

# Research Dialogues

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## Trends in the Selection of TIAA-CREF Life-Annuity Income Options, 1978-1994

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*Participants in defined contribution pension plans make key financial decisions about their accumulations throughout their working years. When they retire, their choice of a retirement income option will determine the level of their life-income benefits.*

*This issue of Research Dialogues describes the TIAA-CREF life-annuity income options and traces the trends in their selection over a seventeen-year period, 1978-1994. Other income-related choices at or before retirement are also explored.*

### Income Choices at Retirement

When paid work stops after a working career, retirees need a replacement stream of income that can maintain their living standards. As employees approach retirement, they can apply three basic tests: Will the retirement income last as long as it's needed? Will it provide for a survivor in case the retiree dies first? Will it be adequate in amount?

*Test # 1 — The Life-Income Choice* In retirement, most people require a steady income they can't outlive — a substitute, in effect, for the regular salary that no longer comes in. Besides life annuities, other choices, such as lump sums, fixed-period annuities, or systematic withdrawals, are also available under most of the employer-sponsored plans funded with TIAA-CREF contracts.

Life annuities, which make lifetime income possible, come in two basic types: one-life and two-life. Generally, most TIAA-CREF participants continue to favor a life-annuity strategy over any other income choices they have under their employer-sponsored plan.

*Test # 2 — Survivor Benefits* There is also the question of providing for a continuing income for a survivor in case the primary annuitant (the retired employee) dies. The two-life income options address this challenge. Retirees who choose a two-life annuity normally want to protect a spouse, domestic partner, or other dependent. They can also select a guaranteed period under the two-life option (guaranteed periods are described later).

*Test # 3 — Adequacy* A final test is whether the income under a selected op-

tion is going to be adequate. This raises planning issues not only at retirement, but for plan participants of all ages. What are the income goals of the employer's pension plan? What is a participant's role in maximizing opportunities for investment earnings (and ultimate benefits) through pension account choices? What additional personal savings may be needed to augment pension and Social Security income? Considering these questions may suggest the need for further financial planning or even for deferring retirement to a later age.

### The One- and Two-Life Annuity Options

*One-Life Annuity Option* The most basic annuity form is the one-life annuity. It pays income no matter how long the retiree lives, and the income ceases at death. But if a stated guaranteed period has been selected and the annuitant dies before the end of the stated period, the income will continue to a named beneficiary for the balance of the period.

Under either one-life or two-life TIAA-CREF annuities, three different guaranteed periods are available: 10, 15, and 20 years. The choice of certain guaranteed periods under one- or two-life annuities may be limited by federal tax law.

*Two-Life Annuity Option* A two-life annuity provides an income for life for two persons; neither the retired employee nor his or her annuity partner (called the *second annuitant*) can outlive the income. Here, the life expectancies of both the primary and the second annuitants (or, more accurately, the probabilities of their survival based on mortality-table

data) are taken into account in determining lifetime benefits. When a guaranteed period is selected under a two-life annuity, the guarantee provides that the income will continue to a designated beneficiary until the end of the period if *both* the retiree and the second annuitant die within the period.

Under TIAA-CREF's two-life annuity option, there are three choices for the proportion of the original income base that will be received by one annuity partner after the death of the other:

- *Full Benefit to Survivor.* Under the full-benefit option there is no benefit reduction after the death of either the

primary annuitant or the second annuitant. This choice is also called a "Last Survivor Full" option.

If a guaranteed period is added to the full-benefit option and both annuitants die during the period, a designated beneficiary will continue to receive the full payments until the period ends.

- *Half Benefit to Second Annuitant.* Under this choice, if the second annuitant dies first, the income amount does not change. But if the primary annuitant dies first, the payments to the second annuitant will continue at half the original level.

If a guaranteed period is added to the half-benefit option and both annuitants die during the period, the beneficiary will get the half benefit until the period ends.

- *Two-Thirds Benefit to Survivor.* Under this option, the death of either the primary or the secondary annuitant reduces the annuity income of the survivor to two-thirds of the original amount. This is the only one of the options that reduces the income of the employee-retiree if the annuity partner dies first.

If a guaranteed period is added and both annuitants die during the period, the beneficiary will receive the two-thirds benefit until the period ends.

Clearly, there are important differences among the life annuity options. They accomplish different objectives and accommodate different personal and family situations. What may be appropriate for one retiree may not be suitable for another, since situations differ and available financial resources other than the pension must also be considered. The range of the annuity income choices people actually make is evident in the data presented later in this study.

### Effect of Age and Income Option on Monthly Benefits

The specific amount of a retirement annuity will be affected by the income option selected; by the age of the retiree and of the second annuitant, if there is one; by

**Table 1**  
Selection of Life-Annuity Income Options—  
Percentage Differences in Benefits According to Income  
Options Selected under the TIAA Standard Payment Method

Retirement Age	One-Life Annuity			Two-Life Annuity with 20-Year Guaranteed Period			
	No Guaranteed Period	10-Year Guaranteed Period	20-Year Guaranteed Period	Annuity Partner's Age	Full Benefit to Survivor	Half Benefit to 2nd Ann.	Two-Thirds Benefit to Survivor
60	100%=\$1,000 per month	98%	94%	60	90%	95%	96%
				65	91%	96%	99%
				70	93%	96%	102%
65	100%=\$1,076 per month	97%	91%	60	85%	92%	92%
				65	87%	93%	95%
				70	89%	94%	98%
70	100%=\$1,185 per month	95%	85%	60	78%	88%	86%
				65	80%	89%	89%
				70	82%	90%	92%

Note: A one-life annuity of \$1,000 per month at age 60 is used as the baseline for comparison.

The higher dollar benefit for retirement at ages 65 and 70 reflects the shorter life expectancy at the later ages.

Example: If retiree is age 60 and spouse age 65, the one-life benefit is \$1,000 per month; under a two-life annuity, with full benefit to survivor, the benefit is \$910 per month (91% x \$1,000).

Source: TIAA Actuarial

**Table 2**  
Selection of Life-Annuity Income Options—  
Percentage Differences in Benefits According to Income Options  
Selected under the TIAA Graded Payment Method and CREF Accounts

Retirement Age	One-Life Annuity			Two-Life Annuity with 20-Year Guaranteed Period			
	No Guaranteed Period	10-Year Guaranteed Period	20-Year Guaranteed Period	Annuity Partner's Age	Full Benefit to Survivor	Half Benefit to 2nd Ann.	Two-Thirds Benefit to Survivor
60	100%=\$1,000 per month	98%	93%	60	86%	93%	95%
				65	89%	94%	99%
				70	91%	95%	103%
65	100%=\$1,119 per month	97%	88%	60	79%	88%	88%
				65	83%	91%	93%
				70	85%	92%	97%
70	100%=\$1,286 per month	95%	81%	60	71%	83%	80%
				65	74%	85%	85%
				70	77%	87%	89%

Note: A one-life annuity of \$1,000 per month at age 60 is used as the baseline for comparison.

The higher dollar benefit for retirement at ages 65 and 70 reflects the shorter life expectancy at the later ages.

Example: If retiree is age 60 and spouse age 65, the one-life benefit is \$1,000 per month; under a two-life annuity, with full benefit to survivor, the benefit is \$890 per month (89% x \$1,000).

