased vesting among men but also on increased selection of joint and survivor benefit options.[47]

Future surveys will undoubtedly find even higher vesting rates, given the continued growth in coverage under defined contribution plans and the less restrictive vesting standards mandated as of 1989. But with changing types and amounts of benefits, the practical implications of vesting may also be changing. Additional research is needed on these implications.

Furthermore, as vesting of covered workers becomes increasingly complete, the coverage rate itself will become almost as good a predictor of future benefit receipt. And once again, it is coverage that seems to present the greatest policy challenge. As noted repeatedly in this and other analyses, fewer than half of all private sector workers are covered by a pension or retirement plan, the overall coverage rate has suffered a modest decline in recent years, and the decline has been substantial among younger, less educated males.[48]

Data from a fifth CPS pension supplement that will be available in 1994 will enable further examination of this and other issues raised throughout this article. Clearly, there is an extensive agenda for future research as we continue to monitor the changing world of employer-sponsored pensions and attempt to understand the implications for retirees of the 21st century.

Notes

[1] Calculated from table 3.21 in Lenore A. Epstein and Janet H. Murray, *The Aged Population of the United States: The 1963 Social Security Survey of the Aged,* Research Report No. 19, Social Security Administration, 1967. Estimate includes private sector pensions and individual annuities.

[2] Calculated from table I.8 in Susan Grad, *Income of the Population 55 or Older, 1990,* Office of Research and Statistics, Social Security Administration, April 1992. It may be noted that receipt rates calculated for aged "units" (that is, married couples and nonmarried persons) are somewhat higher than for aged individuals. In 1990, for example, 30 percent of all aged units reported receipt of private pensions or annuities, 5 percentage points higher than the receipt rate for aged individuals.

[3] To provide context for this statement: The receipt rate for Social Security benefits among persons aged 65 or older was 67 percent in 1962; by 1990, the rate had increased to 91 percent. Parenthetically, the receipt rate for government employee pensions has also increased, from 4 percent in 1962 to 12 percent in 1990. (Calculated from Epstein and Murray, 1967, *op. cit.*; and Grad, 1992, *op. cit.*)

[4] Throughout this analysis, workers are defined as "covered" by a pension plan when they have met the plan's eligibility requirements and are actually participating or included in the plan.

[5] A time series on pension coverage among private wage and salary workers was first developed by the Social Security Administration and eventually included selected years from 1940 to 1975. (See Martha Remy Yohalem, "Employee-Benefit Plans, 1975," *Social Security Bulletin*, November 1977, pp. 19-22.) Coverage statistics were estimated from various sources and were adjusted based on the first nationwide survey of workers in 1972.

[6] The Current Population Survey (CPS) is a monthly survey conducted by the Bureau of the Census with a nationally representative sample of households, primarily to obtain labor force data. For a detailed description of the basic CPS design, see the Bureau of the Census, *The Current Population Survey: Design and Methodology*, Technical Paper No. 40, 1978.

[7] The data for 1972-88 are based on SSA tabulations of the four CPS pension supplements and have not previously been published. The comparability of these estimates to the earlier SSA time series is currently under review, and the expanded series may be subject to slight modification.

[8] John R. Woods, "Pension Coverage Among Private Wage and Salary Workers: Preliminary Findings From the 1988 Survey of Employee Benefits," *Social Security Bulletin*, October 1989, pp.12-19.

[9] Department of Labor, Bureau of Labor

Statistics, *Employment and Earnings*, January 1992, table 2.

[10] While the more recent coverage rate is based on SSA tabulations of the 1988 CPS pension supplement data, the data file for the 1972 pension supplement is no longer available. The rate reported here for 1972 is estimated, based on data in Walter W. Kolodrubetz and Donald M. Landay, "Coverage and Vesting of Full-Time Employees Under Private Retirement Plans," *Social Security Bulletin*, November 1973, pp. 20-36."

[11] For further discussion of vesting provisions prior to ERISA and since, see Avy D. Graham, "How has vesting changed since passage of Employee Retirement Income Security Act?" *Monthly Labor Review*, August 1988, pp. 20-25.

