

# APPENDIX C

## Valuation Tables

**Note:** New valuation tables were issued in 2009. See heading below for effective date and transitional rules.

The value of an annuity, an interest for life or term of years, or a remainder or a reversionary interest, is valued for most income, estate, gift, and generation-skipping transfer tax purposes using the following valuation tables and the current interest rate for the month in which the valuation date occurs. See Q 765. The Section 7520 interest rate for each month is published at [www.TaxFactsOnline.com](http://www.TaxFactsOnline.com). For purposes of these tables, round the age of any person whose life is used to measure an interest to the age of such person on his birthday nearest the valuation date.

Selected single life and term certain factors are provided here. [See Appendix A in *Tax Facts on Investments* for selected unitrust tables.] Both the single life and term certain tables provide factors for remainder interests that can be converted into an income factor or an annuity factor. A remainder interest is converted into an income factor by subtracting the remainder factor from 1. An income factor is converted into an annuity factor by dividing the income factor by the appropriate interest rate for the month.

The value of a remainder or income interest is equal to the principal amount multiplied by the appropriate remainder or income factor.

The value of an annuity payable *annually at the end of each year* is equal to the aggregate payment received during the year multiplied by the annuity factor. If the annuity is payable *other than annually at the end of each period*, the value of an annuity payable annually at the end of each year is adjusted to reflect the more frequent payments by multiplying such value by the appropriate Table A annuity adjustment factor. If an annuity is payable at the *beginning of each period during the life of one individual (or until the death of the survivor of two persons)*, add the amount of one additional payment to the calculation of the value of an annuity payable at the end of each period. If the annuity is payable at the *beginning of each period during a term certain*, the value of an annuity payable annually at the end of each year is adjusted to reflect the more frequent payments by multiplying such value by the appropriate Table B annuity adjustment factor.

### 2009 Change in Valuation Tables

The valuation tables underlying Section 7520 were updated with new valuation factors based on Mortality Table 2000CM. The most recent valuation tables are generally effective for valuation dates after April 2009. However, May and June 2009 were transitional months. A person with a valuation date in May or June 2009 could elect to use either the new or the prior valuation tables (based on Table 90CM). If a person was mentally incompetent on May 1, 2009, such person's executor may be able to elect later to use either the new or the prior valuation tables.

If a charitable deduction is involved, a person can use the Section 7520 interest rate for either of the two preceding months or the current month. If a person made a charitable gift during May or June 2009 and elected to use a Section 7520 rate for a month before May 2009, the prior valuation tables must be used. If a person made a charitable gift during May or June 2009 and elected to use a Section 7520 rate for May or June 2009, the person can elect to use either the new or the prior valuation tables. If a person makes a charitable gift after June 2009, the person must use the new valuation tables.

### Example Calculations

*Example 1.* Jack Jones set up a trust funded with \$100,000 to provide income to his mother (age 70) for life with remainder to his son, Tom. Assume the valuation table interest rate for the month is 3.0%. The factor for the present value of the remainder interest which follows a life estate given to a person age 70 at a 3.0% interest rate is .67291 (Single Life Remainder Factors Table). Consequently, Jack has made a gift of \$67,291 to Tom ( $\$100,000 \times .67291$ ).

The factor for the present value of the income interest given to Jack's mother is .32709 ( $1 - .67291$ ). Consequently, Jack has made a gift of \$32,709 to his mother ( $\$100,000 \times .32709$ ). The gift to Jack's mother is a gift of a present interest which may qualify for the annual exclusion.

*Example 2.* Bob Martin (age 66) transferred property in exchange for a private annuity of \$12,000 a year, payable annually at the end of each year for life. Assume the valuation table interest rate for the month is 3.0%. The present value of an annuity payable at the end of each year for the life of a person 66 years of age at an interest rate of 3.0% is calculated as follows. (1) The remainder factor is .62383 (Single Life Factors Table). (2) The income factor is .37617 ( $1 - .62383$ ). (3) The annuity factor is 12.5391 ( $.37617 \div 3.0\%$ ). (4) The present value of the private annuity is \$150,469 ( $12.5391 \times \$12,000$ ).

If the annuity is payable monthly (i.e., \$1,000 per month) at the end of each period, the annuity payable annually at the end of each year as calculated above is adjusted as follows. Multiply the value of the annuity payable annually at the end of each year (\$150,469) by an annuity adjustment factor of 1.0137 (Annuity Adjustment Factors Table A). Thus, the value of such an annuity is equal to \$152,531 ( $\$150,469 \times 1.0137$ ).

If the annuity in either of the two preceding paragraphs is payable at the beginning of the period, add one payment to the value of the annuity calculated above. The value of the \$12,000 annual annuity payable at the end of each year is increased to \$162,469 ( $\$150,469 + \$12,000$ ) if made payable at the beginning of the year. The value of the \$1,000 monthly annuity payable at the end of each period is increased to \$153,531 ( $\$152,531 + \$1,000$ ) if made payable at the beginning of the period.

*Example 3.* Kim Brown (age 40) transferred property worth \$100,000 in exchange for a private annuity payable for her life. Assume the valuation table interest rate for the month is 3.0%. To calculate what quarterly payments payable at the beginning of each period should be, the following steps are taken.