Source: TIAA Actuarial

**Table 3**  
**Selection of One-Life and Two-Life Income Options under TIAA-CREF Retirement Annuity Contracts,**  
**All Ages, 1978-94**  
**Percent of Annuitants Selecting Option**

**Male Primary Annuitants**

Year	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>One-Life Options</b>																	
Percent of annuitants	43.5	44.5	42.6	42.8	39.7	36.8	36.8	31.1	27.8	27.7	27.7	25.8	25.6	26.0	26.0	25.4	26.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No guaranteed period	33.6	35.3	36.9	39.3	38.5	37.0	38.9	34.7	33.5	34.3	33.6	34.9	33.6	32.3	37.3	36.6	33.8
Guaranteed period																	
10-year	38.2	35.1	31.7	31.8	30.5	31.3	29.6	26.0	27.7	24.2	26.0	25.6	26.2	26.2	25.8	24.4	25.8
15-year	0.0	0.7	0.7	0.5	0.3	0.3	0.5	5.1	5.8	9.7	8.3	13.2	14.1	16.5	14.6	14.2	16.2
20-year	25.1	25.8	27.5	25.7	27.7	28.3	28.0	30.9	30.6	29.2	30.0	25.6	25.4	24.2	21.2	23.6	23.8
Installment refund	3.2	3.1	3.3	2.8	3.0	3.3	3.0	3.2	2.5	2.5	2.2	0.8	0.8	0.8	1.2	1.2	0.4
<b>Two-Life Options</b>																	
Percent of annuitants	56.5	55.5	57.4	57.2	60.3	63.2	63.2	68.9	72.2	72.3	72.3	74.2	74.4	74.0	74.0	74.6	74.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Survivor benefit options																	
Full to survivor	56.8	59.6	60.5	61.7	63.5	64.9	65.3	69.8	72.7	72.3	74.4	72.6	74.7	76.4	75.7	74.5	72.8
Half to 2nd annuitant	11.0	9.7	10.3	9.1	9.0	9.5	8.5	6.7	5.8	5.7	4.8	5.4	5.1	4.7	6.1	6.0	6.5
2/3 to survivor	32.2	30.6	29.3	29.2	27.5	25.6	26.1	23.5	21.5	22.0	20.7	22.0	20.2	18.9	18.2	19.4	20.7
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Female Primary Annuitants**

Year	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>One-Life Options</b>																	
Percent of annuitants	81.1	79.3	77.5	76.0	74.0	73.1	72.4	73.4	69.2	69.4	68.4	66.3	66.0	66.3	65.9	66.7	67.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No guaranteed period	46.0	43.5	44.6	43.2	40.9	40.5	39.0	41.0	39.0	38.0	38.3	37.9	34.5	34.5	37.6	38.8	35.0
Guaranteed period																	
10-year	30.5	30.3	29.8	29.6	28.5	28.7	28.9	27.9	29.0	26.8	27.0	27.8	29.8	29.3	27.2	28.0	29.8
15-year	0.0	0.1	0.0	0.1	0.1	0.0	0.0	4.4	5.6	9.1	7.5	11.2	13.8	14.8	14.1	14.1	15.0
20-year	21.0	23.6	23.1	24.6	27.6	27.6	28.9	24.0	24.0	24.1	25.3	22.3	21.1	20.7	20.0	18.0	19.5
Installment refund	2.6	2.5	2.5	2.5	2.8	3.1	3.3	2.7	2.3	2.0	1.9	0.9	0.8	0.8	1.1	1.0	0.7
<b>Two-Life Options</b>																	
Percent of annuitants	18.9	20.7	22.5	24.0	26.0	26.9	27.6	26.6	30.8	30.6	31.6	33.7	34.0	33.7	34.1	33.3	32.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Survivor benefit options																	
Full to survivor	70.9	71.0	71.6	71.3	72.3	74.7	72.1	70.7	74.0	73.5	72.5	69.4	70.9	71.5	69.2	67.3	64.0
Half to 2nd annuitant	8.5	10.1	10.7	8.8	11.9	10.0	11.6	15.0	14.3	15.0	14.2	13.6	14.4	15.4	18.8	18.9	20.8
2/3 to survivor	20.6	18.8	17.8	20.0	15.8	15.2	16.3	14.3	11.7	11.4	13.3	16.9	14.7	13.1	12.0	13.8	15.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Percentages may not add up to 100 because of rounding.

Source: TIAA Actuarial

the interest rate used to determine the initial income at retirement; and, of course, by the size of the annuity accumulation itself. The ages of the annuitants are the factors that determine the actuarial probabilities of survival: The higher the probability of survival, the lower the income that can be paid starting at a given age under a given annuity accumulation.

Tables 1 and 2 illustrate the percentage differences in benefits according to the an-

nuitant's starting age and the income option selected. Table 1 shows the income option differences for the TIAA Standard Payment Method, and Table 2, the differences for payments under the TIAA Graded Payment Method and under CREF accounts. As a baseline for the comparison, the tables assume that the basic one-life annuity would provide an income of \$1,000 per month at age 60. The percentages in the tables relate the various

life-income options to the one-life annuity benchmark.

**How Federal Laws Affect Choices**

At times, choices may be limited by federal law. One limit, legislated under the Retirement Equity Act of 1984 (REACT), provides that married employees (or employees who were married when they earned the retirement benefits) under a plan governed by the Employee

Retirement Income Security Act (ERISA), can select an option other than a two-life annuity under which the spouse is designated as the second annuitant *only* if the spouse agrees in writing to forgo the two-life benefit. The purpose of the rule is to protect widows and widowers in old age. Plans offered by public institutions or certain churches are exempt from ERISA.

A second law generally requires people to start retirement income, at least on a minimum basis (with a “minimum distribution”), by age 70 1/2. For those in private employment, the minimum required income must be started whether or not the employee is still working for the employer sponsoring the retirement plan. For employees of public institutions or certain church organizations, minimum distributions are not required for employees over age 70 1/2 until April 1 of the year after they retire. The legislative purpose of the minimum distribution rule is to limit income-tax deferrals under pension and deferred compensation plans.

On reaching 70 1/2, retirees affected by the minimum distribution requirement must take at least a minimum amount of retirement income each year. But they can delay the minimum distribution for the year in which they became 70 1/2 until April 1 of the following year. A minimum distribution does not have to be in the form of a lifetime annuity; you can choose to defer taking a lifetime annuity until a later date. (The TIAA-CREF Minimum Distribution Option is described on page 9.)

The federal penalty for not taking the required minimum at the required time is a tax — in addition to the income tax normally paid on retirement income — that is an amount equal to 50 percent of the minimum payment that should have been taken but was not. Because of the hefty tax penalty, careful attention should be given to this rule.

Another federal law limits, under certain circumstances, the period of time over which benefits can be made payable when a life annuity option includes a guaranteed period. Generally, the periods of time over which such benefit guaran-

tees can be made payable to a beneficiary are related to the life expectancy of the annuitant(s) and cannot extend beyond such life expectancies. Internal Revenue Service tables are used in determining such periods.

