benefit ratios. The cost-benefit ratio for a married person retiring in 1967, who has paid in the maximum, is 18 percent using 3 percent interest, 21 using 4 percent, and 25 using 5 percent interest. But, for a young person entering the system in 1967, changes in the rate of interest cause large differences in cost-benefit ratios. For a married man paying the maximum, the cost-benefit ratio is 121 percent using 3 percent interest, 165 percent using 4, and 227 percent using 5 percent interest. This is because the taxes paid by young workers are accumulated over 43 years rather than 30 years. Also, the early tax payments, which are held the longest and account for much of the accumulated interest, are larger for young entrants today than they were for persons retiring in 1967.

(b) What life expectancy should be assumed?

The Life Insurance Fact Book gives the following predictions of life expectancy for persons who were 65 years of age in 1964: 6

Color and sex	Years rem at age	
White male		13, 0
White female		16.3
Nonwhite male		12.8
Nonwhite female		15.6
Average, all races		

To simplify the calculations, all of the estimates in this study assume the same life expectancy for both husband and wife (14 years) and the same age for both husband and wife. More exact assumptions would change the cost-benefit ratios very slightly. Also, it was assumed that life expectancy would not change in the decades ahead.

(c) What is the cost of survivors and disability insurance?

The cost-benefit ratios estimated in this study are retrospective. They refer to persons who live to age 65 and retire. The value of the taxes paid in is the total amount accumulated over the working life of a person up to age 65. The estimated value of the old-age benefits is based on the expected life of a man and his wife at age 65.

Part of the payroll taxes that persons pay prior to reaching age 65 represent the cost of the disability and survivors insurance that they have had during their working years. In 1965, payments for survivors and disability insurance amounted to \$5.6 billion, approximately 30 percent of total OASDI payments of \$18.3 billion. This is considerably more than the 20 percent deduction assumed in this study. The reason for the difference is that in this study, payments to widows of husbands who live to age 65 are considered as old-age rather than survivors insurance benefits. The estimated deduction of 20 percent includes the total cost of disability insurance, but only that portion of survivors benefits paid to young widows with children and to aged widows of insured persons who died before age 65.

⁶ Life Insurance Fact Book, 1966 (New York, Institute of Life Insurance, 1966), p. 95.

⁷ Persons not living to age 65 pay in differing amounts of taxes, depending on how long they live. Most of them live until near age 65 and pay in close to the full amount of taxes for persons with their incomes. Even though they do not receive old-age benefits, their survivors—widowed mothers with children under their care and their widows on reaching age 65—do.