1. Calculate the annuity factor for an annuity payable annually at the end of each year during the life of a person 40 years of age at a 3.0% interest rate. This factor, 21.9370, is obtained by (a) locating the remainder factor of .34189 in the Single Life Remainder Factors Table, (b) subtracting (a) from 1, and (c) dividing (b) by the interest rate of 3.0%.
2. Locate the annuity adjustment factor of 1.0112 from the Annuity Adjustment Factors Table A.
3. Multiply (1) by (2) to obtain a product of 22.1827 ( $21.9370 \times 1.0112$ ).
4. Divide 1 by the number of periodic payments per year (i.e., 1/4, or .25) [if payments at end of period, equals 0].

## APPENDIX C: VALUATION TABLES

5. The sum of (3) and (4) is equal to 22.4327 ( $22.1827 + .25$ ).
6. Annuity payments should be \$4,458 per year ( $\$100,000 \div 22.4327$ ).
7. Quarterly payments should be \$1,114 ( $\$4,458 \div 4$ ).

### ANNUITY ADJUSTMENT FACTORS TABLE A\*

| INTEREST RATE | FREQUENCY OF PAYMENTS |               |           |         |        |
|---------------|-----------------------|---------------|-----------|---------|--------|
|               | ANNUALLY              | SEMI ANNUALLY | QUARTERLY | MONTHLY | WEEKLY |
| 1.0%          | 1.0000                | 1.0025        | 1.0037    | 1.0046  | 1.0049 |
| 1.2%          | 1.0000                | 1.0030        | 1.0045    | 1.0055  | 1.0059 |
| 1.4%          | 1.0000                | 1.0035        | 1.0052    | 1.0064  | 1.0068 |
| 1.6%          | 1.0000                | 1.0040        | 1.0060    | 1.0073  | 1.0078 |
| 1.8%          | 1.0000                | 1.0045        | 1.0067    | 1.0082  | 1.0088 |
| 2.0%          | 1.0000                | 1.0050        | 1.0075    | 1.0091  | 1.0098 |
| 2.2%          | 1.0000                | 1.0055        | 1.0082    | 1.0100  | 1.0107 |
| 2.4%          | 1.0000                | 1.0060        | 1.0090    | 1.0110  | 1.0117 |
| 2.6%          | 1.0000                | 1.0065        | 1.0097    | 1.0119  | 1.0127 |
| 2.8%          | 1.0000                | 1.0070        | 1.0104    | 1.0128  | 1.0137 |
| 3.0%          | 1.0000                | 1.0074        | 1.0112    | 1.0137  | 1.0146 |
| 3.2%          | 1.0000                | 1.0079        | 1.0119    | 1.0146  | 1.0156 |
| 3.4%          | 1.0000                | 1.0084        | 1.0127    | 1.0155  | 1.0166 |
| 3.6%          | 1.0000                | 1.0089        | 1.0134    | 1.0164  | 1.0175 |
| 3.8%          | 1.0000                | 1.0094        | 1.0141    | 1.0173  | 1.0185 |
| 4.0%          | 1.0000                | 1.0099        | 1.0149    | 1.0182  | 1.0195 |
| 4.2%          | 1.0000                | 1.0104        | 1.0156    | 1.0191  | 1.0205 |
| 4.4%          | 1.0000                | 1.0109        | 1.0164    | 1.0200  | 1.0214 |
| 4.6%          | 1.0000                | 1.0114        | 1.0171    | 1.0209  | 1.0224 |
| 4.8%          | 1.0000                | 1.0119        | 1.0178    | 1.0218  | 1.0234 |



\*For use in calculating the value of an annuity payable at the end of each period or, if the term of the annuity is determined with respect to one or more lives, an annuity payable at the beginning of each period.

2015 TAX FACTS ON INSURANCE & EMPLOYEE BENEFITS

**ANNUITY ADJUSTMENT FACTORS TABLE B\***

| INTEREST<br>RATE | FREQUENCY OF PAYMENTS |                  |           |         |        |
|------------------|-----------------------|------------------|-----------|---------|--------|
|                  | ANNUALLY              | SEMI<br>ANNUALLY | QUARTERLY | MONTHLY | WEEKLY |
| 1.0%             | 1.0100                | 1.0075           | 1.0062    | 1.0054  | 1.0051 |
| 1.2%             | 1.0120                | 1.0090           | 1.0075    | 1.0065  | 1.0061 |
| 1.4%             | 1.0140                | 1.0105           | 1.0087    | 1.0076  | 1.0071 |
| 1.6%             | 1.0160                | 1.0120           | 1.0100    | 1.0086  | 1.0081 |
| 1.8%             | 1.0180                | 1.0135           | 1.0112    | 1.0097  | 1.0091 |
| 2.0%             | 1.0200                | 1.0150           | 1.0125    | 1.0108  | 1.0102 |
| 2.2%             | 1.0220                | 1.0165           | 1.0137    | 1.0119  | 1.0112 |
| 2.4%             | 1.0240                | 1.0180           | 1.0150    | 1.0130  | 1.0122 |
| 2.6%             | 1.0260                | 1.0195           | 1.0162    | 1.0140  | 1.0132 |
| 2.8%             | 1.0280                | 1.0210           | 1.0174    | 1.0151  | 1.0142 |
| 3.0%             | 1.0300                | 1.0224           | 1.0187    | 1.0162  | 1.0152 |
| 3.2%             | 1.0320                | 1.0239           | 1.0199    | 1.0172  | 1.0162 |
| 3.4%             | 1.0340                | 1.0254           | 1.0212    | 1.0183  | 1.0172 |
| 3.6%             | 1.0360                | 1.0269           | 1.0224    | 1.0194  | 1.0182 |
| 3.8%             | 1.0380                | 1.0284           | 1.0236    | 1.0205  | 1.0192 |
| 4.0%             | 1.0400                | 1.0299           | 1.0249    | 1.0215  | 1.0203 |
| 4.2%             | 1.0420                | 1.0314           | 1.0261    | 1.0226  | 1.0213 |
| 4.4%             | 1.0440                | 1.0329           | 1.0274    | 1.0237  | 1.0223 |
| 4.6%             | 1.0460                | 1.0344           | 1.0286    | 1.0247  | 1.0233 |
| 4.8%             | 1.0480                | 1.0359           | 1.0298    | 1.0258  | 1.0243 |