### Actual Annuity Options Selected

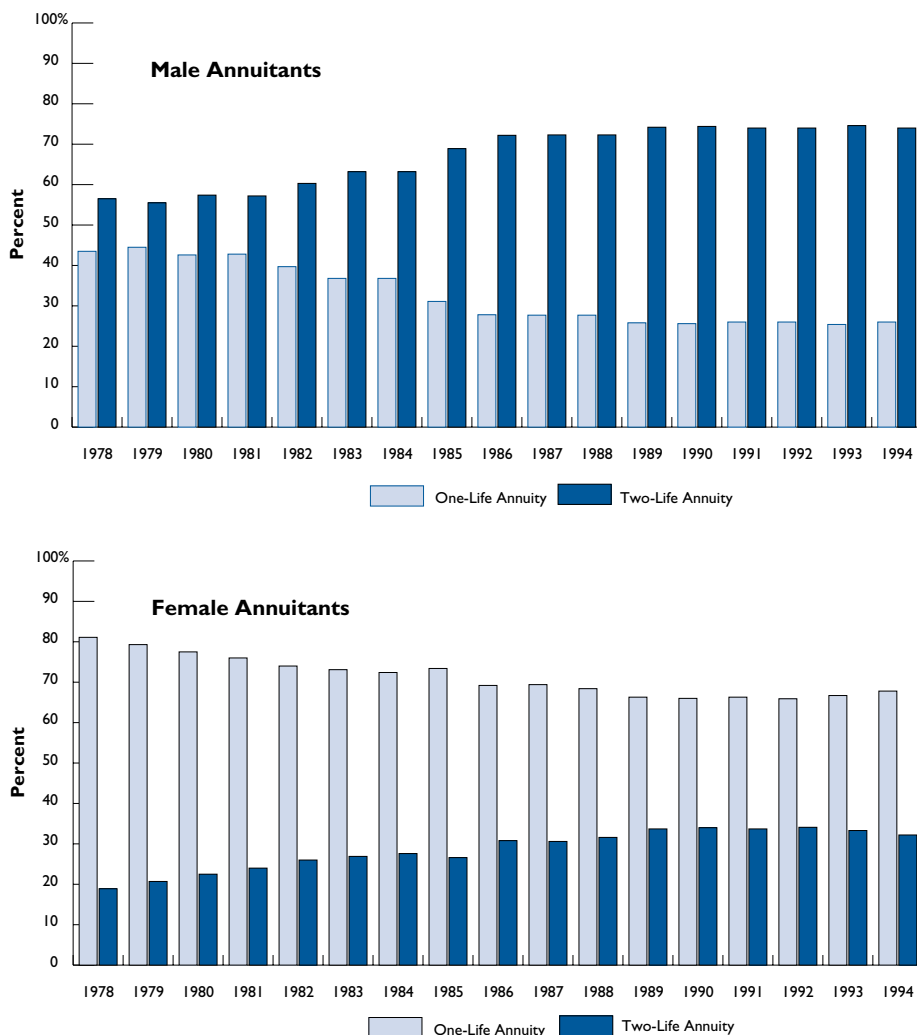
Table 3 displays the range of TIAA-CREF *lifetime* annuity option selections over the 1978-94 period. The percentages in boldface are of the one- and two-life TIAA and CREF annuity contracts started each year; an individual retiree may have one, two, or more of such contracts. Looking at the table, we see that in 1978, 43.5 percent of male annuitants

selected a one-life annuity and 56.5 percent, a two-life annuity. Also in 1978, 81.1 percent of female annuitants selected a one-life annuity and 18.9 percent, a two-life annuity.

Table 3 shows that by 1994, the proportions had changed considerably. In 1994, far fewer male annuitants — 26.0 percent — selected a one-life annuity, while 74.0 percent selected a two-life annuity. Among female annuitants in 1994, 67.8 percent selected a one-life annuity and 32.2 percent selected a two-life annuity.

Over the period 1978-94, the change toward a higher rate of two-life annuity selections was steady and fairly gradual

**Chart 1**  
Selection of One-Life and Two-Life Annuity Income Options under TIAA-CREF Retirement Annuity Contracts, All Ages, 1978-94



Source: TIAA Actuarial



except for a noticeable leap in 1985 and 1986 that can be ascribed to the spousal protection provisions of the federal Retirement Equity Act of 1984, described in the previous section. Thus, among men, the one-life annuity choice dropped from 36.8 percent in 1984 to 27.8 percent in 1986, a 24 percent change. Among women there was a slight drop in the percent choosing a one-life annuity: Although 72.4 percent selected a one-life annuity in 1984, by 1986 the percentage had dropped to 69.2 percent, a 4 percent change.

After the drop in one-life selections for both men and women in the 1984-86 period — and the accompanying increases in two-life selections — the selection proportions remained relatively steady. For men, for the 1987-94 period, one-life selections varied between 25.4 percent and 27.7 percent, and represented 26.0 percent of choices at the end of the period in 1994. For women, the one-life selections in the 1987-94 period varied in a slightly greater range — between 65.9 percent and 69.4 percent — totaling 67.8 percent in 1994.

It is apparent that two-life annuities continue overall to be more frequently chosen by men. In 1994, about 74 percent of men chose a two-life annuity, compared with 32.2 percent of women. The trends of one-life and two-life selections over the entire 1978-94 period are illustrated in Chart 1.

### **One-Life Annuities and Guaranteed Periods**

Retirees choosing TIAA-CREF one-life annuities also have to decide whether to select a guaranteed period. From 1978 to 1994, what guaranteed periods, if any, were selected? Taking the 1978-94 period as a whole, among male annuitants choosing a one-life annuity, about one-third chose the annuity without a guaranteed period. The balance of men choosing a one-life annuity, about two-thirds, selected a guaranteed period. Until 1985, they were somewhat more likely to choose a 10-year guaranteed period than either a 15- or a 20-year period. But from about 1985 on, the 15- and 20-year guaranteed periods represent a larger

percentage of choices than the 10-year period.

Among women choosing a one-life annuity, the annuity without a guaranteed period was chosen more often in the earlier years of the period studied — 46.0 percent in 1978, for example — than in later years, as seen in the 35.0 percent in 1994. In earlier years, those women who took guaranteed periods for their one-life annuities tended, like the men, to favor 10-year guarantees over 20-year guarantees. But the proportion of 20-year guaranteed periods selected by women increased over the 1978 to 1984 span, although gradually. And after 1984, women increasingly favored the 15-year guaranteed periods. By 1994, 35 percent of women selecting the one-life annuity chose no guaranteed period; 29.8 percent, a 10-year guarantee; and 34.5 percent, a guaranteed period of 15 or 20 years.

In each of the years shown in Table 3, the selection of a small number of installment refund annuities is indicated. These selections represent an option available only in TIAA contracts issued before 1985.<sup>1</sup>

### **Two-Life Annuities: Survivor Benefit Options and Guaranteed Periods**

*Survivor Benefit Options* Table 3 also illustrates the survivor benefit choices made between 1978 and 1994 by TIAA-CREF annuitants under their two-life annuities. Overall, both men and women favored the Full Benefit to Survivor option.

Among men with a two-life annuity, selection of the full-benefit option rose from 56.8 percent in 1978 to a peak of 76.4 percent in 1991, leveling off to 72.8 percent in 1994. At the same time, the selection of the Half Benefit to Second Annuitant decreased from 11.0 percent of men's choices in 1978 to 6.5 percent in 1994. And the Two-Thirds Benefit to Survivor option selected by men decreased from 32.2 percent of those choosing a two-life annuity in 1978 to 20.7 percent in 1994.

The majority of women annuitants choosing a two-life annuity also favored the Full Benefit to Survivor option; the level was about 71 percent from 1978 through 1991, decreasing to 69.2 percent

in 1992, 67.3 percent in 1993, and 64.0 percent in 1994. But in contrast to men, the number of women taking a Half Benefit to Second Annuitant option under their two-life annuity rose substantially between 1978 and 1994, increasing from 8.5 percent in 1978 to 20.8 percent in 1994. An overall result is that women have been more evenly divided than men in their choices between the Half Benefit to Second Annuitant and the Two-Thirds Benefit to Survivor.