[12] Gayle Thompson Rogers, "Vesting of Private Pension Benefits in 1979 and Change From 1972," *Social Security Bulletin*, July 1981, pp. 12-29.

[13] This article is concerned with the worker's right to receive his/her own benefits. The increase in workers' vesting, however, should also increase the future rate of survivor benefits, since the worker being vested at time of death is typically a necessary condition for this type of benefit.

[14] A third source of possible underestimation should also be noted. Studies which have surveyed workers and then obtained confirmatory information from their employers have found that workers—particularly younger workers—are not as knowledgeable about their vesting status as they are about basic coverage. According to one such study, the overall vesting rate was underreported by 12 percent. (See Greg J. Duncan and Daniel H. Hill, "An Investigation of the Extent and Consequences of Measurement Error in Labor-Economic Survey Data," *Journal of Labor Economics*, October 1985, table 1.)

[15] Department of Labor, Bureau of Labor Statistics, *Employee Benefits in Medium and Large Firms, 1989*, table 93.

[16] See, for example, General Accounting Office, "Impact of New Vesting Rules Similar for Men and Women," August 1990.

[17] A fifth CPS supplement on pensions and other employee benefits was conducted in April 1993. Data should be available for analysis by early 1994.

[18] Full-time workers are defined in this study as those who usually work 35 hours or more per week on their primary job. Among all civilian workers employed for pay in May 1988, full-time private sector employees comprised the largest group (63 percent). The remaining groups were part-time private employees (13 percent), self-employed persons (9 percent), and government employees (15 percent).

[19] An additional 1 percent of full-time workers were in pretax plans being financed solely by their own contributions. For further detail on this measure of employer-financed coverage, see John R. Woods, 1989, *op. cit.*, pp. 4-6.

[20] For a more detailed discussion of the differences between defined benefit and defined contribution plans, see Chapter IV in *Fundamentals of Employee Benefit Programs*, 3rd. edition, Employee Benefit Research Institute, 1987.

[21] John A. Turner and Daniel J. Beller, eds., *Trends in Pensions, 1992*, Department of Labor, Pension and Welfare Benefits Administration, 1992, table 4.10.

[22] Turner and Beller, eds., 1992, *op. cit.*

[23] Rogers, 1981, *op. cit.*, p. 22.

[24] This estimate may be slightly inflated. Because of a design constraint in the questionnaire, two groups of workers participating in retirement savings plans were not asked about lump-sum eligibility from these plans: the 8 percent of workers who were dually covered (and thus were asked the question only as it applied to their "basic" plan), and the 1 percent of workers who, having no other coverage, did not initially identify their primary, pretax plan as a "pension or retirement plan." Given the near-universal availability of lump-sum payments from such plans, this analysis has recoded both of these groups as "yes" on this question, a procedure that increased the rate from 18 percent to the 23 percent reported here.

[25] While some analyses use 5-year intervals for age categories, the use of 10-year intervals—and by decade (such as workers in their thirties, forties, and so forth)—is more intuitively appealing. In addition, because of reduced sampling error, 10-year intervals yield more reliable estimates. Finally, an examination of vesting for 5-year age groups lends empirical support to this grouping, with one exception: the rate of vesting was significantly lower for workers in their early twenties than for those in their late twenties. For our purposes, however, this is not an important issue. Given the early stage of their careers and expected increases in vesting with age, it is clear that long-term predictions of receipt rates should not be attempted for these younger cohorts.

[26] In a series of briefings which I presented in 1990-91, vesting data were based only on the first measure described in this study and were the result of preliminary analysis. After further examination of the data, a procedure which had been used in this preliminary work—the proportional allocation of nonresponses to the other response categories on vesting—was discontinued in subsequent analyses. The effect of this methodological change was almost inconsequential. Of the dozens of vesting statistics presented in this article, only five differ from statistics presented in the briefings—all, for subgroups of workers and by only one percentage point. For example, the 44 percent vesting rate just cited was reported as 45 percent in the earlier briefing materials.

[27] Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, June 1988, table A-4.