\*For use in calculating the value of a term certain annuity payable at the beginning of each period.

APPENDIX C: VALUATION TABLES

**TERM CERTAIN REMAINDER FACTORS**

| YEARS | INTEREST RATE |          |         |         |         |         |         |         |         |         |
|-------|---------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
|       | 1.0%          | 1.2%     | 1.4%    | 1.6%    | 1.8%    | 2.0%    | 2.2%    | 2.4%    | 2.6%    | 2.8%    |
| 1     | 0.990099      | 0.988142 | .986193 | .984252 | .982318 | .980392 | .978474 | .976562 | .974659 | .972763 |
| 2     | 0.980296      | 0.976425 | .972577 | .968752 | .964949 | .961169 | .957411 | .953674 | .949960 | .946267 |
| 3     | 0.970590      | 0.964847 | .959149 | .953496 | .947887 | .942322 | .936801 | .931323 | .925887 | .920493 |
| 4     | 0.960980      | 0.953406 | .945906 | .938480 | .931127 | .923845 | .916635 | .909495 | .902424 | .895422 |
| 5     | 0.951466      | 0.942101 | .932847 | .923701 | .914663 | .905731 | .896903 | .888178 | .879555 | .871033 |
| 6     | 0.942045      | 0.930930 | .919967 | .909155 | .898490 | .887971 | .877596 | .867362 | .857266 | .847308 |
| 7     | 0.932718      | 0.919891 | .907265 | .894837 | .882603 | .870560 | .858705 | .847033 | .835542 | .824230 |
| 8     | 0.923483      | 0.908983 | .894739 | .880745 | .866997 | .853490 | .840220 | .827181 | .814369 | .801780 |
| 9     | 0.914340      | 0.898205 | .882386 | .866875 | .851667 | .836755 | .822133 | .807794 | .793732 | .779941 |
| 10    | 0.905287      | 0.887554 | .870203 | .853224 | .836608 | .820348 | .804435 | .788861 | .773618 | .758698 |
| 11    | 0.896324      | 0.877030 | .858188 | .839787 | .821816 | .804263 | .787119 | .770372 | .754013 | .738033 |
| 12    | 0.887449      | 0.866630 | .846339 | .826562 | .807285 | .788493 | .770175 | .752316 | .734906 | .717931 |
| 13    | 0.878663      | 0.856354 | .834654 | .813545 | .793010 | .773033 | .753596 | .734684 | .716282 | .698376 |
| 14    | 0.869963      | 0.846200 | .823130 | .800734 | .778989 | .757875 | .737373 | .717465 | .698131 | .679354 |
| 15    | 0.861349      | 0.836166 | .811766 | .788124 | .765215 | .743015 | .721500 | .700649 | .680440 | .660851 |
| 16    | 0.852821      | 0.826251 | .800558 | .775712 | .751684 | .728446 | .705969 | .684228 | .663196 | .642851 |
| 17    | 0.844377      | 0.816453 | .789505 | .763496 | .738393 | .714163 | .690772 | .668191 | .646390 | .625341 |
| 18    | 0.836017      | 0.806772 | .778604 | .751473 | .725337 | .700159 | .675902 | .652530 | .630010 | .608309 |
| 19    | 0.827740      | 0.797205 | .767854 | .739639 | .712512 | .686431 | .661352 | .637237 | .614045 | .591740 |
| 20    | 0.819544      | 0.787752 | .757253 | .727991 | .699914 | .672971 | .647116 | .622302 | .598484 | .575622 |
| 21    | 0.811430      | 0.778411 | .746798 | .716526 | .687538 | .659776 | .633186 | .607716 | .583318 | .559944 |
| 22    | 0.803396      | 0.769181 | .736487 | .705242 | .675381 | .646839 | .619556 | .593473 | .568536 | .544693 |
| 23    | 0.795442      | 0.760061 | .726318 | .694136 | .663439 | .634156 | .606219 | .579563 | .554129 | .529857 |
