

TABLE 2.—AVERAGE LIFETIME ACCUMULATED TAX ON VARIOUS ASSUMPTIONS, STATED AS MULTIPLES OF THE AVERAGE BENEFIT IN 1966

Type of projection and starting age	r=2 percent		r=3 percent	
	i=3	i=5	i=3	i=5
Low cost, start at 18.....	29.64	49.63	36.66	59.42
Low cost, start at 22.....	24.52	39.06	29.80	46.21
High cost, start at 18.....	32.88	54.25	40.97	65.42
High cost, start at 22.....	26.98	42.46	32.99	50.52

The present value of the benefit stream at age 65 can be conveniently and meaningfully stated as a multiple of the initial benefit at age 65. It was assumed that all earners will work long enough so that benefits will be independent of the starting age. As indicated in the last section, the present value of this stream will vary with sex and family composition due to the different mortality projections for males and females. Table 3 gives the present value of the benefit stream for three specified types of beneficiaries at age 65. These ratios are consistent with *a priori* expectations. The present value varies directly with the growth rate, and inversely with interest rates. The high cost (low mortality) estimates show somewhat higher values, and females have higher values than males because of their lower mortality rates. Couples eligible for wife's benefit have almost as high values as single females with the same starting benefits despite the reduction in benefits when one person dies. Since the values for these couples are closer to those for females than those for males this cut in benefits appears to be more than offset by the longer period during which at least one person is expected to receive benefits.

TABLE 3.—VALUE AT AGE 65 OF STREAM OF REAL BENEFITS UNDER VARIOUS ASSUMPTIONS STATED AS A MULTIPLE OF THE INITIAL ANNUAL BENEFIT ON THE 65TH BIRTHDAY

Type of project and family composition	r=2 percent		r=3 percent	
	i=3	i=5	i=3	i=5
Low cost, single male or married male with wife who worked.....	13.13	11.26	14.28	12.15
Low cost, single female or married female with nondependent husband.....	15.60	13.16	17.14	14.30
Low cost, couple eligible for wife's benefit.....	15.10	12.75	16.56	13.86
High cost, single male or married male with wife who worked.....	13.92	11.86	15.20	12.84
High cost, single female or married female with nondependent husband.....	16.39	13.72	18.08	14.98
High cost, couple eligible for wife's benefit.....	15.89	13.33	17.50	14.55

Tables 2 and 3 form the basis for derivation of lifetime tax-benefit ratios for a recipient of average income. If it were reasonable to assume that a single benefit-earnings ratio $\bar{k}$ defined this starting benefit for the average earner it would be necessary only to restate table 3 in multiples of the 1966 starting benefit³² and take the ratio of the tax measures in table 2 to the benefit measures in table 3. However, a rough allowance will be made in this section for one feature of the present

³² The adjustment factors for table 3 are based on the earlier assumption that average real benefits grow at the annual rate.