*Guaranteed Periods* As noted above, TIAA-CREF two-life annuities, like one-life annuities, have an option to select a guaranteed period. Throughout the 1978-94 period, most men who selected a two-life annuity also selected a guaranteed period — 94.8 percent in 1978, 97.2 percent in 1984, and 98.7 percent in 1994. (The two-life guaranteed period selections are not shown in the tables.) The proportion of women selecting a two-life annuity who opted for a guaranteed period was 97.8 percent in 1978, 86.4 percent in 1984, and 88.8 percent in 1994.

In 1978, among men choosing a guaranteed period in a two-life annuity with the Full Benefit to Survivor option, one-third chose a 10-year guarantee and two-thirds, a 20-year guarantee. (A 15-year guarantee was not offered until after 1978.) By 1994, a trend toward the 20-year guaranteed period continued to prevail: Among men choosing two-life annuities, 11.4 percent of those who chose the full-benefit option took a 10-year guarantee; 14.7 percent, a 15-year guarantee; and 73.9 percent, a 20-year guarantee. Among women who chose a two-life annuity with the full-benefit option in 1978, 30.8 percent chose a 10-year guarantee, and 69.2 percent, a 20-year guarantee. By 1994, there were 13.0 percent who selected a 10-year guarantee; 16.4 percent, a 15-year guarantee; and 70.6 percent, a 20-year guarantee.

### **Option Selections by Age**

Table 4 traces the selection patterns by age among retirees selecting one-life and two-life annuities for the years 1978, 1983, 1986, 1990, and 1994.

The table shows that at least to some extent, age at retirement influences the

choice of a one- or two-life annuity at retirement. In 1978, while 43.5 percent of male annuitants of all ages selected a one-life annuity, there were 57.1 percent of male annuitants age 59 and under who selected a one-life annuity, compared with 42.2 percent of those age 70 and over who also selected it. Among the 81.1 percent of female annuitants starting benefits in 1978 and selecting a one-life annuity, 71.6 percent of those age 59 and under selected a one-life annuity, compared with 90.1 percent of those age 70 and over who selected it.

In 1994, patterns of annuity choice similar to those of 1978 can be observed. Among men, younger annuitants tended to prefer the one-life annuity. Thus, while 26 percent of male annuitants of all ages

in 1994 selected a one-life annuity, 40.9 percent of male annuitants age 59 and under selected it, compared with 25 percent of those age 70 and over. But among female annuitants starting benefits in 1994 and selecting a one-life annuity, the pattern continues to be different. While 68.4 percent of women age 59 and under selected a one-life annuity, 71.8 percent of those 70 and over also selected it. The overall rate of selection for a one-life annuity by women of all ages in 1994 was 67.8 percent.

Another choice that varies by age (not shown in Table 4) is the selection of guaranteed periods under one-life annuities. Men selecting a one-life annuity and starting benefits before age 70 are somewhat more likely to select the annuity without a

guaranteed period than are those who start benefits at age 70 and over.

In 1978, women starting one-life annuity benefits at age 70 and over were somewhat less likely to select a guaranteed period than women at younger ages, but this pattern changed in later years. Currently, women 60 to 65 and 65 to 69 are somewhat more likely to choose a one-life annuity without a guaranteed period than are those 59 and under or 70 and over.

At all ages, the most popular choice of a survivor benefit option under a two-life annuity has been the Full Benefit to Survivor option. In 1978, the Full Benefit to Survivor option was selected by 56.8 percent of all men taking a two-life annuity, but, when looked at according to age, it was selected by a much higher proportion of men, 74.7 percent, who were age 59 and under. (The age data for full-benefit selections are not shown in the illustrated one-life/two-life selections by age shown in Table 4.)

In 1986, 72.7 percent of all men taking a two-life annuity selected the Full Benefit to Survivor option. By age, 83.0 percent of men 59 and under who selected a two-life annuity chose the Full Benefit to Survivor option; this percentage of the younger retirees compares with 70.8 percent of men 60 to 64, 70.2 percent of men 65 to 69, and 74.2 percent of men 70 and above. A similar pattern prevailed in 1994, when 77.3 percent of men 59 and under who selected a two-life annuity chose a Full Benefit to Survivor option, while among older retirees the Full Benefit to Survivor was selected by 71.8 percent of those 60 to 64, 71.2 percent of those 65 to 69, and 76.3 percent of those 70 and above.

Women who chose two-life annuities also favored the Full Benefit to Survivor option (although it should again be noted that women are less likely to choose the two-life option than men). In 1986, for example, 83.6 percent of women age 59 and under who chose a two-life annuity took the Full Benefit to Survivor option, while about 70 percent of women who started benefits at higher ages chose that option. In 1994, however, fewer women taking a two-life option selected the Full

**Table 4**  
**Selection of One-Life and Two-Life Annuity Income Options**  
**by Age at Retirement: 1978, 1983, 1986, and 1994**

Age Annuity Started	Male Primary Annuitants			Female Primary Annuitants		
	One-Life Percent	Two-Life Percent	Total Percent	One-Life Percent	Two-Life Percent	Total Percent
<b>1978</b>						
All Ages	43.5	56.5	100.0	81.1	18.9	100.0
59 and under	57.1	42.9	100.0	71.6	28.4	100.0
60-64	40.9	59.1	100.0	77.2	22.8	100.0
65-69	40.7	59.3	100.0	84.5	15.5	100.0
70 and over	42.2	57.8	100.0	90.1	9.9	100.0
<b>1983</b>						
All Ages	36.8	63.2	100.0	73.1	26.9	100.0
59 and under	51.9	48.1	100.0	70.1	29.9	100.0
60-64	35.0	65.0	100.0	67.6	32.4	100.0
65-69	32.8	67.2	100.0	76.9	23.1	100.0
70 and over	31.6	68.4	100.0	85.6	14.4	100.0
<b>1986</b>						
All Ages	27.8	72.2	100.0	69.2	30.8	100.0
59 and under	43.8	56.2	100.0	65.1	34.9	100.0
60-64	26.0	74.0	100.0	65.2	34.8	100.0
65-69	24.2	75.8	100.0	73.4	26.6	100.0
70 and over	22.2	77.8	100.0	77.5	22.5	100.0
<b>1990</b>						
All Ages	25.6	74.4	100.0	66.0	34.0	100.0
59 and under	43.0	57.0	100.0	62.7	37.3	100.0
60-64	23.8	76.2	100.0	61.1	38.9	100.0
65-69	23.0	77.0	100.0	97.1	32.9	100.0
70 and over	20.4	79.6	100.0	75.9	24.1	100.0
<b>1994</b>						
All Ages	26.0	74.0	100.0	67.8	32.2	100.0
59 and under	40.9	59.1	100.0	68.4	31.6	100.0
60-64	24.6	75.4	100.0	62.2	37.8	100.0
65-69	23.1	76.9	100.0	71.1	28.9	100.0
70 and over	25.0	75.0	100.0	71.8	28.2	100.0

Source: TIAA Actuarial

**Table 5**

**Selection of One-Life and Two-Life TIAA-CREF Annuity Income Options by Combined Size of Annuity Accumulations Converted to Life Annuities, 1994**