| 24    | 0.787566      | 0.751048 | .716290 | .683205 | .651708 | .621722 | .593169 | .565980 | .540087 | .515425 |
| 25    | 0.779768      | 0.742142 | .706401 | .672446 | .640185 | .609531 | .580400 | .552715 | .526400 | .501386 |
| 26    | 0.772048      | 0.733342 | .696648 | .661856 | .628866 | .597579 | .567906 | .539761 | .513061 | .487729 |
| 27    | 0.764404      | 0.724646 | .687029 | .651433 | .617746 | .585862 | .555681 | .527110 | .500059 | .474445 |
| 28    | 0.756836      | 0.716054 | .677544 | .641174 | .606823 | .574375 | .543720 | .514756 | .487387 | .461522 |
| 29    | 0.749342      | 0.707563 | .668189 | .631077 | .596094 | .563112 | .532015 | .502691 | .475036 | .448952 |
| 30    | 0.741923      | 0.699173 | .658964 | .621139 | .585554 | .552071 | .520563 | .490909 | .462998 | .436724 |
| 31    | 0.734577      | 0.690882 | .649865 | .611357 | .575200 | .541246 | .509357 | .479404 | .451265 | .424828 |
| 32    | 0.727304      | 0.682690 | .640893 | .601730 | .565029 | .530633 | .498392 | .468168 | .439830 | .413257 |
| 33    | 0.720103      | 0.674595 | .632044 | .592254 | .555039 | .520229 | .487664 | .457195 | .428684 | .402001 |
| 34    | 0.712973      | 0.666596 | .623318 | .582927 | .545225 | .510028 | .477166 | .446479 | .417820 | .391052 |
| 35    | 0.705914      | 0.658692 | .614712 | .573747 | .535584 | .500028 | .466894 | .436015 | .407232 | .380400 |
| 36    | 0.698925      | 0.650881 | .606225 | .564711 | .526114 | .490223 | .456844 | .425796 | .396913 | .370039 |
| 37    | 0.692005      | 0.643163 | .597855 | .555818 | .516812 | .480611 | .447010 | .415816 | .386854 | .359960 |
| 38    | 0.685153      | 0.635537 | .589600 | .547065 | .507673 | .471187 | .437387 | .406071 | .377051 | .350156 |
| 39    | 0.678370      | 0.628001 | .581460 | .538450 | .498697 | .461948 | .427972 | .396553 | .367496 | .340619 |
| 40    | 0.671653      | 0.620554 | .573432 | .529970 | .489879 | .452890 | .418759 | .387259 | .358183 | .331341 |
| 41    | 0.665003      | 0.613196 | .565515 | .521624 | .481217 | .444010 | .409745 | .378183 | .349107 | .322316 |
| 42    | 0.658419      | 0.605924 | .557707 | .513410 | .472708 | .435304 | .400924 | .369319 | .340260 | .313537 |
| 43    | 0.651900      | 0.598740 | .550007 | .505325 | .464350 | .426769 | .392294 | .360663 | .331637 | .304997 |
| 44    | 0.645445      | 0.591640 | .542413 | .497367 | .456140 | .418401 | .383849 | .352210 | .323233 | .296690 |
| 45    | 0.639055      | 0.584624 | .534924 | .489534 | .448074 | .410197 | .375586 | .343955 | .315042 | .288609 |
| 46    | 0.632728      | 0.577692 | .527538 | .481825 | .440152 | .402154 | .367501 | .335894 | .307059 | .280748 |
| 47    | 0.626463      | 0.570842 | .520255 | .474237 | .432369 | .394268 | .359590 | .328201 | .299277 | .273101 |
| 48    | 0.620260      | 0.564073 | .513072 | .466769 | .424724 | .386538 | .351850 | .320333 | .291693 | .265663 |
| 49    | 0.614119      | 0.557384 | .505988 | .459418 | .417214 | .378958 | .344276 | .312825 | .284302 | .258427 |
| 50    | 0.608039      | 0.550775 | .499002 | .452183 | .409837 | .371528 | .336864 | .305494 | .277097 | .251388 |