[28] These cumulative rates may be contrasted with statistics produced by the Employee Benefit Research Institute (EBRI) and published in 1992 (see Sophie M. Korczyk, "Gender and Pension Coverage," pp. 120 and 125, in Turner and Beller, eds., 1992, *op. cit.*). In that analysis, total vesting from current or prior jobs was 6 percentage points higher than the rates being reported here (48 percent for men and 40 percent for women, in contrast to our figures of 42 and 34 percent). Although there were several minor differences between EBRI's measures of vesting and ours, most of the discrepancy can be attributed to a difference in the treatment of preretirement lump-sum distributions received from a prior job. While EBRI includes all of these workers in its count of the total number vested, further analysis of these lump sums—as in the next section of this article—suggests that virtually none of them should be added to the total currently vested.

[29] Under defined benefit (DB) plans, an employer is allowed by law to "cash out" a vested employee who terminates employment before retirement age if the accrued value of his benefits is less than $3,500; otherwise, preretirement lump-sum payments are offered by only a minority of DB plans. See pp. 286-288 in Phyllis A. Fernandez, "Preretirement Lump-Sum Distributions," in Turner and Beller, eds., 1992, *op. cit.*

[30] For a detailed discussion of portability and preservation issues, including alternatives

for policy reform, see pp. 1-13 in Joseph S. Piacentini, "Preservation of Pension Benefits," *EBRI Issue Brief*, No. 98, January 1990. It may be noted that recent legislation, effective January 1993, imposes a 20-percent withholding tax on all lump-sum distributions that are not directly rolled over into tax-qualified retirement accounts. The final tax liability in such cases—including the possible 10-percent penalty tax—will then depend on whether the distribution is subsequently rolled over or not. This regulation may further discourage the use of preretirement lump sums for nonretirement purposes.

[31] For analysis of the 1983 data, see G. Lawrence Atkins, *Spend It or Save It? Pension Lump-Sum Distributions and Tax Reform*, Washington, DC: Employee Benefit Research Institute, 1986. For analyses of the 1988 data, see Piacentini, January 1990, *op. cit.*; *Joseph S. Piacentini, "Preserving Portable Pensions," An EBRI Special Report*, June 1990; and Fernandez, pp. 285-317 in Turner and Beller, eds., 1992, *op. cit.* The three studies of the 1988 data are based primarily on a single set of tables presented in Piacentini's January 1990 study. These tables were modified slightly and incorporated in his June 1990 report, and this report, in turn, served as an important base for Fernandez' 1992 analysis.

[32] All summary statistics concerning lump-sum amounts are based on the 84 percent of recipients who reported an amount, and are rounded to the nearest $10.

[33] Piacentini, January 1990, *op. cit.*

[34] Although Piacentini does not report the median amount or the proportion receiving more than $6,800, these statistics can be estimated from his data (January 1990, table 2). However, they were also confirmed in a separate tabulation done for this article.

[35] For example, Piacentini, January 1990, p. 25. It may be noted that Piacentini does report data on the current participation status of lump-sum recipients in several tables in his June 1990 report (tables 5, 6, and 8). The data show that the majority of lump-sum recipients were participating in plans on their current jobs. However, this finding is not mentioned in his analysis.

[36] These categories are consistent with those analyzed by Piacentini (January 1990 and June 1990), with one exception: Whereas the "other" response is being described here as "unknown," Piacentini assumed that this response represented consumption, an assumption also made by Atkins (1986) in his analysis of the 1983 data. It may also be noted that the list of response categories was more extensive in the 1988 survey than in 1983, significantly reducing the proportion of "other" responses and revealing more complex usage patterns than previously thought.

[37] These statistics may be calculated from the data in table 8 and the base number of 71,485 (in tables 1-5), but are not shown separately.

[38] Although these findings are for full-time private sector employees, they undoubtedly apply more broadly. Basic statistics on the incidence, amounts, and uses of preretirement lump sums in this article are quite similar to those reported in Piacentini's 1990 analyses of all civilian workers. In part, of course, this reflects the fact that full-time private employees are the predominant group in the civilian work force.