**Male Annuitants**

Accumulation Range	One-Life Annuity		Two-Life Annuity								Total All Annuities	
	Number	Percent	Full to Survivor		Half to 2nd Annuitant		2/3 to Survivor		Two-Life Annuity Total		Number	Percent
			Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Under \$50,000	2,654	32.7	4,066	50.1	362	4.5	1,035	12.8	5,463	67.3	8,117	100.0
50,000 - 99,999	738	24.2	1,606	52.6	176	5.8	533	17.5	2,315	75.8	3,053	100.0
100,000 - 149,999	379	20.0	1,086	57.2	97	5.1	336	17.7	1,519	80.0	1,898	100.0
150,000 - 199,999	248	20.5	660	54.5	71	5.9	233	19.2	964	79.5	1,212	100.0
200,000 - 249,999	148	17.3	534	62.4	36	4.2	138	16.1	708	82.7	856	100.0
250,000 - 299,999	122	18.9	379	58.9	33	5.1	110	17.1	522	81.1	644	100.0
300,000 - 349,999	61	14.6	278	66.3	17	4.1	63	15.0	358	85.4	419	100.0
350,000 - 399,999	50	17.4	179	62.2	12	4.2	47	16.3	238	82.6	288	100.0
400,000 - 449,999	41	17.6	147	63.1	7	3.0	38	16.3	192	82.4	233	100.0
450,000 - 499,999	31	16.1	122	63.2	6	3.1	34	17.6	162	83.9	193	100.0
500,000 and over	47	10.2	300	65.1	19	4.1	95	20.1	414	89.8	461	100.0
Total	4,519	26.0	9,357	53.9	836	4.8	2,662	15.3	12,855	74.0	17,374	100.0

**Female Annuitants**

Accumulation Range	One-Life Annuity		Two-Life Annuity								Total All Annuities	
	Number	Percent	Full to Survivor		Half to 2nd Annuitant		2/3 to Survivor		Two-Life Annuity Total		Number	Percent
			Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Under \$50,000	5,116	68.3	1,518	20.3	458	6.1	398	5.3	2,374	31.7	7,490	100.0
50,000 - 99,999	1,193	64.5	415	22.4	158	8.5	85	4.6	658	35.5	1,851	100.0
100,000 - 149,999	512	67.6	158	20.9	59	7.8	28	3.7	245	32.4	757	100.0
150,000 - 199,999	283	69.7	78	19.2	28	6.9	17	4.2	123	30.3	406	100.0
200,000 - 249,999	140	73.7	35	18.4	10	5.3	5	2.6	50	26.3	190	100.0
250,000 - 299,999	74	70.5	19	18.1	9	8.6	3	2.9	31	29.5	105	100.0
300,000 - 349,999	46	68.7	17	25.4	3	4.5	1	1.5	21	31.3	67	100.0
350,000 - 399,999	21	65.6	8	25.0	2	6.3	1	3.1	11	34.4	32	100.0
400,000 - 449,999	10	71.4	2	14.3	1	7.1	1	7.1	4	28.6	14	100.0
450,000 - 499,999	6	46.2	4	30.8	3	23.1	-	-	7	53.8	13	100.0
500,000 and over	17	50.0	14	41.2	2	5.9	1	2.9	17	50.0	34	100.0
Total	7,418	67.8	2,268	20.6	733	6.7	540	4.9	3,541	32.3	10,959	100.0

Source: TIAA Actuarial

Benefit to Survivor option than in 1986 — 64.0 percent in 1994 for all age groups combined, compared with 74.0 percent in 1986. Concurrently, for all ages combined, there were modest increases in women’s selection of the Half Benefit to Second Annuitant option (from 14.3 percent in 1986 to 20.8 percent in 1994), and the Two-Thirds Benefit to Survivor (from 11.7 percent in 1986 to 15.2 percent in 1994).

**Option Selections by Size of Accumulation**

We now turn to the question of whether there are differences in the selection of an annuity income option that are related to the size of the annuity accumulation involved. Table 5 shows the selection of life annuity options according to

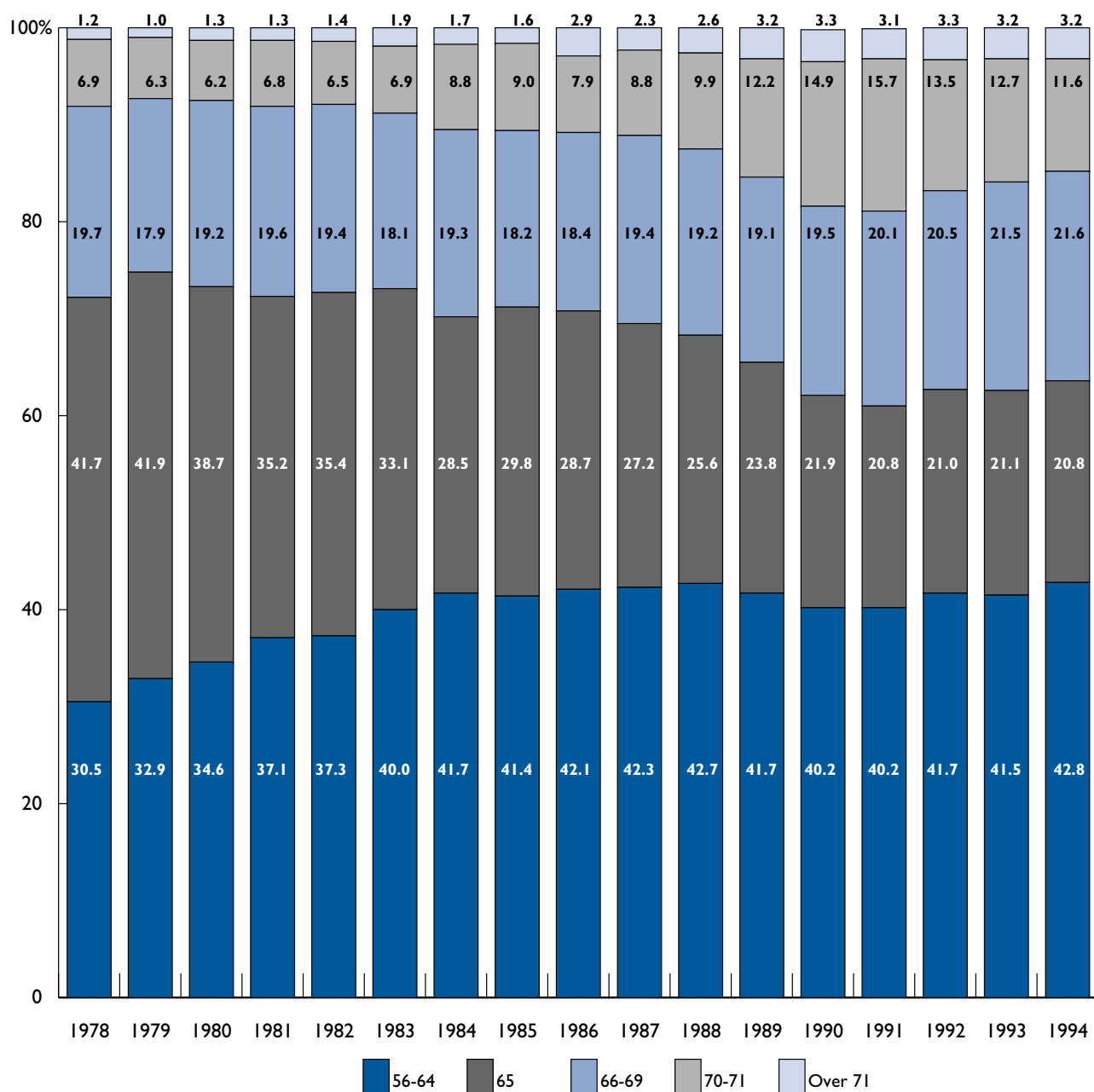
the size of combined TIAA-CREF accumulations applied to annuities in 1994.