2015 TAX FACTS ON INSURANCE & EMPLOYEE BENEFITS

TERM CERTAIN REMAINDER FACTORS

| YEARS | INTEREST RATE |         |         |         |         |         |         |         |         |         |
|-------|---------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|       | 3.0%          | 3.2%    | 3.4%    | 3.6%    | 3.8%    | 4.0%    | 4.2%    | 4.4%    | 4.6%    | 4.8%    |
| 1     | .970874       | .968992 | .967118 | .965251 | .963391 | .961538 | .959693 | .957854 | .956023 | .954199 |
| 2     | .942596       | .938946 | .935317 | .931709 | .928122 | .924556 | .921010 | .917485 | .913980 | .910495 |
| 3     | .915142       | .909831 | .904562 | .899333 | .894145 | .888996 | .883887 | .878817 | .873786 | .868793 |
| 4     | .888487       | .881620 | .874818 | .868082 | .861411 | .854804 | .848260 | .841779 | .835359 | .829001 |
| 5     | .862609       | .854282 | .846052 | .837917 | .829876 | .821927 | .814069 | .806302 | .798623 | .791031 |
| 6     | .837484       | .827793 | .818233 | .808801 | .799495 | .790315 | .781257 | .772320 | .763502 | .754801 |
| 7     | .813091       | .802125 | .791327 | .780696 | .770227 | .759918 | .749766 | .739770 | .729925 | .720230 |
| 8     | .789409       | .777253 | .765307 | .753567 | .742029 | .730690 | .719545 | .708592 | .697825 | .687242 |
| 9     | .766417       | .753152 | .740142 | .727381 | .714865 | .702587 | .690543 | .678728 | .667137 | .655765 |
| 10    | .744094       | .729799 | .715805 | .702106 | .688694 | .675564 | .662709 | .650122 | .637798 | .625730 |
| 11    | .722421       | .707169 | .692268 | .677708 | .663482 | .649581 | .635997 | .622722 | .609749 | .597071 |
| 12    | .701380       | .685241 | .669505 | .654158 | .639193 | .624597 | .610362 | .596477 | .582935 | .569724 |
| 13    | .680951       | .663994 | .647490 | .631427 | .615792 | .600574 | .585760 | .571339 | .557299 | .543630 |
| 14    | .661118       | .643405 | .626199 | .609486 | .593249 | .577475 | .562150 | .547259 | .532790 | .518731 |
| 15    | .641862       | .623454 | .605608 | .588307 | .571531 | .555265 | .539491 | .524195 | .509360 | .494972 |
| 16    | .623167       | .604122 | .585695 | .567863 | .550608 | .533908 | .517746 | .502102 | .486960 | .472302 |
| 17    | .605016       | .585390 | .566436 | .548131 | .530451 | .513373 | .496877 | .480941 | .465545 | .450670 |
| 18    | .587395       | .567238 | .547810 | .529084 | .511031 | .493628 | .476849 | .460671 | .445071 | .430028 |
| 19    | .570286       | .549649 | .529797 | .510699 | .492323 | .474642 | .457629 | .441256 | .425498 | .410332 |
| 20    | .553676       | .532606 | .512376 | .492952 | .474300 | .456387 | .439183 | .422659 | .406786 | .391538 |
| 21    | .537549       | .516091 | .495529 | .475823 | .456936 | .438834 | .421481 | .404846 | .388897 | .373605 |
| 22    | .521892       | .500088 | .479235 | .459288 | .440208 | .421955 | .404492 | .387783 | .371794 | .356494 |
| 23    | .506692       | .484582 | .463476 | .443329 | .424093 | .405726 | .388188 | .371440 | .355444 | .340166 |
| 24    | .491934       | .469556 | .448236 | .427923 | .408567 | .390121 | .372542 | .355785 | .339813 | .324586 |
| 25    | .477606       | .454996 | .433497 | .413053 | .393610 | .375117 | .357526 | .340791 | .324869 | .309719 |
| 26    | .463695       | .440888 | .419243 | .398700 | .379200 | .360689 | .343115 | .326428 | .310582 | .295533 |
| 27    | .450189       | .427217 | .405458 | .384846 | .365318 | .346817 | .329285 | .312670 | .296923 | .281998 |
| 28    | .437077       | .413970 | .392125 | .371473 | .351944 | .333477 | .316012 | .299493 | .283866 | .269082 |
| 29    | .424346       | .401133 | .379231 | .358564 | .339060 | .320651 | .303275 | .286870 | .271382 | .256757 |
| 30    | .411987       | .388695 | .366762 | .346105 | .326648 | .308319 | .291051 | .274780 | .259447 | .244997 |
| 31    | .399987       | .376643 | .354702 | .334078 | .314689 | .296460 | .279319 | .263199 | .248038 | .233776 |
| 32    | .388337       | .364964 | .343038 | .322469 | .303169 | .285058 | .268061 | .252106 | .237130 | .223069 |
| 33    | .377026       | .353647 | .331759 | .311263 | .292070 | .274094 | .257256 | .241481 | .226702 | .212852 |
| 34    | .366045       | .342681 | .320850 | .300447 | .281378 | .263552 | .246887 | .231304 | .216732 | .203103 |
| 35    | .355383       | .332055 | .310300 | .290007 | .271077 | .253415 | .236935 | .221556 | .207201 | .193801 |
| 36    | .345032       | .321759 | .300096 | .279930 | .261153 | .243669 | .227385 | .212218 | .198089 | .184924 |
| 37    | .334983       | .311782 | .290228 | .270202 | .251593 | .234297 | .218220 | .203274 | .189377 | .176454 |
| 38    | .325226       | .302114 | .280685 | .260813 | .242382 | .225285 | .209424 | .194707 | .181049 | .168373 |
| 39    | .315754       | .292747 | .271456 | .251750 | .233509 | .216621 | .200983 | .186501 | .173087 | .160661 |
| 40    | .306557       | .283669 | .262530 | .243002 | .224960 | .208289 | .192882 | .178641 | .165475 | .153302 |
| 41    | .297628       | .274873 | .253897 | .234558 | .216725 | .200278 | .185107 | .171112 | .158198 | .146281 |
| 42    | .288959       | .266350 | .245549 | .226407 | .208791 | .192575 | .177646 | .163900 | .151241 | .139581 |
| 43    | .280543       | .258091 | .237474 | .218540 | .201147 | .185168 | .170486 | .156992 | .144590 | .133188 |
| 44    | .272372       | .250088 | .229666 | .210946 | .193783 | .178046 | .163614 | .150376 | .138231 | .127088 |
| 45    | .264439       | .242334 | .222114 | .203616 | .186689 | .171198 | .157019 | .144038 | .132152 | .121267 |
| 46    | .256737       | .234819 | .214810 | .196540 | .179855 | .164614 | .150690 | .137968 | .126340 | .115713 |
| 47    | .249259       | .227538 | .207747 | .189711 | .173270 | .158283 | .144616 | .132153 | .120784 | .110413 |
| 48    | .241999       | .220483 | .200916 | .183118 | .166927 | .152195 | .138787 | .126583 | .115473 | .105356 |
| 49    | .234950       | .213646 | .194309 | .176755 | .160816 | .146341 | .133193 | .121248 | .110395 | .100530 |
| 50    | .228107       | .207021 | .187920 | .170613 | .154929 | .140713 | .127824 | .116138 | .105540 | .095926 |