[39] For example, in Piacentini, January 1990, *op. cit.*, vesting rates were reported (but with only limited analysis) for various categories of workers in 1979, 1983, and 1988 based on the first measure of vesting described earlier in our analysis (that is, entitlement to retirement benefits from current job). In addition, Piacentini reported data on the second measure of vesting described earlier (entitlement to lump-sum payment from current job), both as an alternative and an additional form of vesting in 1983 and 1988. This part of his presentation (pp. 25-26) was restricted to nonagricultural wage and salary workers.

[40] The reader will note that the order of the second and third components has been reversed in this analysis compared to our analysis of vesting in 1988, cited earlier. The earlier order was selected to develop a total measure of vesting on the current job—primarily to examine vesting as a percent of current coverage. The order here reflects the order in which these two measures were added to the time series; more importantly, it relegates the net gain from eligibility for lump sums to a position of lesser importance, given the greater uncertainty about lump-sum eligibility as a predictor of future pension receipt.

[41] Coverage and vesting rates for 1972 are estimated based on data reported in Kolodrubetz and Landay, 1973, *op. cit.* The 1972 data file no longer exists, and the 1973 article is the only known publication that reports data from that survey. All other coverage and vesting statistics presented here are based on our own tabulations of the three later CPS supplements. Coverage rates include the proportional allocation of nonresponses, as reported in an earlier study (Woods, 1989, *op. cit.*).

[42] The lack of an increase from 1979 to 1983 (and the relative stability in the total number of workers) undoubtedly reflects, in part, the economic recession of the early 1980's and the fact that the unemployment rate in May 1988 was 9.8 percent, almost twice the rate of unemployment at the time of the other three surveys.

[43] For readers interested in the total rates of vesting for lump sums (not just the nonduplicative proportions shown in table 9), the statistics for 1983 and 1988, respectively, were 18 and 23 percent. The recoding of this variable for 1988 was described earlier (note 24). For 1983, similar recoding was necessary due to the structure of the questionnaire. Respondents who reported later in the interview that they were participating in a retirement savings plan were coded as eligible for a lump-sum payment, even if they had not been asked that question earlier. This recode increased the eligibility rate for lump sums from 16 to 18 percent, and the net gain in total vesting due to lump-sum eligibility from 6 percent to the 7 percent shown in table 9.

[44] Administrative data from the Department of Labor show that 17 percent of private sector participants had a defined contribution plan as their primary plan in 1979; by 1987, this had increased to 32 percent. (Turner and Beller, 1992, *op. cit.*, table 4.10.)

[45] The lower end of this range in predicted receipt is based on the first measure of vesting in 1979 and 1988 (42 and 44 percent, respectively), adjusted to reflect the expected impact on the 1988 cohort of the newly-mandated vesting standards which were to take effect in 1989. The upper end is based on the first two measures of vesting combined (46 and 52 percent, respectively), similarly adjusted. This second measure is undoubtedly a slight overestimate, since it assumes that additional vesting from previous jobs was entirely from the private sector. Beyond this base range, there are several unknowns. Some assumptions would push the range higher—assumptions that women's increased labor-force participation would more than offset the slight decline in men's employment, and that the nonemployed in 1988 had a slightly higher rate of vesting or receipt than their 1979 counterparts. But offsetting these factors to some degree would be a higher incidence in the 1988 cohort of lump-sum payments that are not annuitized.

[46] Employment rates were calculated for April 1972 and May 1988, the months of the CPS pension supplements. While the rate of civilian full-time employment among men actually declined from 65.4 to 63.5 percent

between these two points, women's full-time employment rate increased from 30.2 to 39.1 percent. Calculated from *Employment and Earnings*, Department of Labor, May 1972 and June 1988.

[47] Under the Retirement Equity Act of 1984, defined benefit plans must typically provide for survivor benefits unless that option is explicitly waived by the spouse of the retiring worker. For more information and estimated impact of this legislation, see General Accounting Office, "1984 Pension Law Will Help Some Widows but Not the Poorest," July 1988. See also table 10.9 in Turner and Beller, eds., 1992, *op. cit.*

[48] See Woods, 1989, *op. cit.*; and Virginia P. Reno, "The Role of Pensions in Retirement Income," *Social Security Bulletin*, Spring 1993, table 9.