We have seen that overall in 1994, about a quarter of men selected a one-life option and three-quarters, a two-life option. Table 5 shows that the percentage of men choosing a two-life annuity increases with the size of the annuity accumulation. Thus, while 67.3 percent of men with TIAA-CREF accumulations of \$50,000 or less chose a two-life option in 1994, 89.8 percent of men with accumulations of \$500,000 or more chose the two-life form. For one-life annuities, men’s choices were 26.0 percent overall in 1994. But analyzed by size of accumulation, 32.7 percent of men with TIAA-CREF accumulations of under \$50,000 at retirement selected a one-life annuity, in contrast to just 10.2 percent of male re-

tirees with total accumulations of \$500,000 or more.

As noted above, women overall have been more likely than men to choose a one-life than a two-life annuity, with about two-thirds taking a one-life option and one-third, a two-life. But unlike men, as Table 5 shows, among women at most accumulation levels there is not a great difference in the selection of annuity income options by size of annuity accumulation. However, women with higher accumulations are more likely to take a two-life annuity than women with lower accumulations. Thus, in 1994, among women with accumulations of under \$50,000, 68.3 percent selected a one-life option, compared with the 50.0 percent who selected it among women

Chart 2  
TIAA-CREF Life-Annuity Income Starting Ages, 1978-94



Source: TIAA Actuarial

with accumulations of \$500,000 and over.

### Age at Retirement

Finally, we look at the ages at which TIAA-CREF participants have started life-annuity income. Chart 2 shows the annuity-income starting ages selected by individual retirees from 1978 through 1994.

From 1978 to 1994, we see a trend toward fewer retirements at age 65 and more retirements at ages both younger and older than age 65. Age 65 is used as a benchmark since it is the age at which unreduced Social Security old-age benefits first become payable. In 1978, 30.5 percent of retirements took place at ages under 65, 41.7 percent at age 65, and 27.8 percent at ages above 65. In 1994, retire-

ments under age 65 represented 42.8 percent of retirees; at age 65, 20.8 percent; and above age 65, 36.4 percent.

If we look at annuity-income starting ages at age 70 and over, we note that from a peak of 18.8 percent in 1991, the percentage drops to 14.8 in 1994. If this figure rises in the next few years, it may well reflect the end (as of 1994) of age-70 mandatory retirement for tenured faculty



under the Age Discrimination in Employment Act (ADEA).<sup>2</sup> But other TIAA-CREF data — growth in the number of participants using the Minimum Distribution Option (MDO) — suggest that retirement at later ages may already be indicated by the growing incidence of MDO contracts.

### Minimum Distribution Option

For people who must meet the federal minimum distribution requirement once they reach age 70 1/2 (as described earlier) — whether they are retirees who don't yet want to start a life annuity or are still employed — TIAA-CREF offers a Minimum Distribution Option (MDO). Payments under an MDO contract are set at the minimum levels required by law and can be continued until the annuity accumulation has been fully paid out to the annuitant; or, if he or she dies before payments are completed, to a beneficiary; or until such time as the plan participant decides to retire and start life-annuity payments.<sup>3</sup> Thus, some people age 70 and over who start life annuities may have previously taken a Minimum Distribution Option.

Under the Minimum Distribution Option, the TIAA and CREF annuity accumulations, less MDO distributions, remain in a participant's account. The traditional TIAA annuities from which MDO payments are made continue to be credited with guaranteed interest and declared dividends. Likewise, CREF and TIAA variable MDO accounts continue to be credited with their respective investment experience. At the end of each year, the payments under the MDO are automatically made to the participant at the minimum needed in order to avoid the 50 percent federal penalty tax; the MDO payment is normally drawn from the accumulation of each annuity account from which a payment must be made.

Table 6 shows the numbers of TIAA and CREF life annuity and MDO contracts issued in the years 1990 to 1994. The Minimum Distribution contracts, first offered in 1991, represent income selections started in the age bracket 70 to 71. We see a growth of TIAA MDOs from 2.2 percent of total income contracts issued in 1991, to 17.3 percent in 1994. Similar growth is seen in CREF MDOs

**Table 6**  
**TIAA and CREF Life Annuity and Minimum Distribution Contracts Issued, 1990-1994**

Year	1990		1991		1992		1993		1994	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>TIAA</b>										
Standard	19,051	93.4	19,545	90.7	18,288	82.4	16,346	78.4	15,106	70.9
Graded	1,349	6.6	1,534	7.1	1,952	8.8	2,014	9.7	2,502	11.7
Minimum Distribution	-	-	479	2.2	1,957	8.8	2,500	12.0	3,688	17.3
Employer premium continues*	-	-	141	0.7	636	2.9	732	3.5	1,088	5.1
No employer premium*	-	-	338	1.6	1,321	6.0	1,768	8.5	2,600	12.2
Total	20,400	100.0	21,558	100.0	22,197	100.0	20,860	100.0	21,296	100.0
<b>CREF</b>										
Stock	8,305	93.6	8,741	89.2	9,364	81.2	9,271	76.8	9,211	67.6
Money Market	572	6.4	689	7.0	612	5.3	534	4.4	502	3.7
Social Choice	-	-	33	0.3	108	0.9	232	1.9	256	1.9
Global	-	-	-	-	46	< 0.1	186	1.5	705	5.2
Growth	-	-	-	-	-	-	-	-	47	0.3
Equity Index	-	-	-	-	-	-	-	-	14	0.1
Minimum Distribution**	-	-	338	3.4	1,408	12.2	1,850	15.3	2,891	21.2
Employer premium continues*	-	-	95	1.0	429	3.7	549	4.5	853	6.3
No employer premium*	-	-	243	2.5	979	8.5	1,301	10.8	2,038	15.0
Total	8,877	100.0	9,801	100.0	11,538	100.0	12,073	100.0	13,616	100.0

Except for payments under the Minimum Distribution Option, all contracts are for Immediate Life Annuities.

\* Percentages in the minimum distribution subgroups may not add to totals because of rounding.

\*\* Includes minimum distribution from all types of CREF accounts.

Source: TIAA Actuarial

over the period, from 3.4 percent of income contracts issued in 1991 to 21.2 percent in 1994.

At age 70 1/2, minimum pension distributions are required for retirees and employees of private institutions (but not for employees — as distinct from retirees — under pension plans of public and certain church institutions). Having an MDO contract does not necessarily mean that a participant is retired. For this reason, Table 6 separates MDOs into two groups: (1) those in which employer premiums continue to be paid to TIAA-CREF, which indicates that a participant is not retired, and (2) those where no employer premium is being paid to TIAA-CREF contracts under the employer's plan.

Taking the second group — no employer premium payments — Table 6 in-

dicates that for newly issued income contracts of all types in 1994, 12.2 percent of TIAA contracts were started under an MDO by presumably retired employees at about age 70 1/2, and 82.6 percent of TIAA retirees started life annuity contracts under the traditional TIAA annuity, using either the standard or the graded payment method. This contrasts with the data for 1991, when 97.8 percent of TIAA contracts issued were life annuities.

Under CREF accounts in 1994, 15.0 percent of participants selected income in the form of MDOs (again, in the age-70 1/2 group with no employer premiums being paid), while 78.8 percent of CREF participants of various ages who selected retirement income methods selected life annuities. In contrast, in 1991, 96.5 percent of CREF income contracts were issued as life annuities.