APPENDIX C: VALUATION TABLES

**SINGLE LIFE REMAINDER FACTORS**  
(For valuation dates occurring after April 30, 2009)

| AGE | INTEREST RATE |        |        |        |        |        |        |        |        |        |
|-----|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|     | 1.0%          | 1.2%   | 1.4%   | 1.6%   | 1.8%   | 2.0%   | 2.2%   | 2.4%   | 2.6%   | 2.8%   |
| 35  | .65414        | .60253 | .55549 | .51261 | .47347 | .43774 | .40509 | .37523 | .34792 | .32290 |
| 36  | .66021        | .60921 | .56266 | .52014 | .48127 | .44572 | .41318 | .38337 | .35606 | .33100 |
| 37  | .66631        | .61594 | .56989 | .52774 | .48916 | .45381 | .42139 | .39165 | .36435 | .33927 |
| 38  | .67244        | .62272 | .57718 | .53544 | .49715 | .46201 | .42974 | .40008 | .37281 | .34771 |
| 39  | .67860        | .62955 | .58453 | .54320 | .50523 | .47032 | .43821 | .40864 | .38141 | .35631 |
| 40  | .68479        | .63641 | .59194 | .55104 | .51340 | .47873 | .44679 | .41734 | .39016 | .36507 |
| 41  | .69100        | .64331 | .59940 | .55894 | .52165 | .48724 | .45549 | .42616 | .39906 | .37399 |
| 42  | .69723        | .65024 | .60690 | .56691 | .52998 | .49585 | .46430 | .43511 | .40809 | .38307 |
| 43  | .70348        | .65721 | .61447 | .57495 | .53840 | .50457 | .47324 | .44421 | .41729 | .39232 |
| 44  | .70976        | .66422 | .62208 | .58305 | .54690 | .51338 | .48229 | .45343 | .42663 | .40172 |
| 45  | .71605        | .67125 | .62973 | .59122 | .55547 | .52228 | .49144 | .46277 | .43611 | .41128 |
| 46  | .72236        | .67832 | .63743 | .59945 | .56413 | .53129 | .50072 | .47225 | .44574 | .42101 |
| 47  | .72867        | .68541 | .64517 | .60773 | .57286 | .54037 | .51009 | .48185 | .45550 | .43089 |
| 48  | .73501        | .69253 | .65295 | .61606 | .58166 | .54955 | .51958 | .49158 | .46540 | .44093 |
| 49  | .74135        | .69967 | .66077 | .62446 | .59053 | .55882 | .52917 | .50143 | .47545 | .45113 |
| 50  | .74771        | .70684 | .66864 | .63292 | .59949 | .56819 | .53888 | .51141 | .48566 | .46150 |
| 51  | .75409        | .71404 | .67655 | .64143 | .60852 | .57766 | .54871 | .52153 | .49602 | .47204 |
| 52  | .76048        | .72127 | .68450 | .65001 | .61763 | .58722 | .55865 | .53179 | .50653 | .48276 |
| 53  | .76687        | .72852 | .69249 | .65863 | .62680 | .59687 | .56869 | .54217 | .51718 | .49363 |
| 54  | .77326        | .73577 | .70050 | .66730 | .63603 | .60658 | .57882 | .55265 | .52796 | .50465 |
| 55  | .77964        | .74302 | .70851 | .67598 | .64530 | .61635 | .58902 | .56322 | .53884 | .51579 |
| 56  | .78599        | .75024 | .71651 | .68465 | .65457 | .62613 | .59926 | .57383 | .54978 | .52701 |
| 57  | .79230        | .75744 | .72448 | .69332 | .66384 | .63593 | .60951 | .58449 | .56078 | .53830 |
| 58  | .79857        | .76459 | .73242 | .70195 | .67309 | .64573 | .61978 | .59517 | .57182 | .54964 |
| 59  | .80479        | .77170 | .74033 | .71057 | .68233 | .65553 | .63007 | .60589 | .58290 | .56105 |
| 60  | .81098        | .77879 | .74822 | .71918 | .69158 | .66534 | .64039 | .61665 | .59405 | .57254 |
| 61  | .81713        | .78584 | .75608 | .72776 | .70081 | .67515 | .65072 | .62743 | .60524 | .58409 |
| 62  | .82323        | .79283 | .76388 | .73630 | .71001 | .68494 | .66104 | .63822 | .61645 | .59566 |
| 63  | .82926        | .79977 | .77164 | .74479 | .71917 | .69470 | .67133 | .64900 | .62766 | .60726 |
| 64  | .83524        | .80665 | .77933 | .75323 | .72828 | .70443 | .68161 | .65977 | .63887 | .61887 |
| 65  | .84116        | .81346 | .78697 | .76162 | .73735 | .71411 | .69186 | .67053 | .65009 | .63049 |
| 66  | .84706        | .82027 | .79461 | .77002 | .74645 | .72385 | .70216 | .68136 | .66140 | .64223 |
| 67  | .85292        | .82705 | .80223 | .77841 | .75554 | .73359 | .71250 | .69224 | .67277 | .65405 |
| 68  | .85874        | .83378 | .80980 | .78676 | .76461 | .74331 | .72283 | .70312 | .68416 | .66590 |
| 69  | .86449        | .84044 | .81731 | .79504 | .77362 | .75299 | .73312 | .71398 | .69553 | .67776 |
| 70  | .87016        | .84702 | .82473 | .80326 | .78256 | .76260 | .74335 | .72479 | .70688 | .68959 |
| 71  | .87577        | .85353 | .83209 | .81140 | .79143 | .77215 | .75353 | .73556 | .71819 | .70141 |
| 72  | .88129        | .85996 | .83935 | .81945 | .80021 | .78162 | .76364 | .74626 | .72945 | .71318 |
| 73  | .88671        | .86627 | .84651 | .82739 | .80888 | .79098 | .77365 | .75686 | .74061 | .72487 |
| 74  | .89202        | .87247 | .85353 | .83518 | .81741 | .80019 | .78350 | .76733 | .75164 | .73643 |
| 75  | .89720        | .87851 | .86039 | .84281 | .82577 | .80923 | .79318 | .77761 | .76249 | .74781 |
| 76  | .90224        | .88440 | .86708 | .85026 | .83393 | .81807 | .80266 | .78769 | .77314 | .75899 |
| 77  | .90715        | .89013 | .87360 | .85753 | .84191 | .82671 | .81194 | .79756 | .78358 | .76997 |
| 78  | .91190        | .89571 | .87995 | .86461 | .84968 | .83515 | .82100 | .80722 | .79380 | .78072 |
| 79  | .91652        | .90112 | .88611 | .87149 | .85725 | .84337 | .82984 | .81664 | .80378 | .79124 |
| 80  | .92098        | .90635 | .89208 | .87817 | .86460 | .85135 | .83843 | .82582 | .81351 | .80149 |
| 81  | .92529        | .91141 | .89786 | .88463 | .87172 | .85910 | .84678 | .83474 | .82298 | .81148 |
| 82  | .92944        | .91629 | .90344 | .89088 | .87861 | .86660 | .85487 | .84339 | .83217 | .82119 |
| 83  | .93343        | .92099 | .90882 | .89691 | .88526 | .87385 | .86269 | .85177 | .84107 | .83060 |
| 84  | .93727        | .92551 | .91399 | .90271 | .89166 | .88084 | .87024 | .85986 | .84968 | .83970 |