Appendix: Vesting in the Larger Population, 1988

For the first time in the series of CPS pension supplements, the 1988 survey added a single question for all persons who were not currently employed, asking if they had ever been covered by a pension or retirement plan from which they were currently receiving or expecting to receive benefits. The resulting data—analogous to the "previous vesting" measure for those currently employed, as described earlier—are shown here in two tables, along with complete vesting data for all wage and salary workers and the self-employed. Table I includes the entire civilian noninstitutionalized population aged 16 or older. Table II is restricted to those aged 50-59.

A few selected comments about these findings: First, the rate of total vesting among full-time private sector employees—described earlier as 39 percent and

Table I.—Percent covered, current job, and percent vested on current or previous job, by employment status and sex: Civilian noninstitutionalized population aged 16 or older, May 1988

Employment status	Number (in millions)	Percent covered, current job	Percent vested, current job			Percent vested,[1] previous job	Total percent vested, current or previous job
			For benefits at retirement	For lump-sum payment	Total		
Total	184.3	...	...	...	...	13	32
Currently employed	113.7	44	29	24	34	7	39
Wage and salary workers	103.4	46	29	24	36	6	40
Private	86.3	40	25	19	30	6	34
Full-time	71.5	46	29	23	35	6	39
Part-time	14.9	9	5	4	6	5	11
Government	17.1	75	53	48	65	8	68
Self-employed[2]	10.3	21	21	21	21	9	27
Not currently employed[3]	70.6	...	...	...	...	22	22
Under age 65	45.3	...	...	...	...	11	11
Age 65 or older	25.3	...	...	...	...	41	41
Men	87.8	...	...	...	...	17	41
Currently employed	63.0	46	31	25	37	9	42
Wage and salary workers	56.0	50	33	26	39	9	44
Private	47.9	44	28	21	34	8	39
Full-time	43.2	49	31	23	38	8	42
Part-time	4.7	6	3	2	4	9	12
Government	8.1	80	57	51	69	11	73
Self-employed[2]	7.0	21	21	21	21	10	29
Not currently employed[3]	24.7	...	...	...	...	38	38
Under age 65	14.8	...	...	...	...	21	21
Age 65 or older	9.9	...	...	...	...	63	63
Women	96.6	...	...	...	...	9	24
Currently employed	50.7	40	25	22	31	4	34
Wage and salary workers	47.4	41	26	22	32	4	34
Private	38.4	34	20	17	25	4	28
Full-time	28.3	43	25	21	31	4	34
Part-time	10.1	11	6	5	8	4	11
Government	9.0	71	50	45	61	5	63
Self-employed[2]	3.3	20	20	20	20	6	24
Not currently employed[3]	45.9	...	...	...	...	14	14
Under age 65	30.5	...	...	...	...	7	7
Age 65 or older	15.4	...	...	...	...	28	28

[1] Currently receiving benefits or expecting to receive benefits when they reach retirement age.
[2] Self-employed persons counted as covered and vested in current job if they had an IRA or Keogh account.
[3] Persons not responding on vesting included in base and allocated proportionately to valid response categories.

shown again in the final column of table I—is remarkably similar to the rate for all wage and salary workers, shown as 40 percent in the table. This reflects not only the predominance of full-time private employees (who comprise 69 percent of all wage and salary workers), but also the offsetting vesting rates of part-time private sector employees (only 11 percent) and government employees (68 percent). These patterns also apply to the subset of workers aged 50-59 (table II).

Second, among private sector employees working part-time, a substantial portion of total vesting (about one-half) comes from prior jobs. To a lesser extent (about one-third), this is also true of the self-employed. Thus, while vesting from previous jobs may become an increasingly important component of vesting for all categories of workers, it is already an important factor in assessing pension protection among part-time and self-employed workers.