Table 6 shows an increase in recent years of people selecting MDO contracts. These figures suggest that in analyzing recent trends in retirement ages, we should now consider as indicators not only life-annuity starting ages but also the age of those choosing MDOs. The growth of MDO contracts seems to indicate that actual retirements are increasing at age 70 and over — a trend that includes those who are currently retiring as well as MDO participants who continue to work while also receiving required minimum distributions, but who will retire later.

Among some participants, the MDO choice, although a requirement, may not be viewed as just a temporary instrument before a life annuity is started. They may see it as a means of obtaining a series of lump-sum payments in place of a life annuity. For example, a retiree may choose an MDO (instead of an annuity) based on

self-estimated poor health, where a life annuity might not seem to be a good economic choice. Others may continue MDO payments in an effort to conserve some annuity assets for intergenerational transfer. In this area, further research into the reasons behind participant decision-making about how to receive retirement income, and the implications for pension policy, could offer useful insights.

#### Interest Payment Retirement Option

One of the choices available to TIAA participants for income in retirement, the Interest Payment Retirement Option (IPRO), provides for payments consisting only of current interest on the TIAA accumulation. The accumulation remains unchanged during the period that IPRO income is taken. The option, which was introduced in 1989, is available to participants between ages 55 and approximate-

ly 69 1/2. If the option is taken before age 59 1/2, payments may be subject to federal early-distribution penalties. Over the six-year period of its availability, the number of IPRO contracts issued yearly has ranged from 844 to 1,138. IPRO can be useful in certain interim situations, but it must eventually be converted to a lifetime annuity, a fixed-period annuity, or a Minimum Distribution Option.

#### Transfer Payout Annuities

Another participant option is for transfers, rollovers, or lump-sum payments of accumulated funds from traditional TIAA Retirement Annuities through the TIAA Transfer Payout Annuity (TPA). First offered in 1991, the TIAA TPA provides that accumulation transfers can be made from traditional TIAA Retirement Annuity contracts in yearly installments over a ten-year period

**Table 7**  
TIAA Transfer Payout Annuity (TPA) Contracts Started, by Age, 1991-94

Year	To CREF Accounts				To IRA/403(b)Transfer				Direct to Participant			
	Partial	Percent	Full	Percent	Partial	Percent	Full	Percent	Partial	Percent	Full	Percent
<b>1991</b>												
59 and under	2,781	81.8	134	76.6	291	81.7	407	80.6	100	45.9	401	59.7
60-64	404	11.9	22	12.6	42	11.8	69	13.7	64	29.4	138	20.5
65-69	184	5.4	11	6.3	19	5.3	27	5.3	36	16.5	86	12.8
70 and over	31	0.9	8	4.6	4	1.1	2	0.4	18	8.3	47	7.0
Total	3,400	100.0	175	100.0	356	100.0	505	100.0	218	100.0	672	100.0
<b>1992</b>												
59 and under	4,681	84.9	139	63.8	511	80.5	693	85.7	278	59.4	733	55.2
60-64	503	9.1	38	17.4	83	13.1	62	7.7	113	24.1	300	22.6
65-69	266	4.8	31	14.2	31	4.9	43	5.3	58	12.4	211	15.9
70 and over	61	1.1	10	4.6	10	1.6	11	1.4	19	4.1	83	6.3
Total	5,511	100.0	218	100.0	635	100.0	809	100.0	468	100.0	1,327	100.0
<b>1993</b>												
59 and under	5,983	83.7	153	61.7	665	85.1	802	84.9	276	57.1	858	57.6
60-64	776	10.9	46	18.5	77	9.9	82	8.7	108	22.4	318	21.4
65-69	339	4.7	39	15.7	29	3.7	48	5.1	73	15.1	222	14.9
70 and over	50	0.7	10	4.0	10	1.3	13	1.4	26	5.4	91	6.1
Total	7,148	100.0	248	100.0	781	100.0	945	100.0	483	100.0	1,489	100.0
<b>1994</b>												
59 and under	9,004	85.9	303	65.0	822	87.4	939	85.8	370	56.6	1,016	54.5
60-64	928	8.9	74	15.9	78	8.3	94	8.6	145	22.2	403	21.6
65-69	446	4.3	61	13.1	36	3.8	52	4.7	96	14.7	320	17.2
70 and over	98	0.9	28	6.0	5	0.5	10	0.9	43	6.6	125	6.7
Total	10,476	100.0	466	100.0	941	100.0	1,095	100.0	654	100.0	1,864	100.0

Percentages may not add to 100 because of rounding.

Partial: Participant has applied only a part of TIAA accumulation to a TPA.

Full: Participant has applied all TIAA accumulations to a TPA.

Source: TIAA Actuarial

to variable TIAA and CREF accounts, or, depending on the employer plan's provisions, to the accounts of other retirement companies through direct Sec. 403(b) transfers, to IRA rollovers through transfers to CREF, or in cash to the participant. The TPA provides participants of all ages, not just at the ages near retirement, a means of rebalancing their traditional and variable annuity funds, as well as a means of moving funds to different investment vehicles.

Table 7 indicates that the highest use of TPAs is made by participants age 59 and under. Table 7 also shows that TIAA participants are using TPAs in retirement planning at an increasing rate. For TPA transfers to CREF accounts in which part of the TIAA accumulation remains in TIAA (i.e., a transfer of only a part of the total TIAA accumulation), total transfers rose from 3,400 in 1991 to 10,476 in 1994, an increase of 208 percent. Where the full TIAA accumulation is applied to TPA transfers to CREF accounts, total transfers rose from 175 in 1991 to 466 in 1994, an increase of 166 percent.

Transfers to other Sec. 403(b) accounts or to IRA rollovers have been smaller in number, but they are also growing rapidly; full transfers exceed partial transfers by a modest margin. Full transfers or IRA rollovers grew from 505 in 1991 to 1,095 in 1994, an increase of 117 percent.

In addition to its use for account rebalancing, the TPA can be used by participants at or near retirement age to receive directly a part of retirement income on a non-life-annuity basis over the ten-year period. Here, full transfers are proportionately more numerous than partials; they have grown from 672 in 1991 to 1,864 in 1994, an increase of 177 percent.

Since Table 7 shows the information about TPAs by age of participant, we can see that the greatest use is by participants age 59 and under. Most TPA use by those age 59 and under appears to be a part of investment strategy — for transfers to CREF accounts, or, to a lesser extent, to other retirement instruments. But there is also a considerable rate of growth of payments made directly to the participant, seen in the four right-hand columns of Table 7.

The numbers of TPA payments being made directly to participants suggest that at least to some extent, accumulated retirement funds may be being diverted to current income rather than retained in retirement accounts, thus eroding retirement protection. Among younger participants (age 59 and under), some of the TPA transfers paid directly to the individual may be going to people who are no longer employed in education and who may have other pension income sources. But while the growth of TPA transfers directly to participants reflects some use of this pension option for current income, its major use is for direct transfers to other retirement accounts.

Overall, the growth in use of the TPA for transfers from TIAA accumulations to CREF, to other retirement instruments, or in lump sums to participants, indicates a rapid rise in awareness of the TPA and its uses. Participants in midcareer may use TPA transfers primarily as financial strategy; participants at the higher ages may do so as part of their more immediate income planning.