2015 TAX FACTS ON INSURANCE & EMPLOYEE BENEFITS

**SINGLE LIFE REMAINDER FACTORS**  
(For valuation dates occurring after April 30, 2009)

| AGE | INTEREST RATE |        |        |        |        |        |        |        |        |        |
|-----|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|     | 3.0%          | 3.2%   | 3.4%   | 3.6%   | 3.8%   | 4.0%   | 4.2%   | 4.4%   | 4.6%   | 4.8%   |
| 35  | .29998        | .27896 | .25967 | .24195 | .22567 | .21070 | .19692 | .18423 | .17253 | .16174 |
| 36  | .30800        | .28688 | .26746 | .24961 | .23317 | .21803 | .20407 | .19119 | .17931 | .16833 |
| 37  | .31621        | .29499 | .27546 | .25746 | .24087 | .22557 | .21144 | .19838 | .18631 | .17515 |
| 38  | .32460        | .30330 | .28366 | .26554 | .24880 | .23334 | .21904 | .20582 | .19357 | .18222 |
| 39  | .33316        | .31179 | .29205 | .27381 | .25694 | .24133 | .22687 | .21348 | .20105 | .18952 |
| 40  | .34189        | .32046 | .30064 | .28229 | .26529 | .24954 | .23493 | .22137 | .20878 | .19707 |
| 41  | .35080        | .32932 | .30942 | .29097 | .27386 | .25797 | .24322 | .22950 | .21674 | .20487 |
| 42  | .35987        | .33836 | .31840 | .29986 | .28264 | .26662 | .25173 | .23786 | .22494 | .21290 |
| 43  | .36913        | .34760 | .32758 | .30897 | .29165 | .27552 | .26049 | .24648 | .23342 | .22122 |
| 44  | .37857        | .35702 | .33697 | .31829 | .30088 | .28465 | .26950 | .25535 | .24214 | .22979 |
| 45  | .38817        | .36663 | .34655 | .32782 | .31033 | .29400 | .27874 | .26447 | .25112 | .23862 |
| 46  | .39796        | .37644 | .35634 | .33757 | .32002 | .30360 | .28824 | .27385 | .26038 | .24774 |
| 47  | .40791        | .38642 | .36633 | .34753 | .32992 | .31343 | .29798 | .28349 | .26989 | .25712 |
| 48  | .41803        | .39660 | .37652 | .35770 | .34006 | .32351 | .30797 | .29338 | .27967 | .26678 |
| 49  | .42833        | .40696 | .38691 | .36810 | .35043 | .33383 | .31822 | .30355 | .28974 | .27674 |
| 50  | .43883        | .41754 | .39754 | .37874 | .36106 | .34442 | .32876 | .31401 | .30011 | .28701 |
| 51  | .44951        | .42832 | .40838 | .38961 | .37194 | .35528 | .33958 | .32477 | .31079 | .29759 |
| 52  | .46038        | .43931 | .41945 | .40073 | .38307 | .36641 | .35068 | .33582 | .32178 | .30851 |
| 53  | .47143        | .45050 | .43074 | .41208 | .39446 | .37781 | .36206 | .34717 | .33308 | .31974 |
| 54  | .48265        | .46186 | .44222 | .42364 | .40607 | .38945 | .37371 | .35880 | .34467 | .33127 |
| 55  | .49400        | .47338 | .45387 | .43540 | .41789 | .40131 | .38559 | .37067 | .35652 | .34308 |
| 56  | .50544        | .48501 | .46565 | .44729 | .42987 | .41335 | .39765 | .38275 | .36859 | .35512 |
| 57  | .51698        | .49675 | .47755 | .45932 | .44201 | .42555 | .40990 | .39502 | .38086 | .36739 |