Finally, with vesting data for the entire civilian, noninstitutionalized population aged 50-59 in 1988 (table II), we can make some rough predictions about pension receipt for this population cohort in the year 2003, when they will have reached the ages of 65-74. The data do not enable us to project receipt rates for private as opposed to government employee pensions since the important component of vesting from prior jobs was not identified according to sector. However, they do provide an indicator of potential pension receipt from all sources combined—that is, based on one's own employment.

According to these vesting statistics, we might expect a total rate of employment-based pension receipt of around 44 percent among persons aged 65-74 in 2003, 59 percent for men and 31 percent for women (table II). An additional proportion will be receiving survivor ben-

Table II.—Percent covered, current job, and percent vested on current or previous job, by employment status and sex: Civilian noninstitutionalized population aged 50-59, May 1988

Employment status	Number (in millions)	Percent covered, current job	Percent vested, current job			Percent vested,[1] previous job	Total percent vested, current or previous job
			For benefits at retirement	For lump-sum payment	Total		
Total	22.0	...	...	...	...	15	44
Currently employed	15.1	54	43	31	48	12	55
Wage and salary workers	13.2	58	45	31	51	12	57
Private	10.3	52	39	26	44	12	52
Full-time	9.0	57	44	29	49	12	56
Part-time	1.3	14	8	8	11	13	23
Government	2.9	80	65	49	73	11	76
Self-employed[2]	2.0	29	29	29	29	13	37
Not currently employed[3]	6.9	...	...	...	...	21	21
Men	10.5	...	...	...	...	22	59
Currently employed	8.6	59	48	33	53	16	61
Wage and salary workers	7.3	65	52	34	57	16	65
Private	5.9	60	47	30	52	16	61
Full-time	5.7	62	49	30	53	15	61
Part-time	.2	7	4	4	4	40	44
Government	1.4	84	71	51	78	17	84
Self-employed[2]	1.3	30	30	30	30	14	40
Not currently employed[3]	1.9	...	...	...	...	47	47
Women	11.5	...	...	...	...	8	31
Currently employed	6.5	47	36	28	41	6	46
Wage and salary workers	5.9	49	37	28	43	6	47
Private	4.4	41	29	22	34	6	40
Full-time	3.3	49	35	27	42	6	46
Part-time	1.1	15	9	8	12	8	20
Government	1.5	76	60	46	68	5	70
Self-employed[2]	.6	28	28	28	28	9	32
Not currently employed[3]	5.0	...	...	...	...	11	11

[1] Currently receiving benefits or expecting to receive benefits when they reach retirement age.

[2] Self-employed persons counted as covered and vested in current job if they had an IRA or Keogh account.

[3] Persons not responding on vesting included in base and allocated proportionately to valid response categories.

efits, a factor that will undoubtedly continue to be more important for women.

These projections are rough for several reasons. First, they are based on a "snapshot" of this population in 1988, and some additional workers will become vested before they actually retire. This point is reinforced by the expected impact of the new vesting standards mandated by the 1986 Tax Reform Act, which took effect in 1989. Among full-time private sector employees in this older cohort, for example, an additional 2.6 percent would have been vested in 1988 if their plans had replaced a 10-year vesting requirement with a 5-year standard. A second factor making for rough predictions concerns lump sums. The projected receipt rates for both men and women include some proportion (at least 3 to 5 percent) who will have received only lump-sum payments. To the extent that these payments have not been converted into annuities, the rate of pension receipt will be correspondingly lower. Finally, these projections make no assumptions about differences in mortality rates for vested and nonvested persons. Considering the relationship of both pension coverage and mortality to socioeconomic status, it seems likely that vested persons will have a somewhat higher survival rate to ages 65-74, resulting in a higher pension receipt rate in the aged population; but there has been no research specifically devoted to this topic.

Whatever the net impact of these offsetting factors, it appears that the receipt rate for employment-based pensions in 2003 will, in fact, be higher than recent receipt rates—a finding consistent with the earlier analysis of vesting trends. In 1990, 35 percent of persons aged 65-74 were receiving employment-based pensions—51 percent of the men and 22 percent of the women. To the extent that the 1988 vesting data prove to be accurate predictors, the corresponding receipt rates in 2003 will have increased to 44 percent for all persons aged 65-74—59 percent for men and 31 percent for women.