In general, the various limitations that affect permitted rates of transfer out of traditional TIAA Retirement Annuities are based on (1) protection of the TIAA capacity to guarantee principal and on (2) the nature of its investments, which concentrate on fixed-income instruments such as mortgages, publicly traded bonds, direct loans to business and industry, and real estate, all with limited liquidity. It should be noted that TIAA Group Retirement Annuities under an employer's plan provisions and all TIAA Supplemental Retirement Annuities are structured differently from the traditional TIAA Retirement Annuities, and can therefore provide for cash options without the ten-year payout requirement.

#### Other Flexibilities

Under CREF, flexibilities for transfers, rollovers, and lump sums at retirement are greater than under the traditional TIAA Retirement Annuities, which guarantee principal, since CREF assets are valued at market each day. The growth of CREF transfers, rollovers, and cash payments reflects this difference. It also reflects the

increasingly active role taken by individual participants in their pension planning. The full range of available options is governed mainly by the provisions of each employer's pension plan; employers in recent years have been broadening the options available.

As reflected by CREF data, most of the transfer activity among or to other investment accounts is by participants age 59 and under. Transfer activity overall has about tripled from 1990 to 1994. Transfer options allow for a wide range of choices of investments and investment companies, and permit broad investment diversification. Transferred funds may be taken later in annuity form, or in lump-sum amounts, depending on an employer's plan provisions. Cash withdrawals, where permitted, may be received in any amount, large or small. Where larger cash withdrawals represent significant reductions in funds designed to support future retirement income, the practice may raise issues about basic pension plan objectives for employers and for public policy advocates.

Approximately 85 percent of pension plans funded by TIAA-CREF annuities provide for employee choice about whether to take retirement benefits in lump sums for cash or transfers, either fully or partially, depending on the plan; all the plans provide for TIAA-CREF annuity income options.

#### Summary

Employees work for many years to build up future retirement benefits. Finally, the future arrives — the time comes to select an annuity income option, a major financial decision.

We studied the selection of TIAA-CREF one-life and two-life annuity income options by male and female retirees over the period 1978 to 1994. We found that over the years, selection patterns have changed. In the earlier years, a larger proportion of male retirees selected a one-life annuity than in the later years of the period. Thus, 43.5 percent of male retirees selected a one-life option in 1978, while just 26.0 percent selected it in 1994. This change was due, at least in part, to the provisions of the Retirement Equity Act of 1984 (REACT), which require married



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retirees to take a two-life annuity unless the spouse specifically signs a waiver.

Women retirees, on the other hand, have generally favored one-life annuities, although the proportion has declined somewhat over the 1978-94 period — from 81.1 percent selecting one-life options in 1978 to 67.8 percent in 1994.

Among men and women choosing one-life annuities, about two-thirds choose a guaranteed period under the one-life annuity. Under a guaranteed period, annuity income always continues for life, but if the annuitant dies before the end of the stated guaranteed period (either 10, 15, or 20 years, as selected), the income payments continue to be made to a beneficiary until the end of the period.

Among men, the proportion of those choosing a one-life annuity who selected it without a guaranteed period remained fairly steady over the 1978-94 period. The proportion was 33.6 percent in 1978 and 33.8 percent in 1994, with increases in a few years during the early eighties to as high as 39.3 percent. For women, over the 1978-94 period there was a decline in those selecting one-life annuities who chose not to take a guaranteed period: from 46.0 percent in 1978 to 35.0 percent in 1994.

Men and women who select two-life annuities also select a survivor option, the feature that determines the kind of two-life annuity to be received. The Full Benefit to Survivor option was selected by the majority of both men and women retirees. Under this option, the amount of income being received continues as long as either the retired employee or the spouse or other annuity partner survives. In 1994, 72.8 percent of men who selected a two-life annuity and 64.0 percent of women who chose a two-life annuity took the Full Benefit to Survivor option. The other survivor options, Half Benefit to Second Annuitant and Two-Thirds Benefit to Survivor, were somewhat less popular. Over the years, male retirees choosing between these two options generally favored the Two-Thirds Benefit to Survivor over the Half Benefit to Second Annuitant, while female retirees were more evenly divided between the two.

We looked at income-option choices according to age at retirement. Generally, we found that men were more likely to select a one-life annuity when they retired at younger ages, such as age 59 and under, than at older ages, that is, age 70 and over. Men were more likely to select a guaranteed period when retiring at the older ages, compared with men retiring at younger ages. The pattern for women was not the same. Women were more likely than men to select a one-life annuity at the older ages. But, in contrast to men, women were no more likely to choose a guaranteed period in a one-life annuity at age 59 and under than at age 70 and over.

Looking at income-option choices by size of annuity accumulation, we note that the proportion of men who choose a one-life annuity declines rapidly as the size of the annuity accumulation increases. The choice of a two-life option increases with the size of the annuity accumulation. Among women, the choice of an annuity income option does not appear to vary greatly by annuity accumulation, but nonetheless, women with higher annuity accumulations, like men, are more likely to choose a two-life annuity than those with lower accumulations.

When are people retiring? We looked at the ages at which TIAA-CREF participants first begin life-annuity income, a fair proxy for retirement, and found that retirements at age 65 have decreased since 1978, and, further, that increasing numbers of retirements are occurring both earlier and later than at age 65. Of course, since the end of mandatory retirement (under amendments to the federal Age Discrimination in Employment Act), the decision to retire is even more closely tied to personal and family considerations, workplace conditions, and financial resources (including the adequacy of pension benefits).

We also examined the recent rapid growth of the use of the TIAA-CREF Minimum Distribution Option by participants required by federal law to start taking pension benefits when they reach age 70 1/2. Evidence from the data suggests that later retirements may be more prevalent than indicated by examining life-annuity starting ages alone. The data also

suggest that further research into various current uses of the MDO provisions (as an alternative to life-annuity selection, for example) could be helpful in guiding individuals in their income selection choices and in contributing to better understanding of related pension policy issues.

Finally, we looked at some other investment or income options for TIAA-CREF participants: in TIAA, the Interest Payout Retirement Option and the Transfer Payout Annuity; in TIAA and CREF, the Minimum Distribution Option; and in CREF, the full flexibilities under CREF contracts for transfers, rollovers, and cash or lump-sum options. Participant use of these options is increasing. □

*(This report was prepared for Research Dialogues by Francis P. King, Senior Research Officer, TIAA-CREF.)*

### Endnotes

1. Under TIAA deferred annuity contracts issued before January 1, 1985, an installment refund annuity option was offered. For contracts issued after 1984, the option was discontinued because of changes in annuity payment methods required for compliance with the Tax Equity and Fiscal Responsibility Act of 1982. An installment refund option pays benefits for the life of the annuitant(s), but if the annuitant(s) dies before the total of the payments made equals the annuity accumulation at retirement, a refund of the difference is made in installments to a named beneficiary. Settlements on an installment refund basis are still available for pre-1985 TIAA contracts, but can be made only when they meet IRS regulations that limit the maximum periods over which payments can be made following the death of an annuitant, and, consequently, the amounts of such payments.
2. For a full discussion of the issues of mandatory retirement in higher education and the expected effects of ending mandatory retirement for tenured employees under the Age Discrimination in Employment Act, see P. Brett Hammond and Harriet P. Morgan, eds., *Ending Mandatory Retirement for Tenured Faculty*, Committee on Mandatory Retirement in Higher Education, Commission on Behavioral and Social Sciences and Education, National Research Council (Washington, D.C.: National Academy Press, 1991).
3. A participant can switch from payments under a Minimum Distribution Option to a life annuity or a fixed-period annuity depending on the "calculation method" chosen for the Minimum Distribution Option.