| 58  | .52858        | .50858 | .48956 | .47147 | .45427 | .43790 | .42231 | .40747 | .39333 | .37985 |
| 59  | .54027        | .52050 | .50167 | .48375 | .46668 | .45041 | .43490 | .42011 | .40600 | .39253 |
| 60  | .55205        | .53253 | .51392 | .49617 | .47925 | .46310 | .44768 | .43296 | .41890 | .40546 |
| 61  | .56390        | .54465 | .52627 | .50872 | .49196 | .47595 | .46064 | .44600 | .43200 | .41860 |
| 62  | .57581        | .55683 | .53870 | .52136 | .50478 | .48892 | .47373 | .45920 | .44527 | .43194 |
| 63  | .58774        | .56907 | .55120 | .53409 | .51770 | .50200 | .48696 | .47253 | .45870 | .44544 |
| 64  | .59970        | .58134 | .56375 | .54688 | .53071 | .51519 | .50030 | .48601 | .47229 | .45911 |
| 65  | .61170        | .59367 | .57637 | .55976 | .54381 | .52849 | .51377 | .49963 | .48603 | .47295 |
| 66  | .62383        | .60615 | .58916 | .57283 | .55713 | .54203 | .52750 | .51352 | .50007 | .48711 |
| 67  | .63605        | .61874 | .60208 | .58605 | .57062 | .55575 | .54144 | .52765 | .51436 | .50154 |
| 68  | .64833        | .63140 | .61509 | .59938 | .58423 | .56963 | .55554 | .54196 | .52885 | .51619 |
| 69  | .66062        | .64409 | .62815 | .61277 | .59793 | .58360 | .56976 | .55640 | .54349 | .53102 |
| 70  | .67291        | .65680 | .64124 | .62621 | .61168 | .59764 | .58407 | .57095 | .55826 | .54598 |
| 71  | .68519        | .66951 | .65434 | .63968 | .62549 | .61176 | .59848 | .58561 | .57316 | .56109 |
| 72  | .69744        | .68220 | .66745 | .65317 | .63933 | .62593 | .61294 | .60035 | .58815 | .57632 |
| 73  | .70962        | .69484 | .68051 | .66662 | .65315 | .64009 | .62741 | .61512 | .60318 | .59160 |
| 74  | .72167        | .70735 | .69346 | .67997 | .66688 | .65417 | .64183 | .62983 | .61818 | .60686 |
| 75  | .73355        | .71971 | .70625 | .69318 | .68048 | .66813 | .65612 | .64444 | .63309 | .62204 |
| 76  | .74524        | .73187 | .71886 | .70621 | .69390 | .68192 | .67026 | .65891 | .64786 | .63710 |
| 77  | .75672        | .74382 | .73127 | .71904 | .70713 | .69553 | .68423 | .67321 | .66248 | .65201 |
| 78  | .76798        | .75556 | .74346 | .73166 | .72016 | .70894 | .69800 | .68733 | .67692 | .66676 |
| 79  | .77900        | .76706 | .75542 | .74405 | .73296 | .72213 | .71156 | .70124 | .69116 | .68132 |
| 80  | .78976        | .77830 | .76711 | .75618 | .74550 | .73507 | .72487 | .71490 | .70516 | .69563 |
| 81  | .80025        | .78927 | .77853 | .76803 | .75777 | .74773 | .73791 | .72830 | .71890 | .70970 |
| 82  | .81045        | .79994 | .78966 | .77959 | .76974 | .76009 | .75065 | .74140 | .73235 | .72348 |
| 83  | .82035        | .81030 | .80047 | .79083 | .78139 | .77214 | .76308 | .75419 | .74548 | .73695 |
| 84  | .82993        | .82035 | .81095 | .80174 | .79271 | .78385 | .77516 | .76664 | .75828 | .75008 |