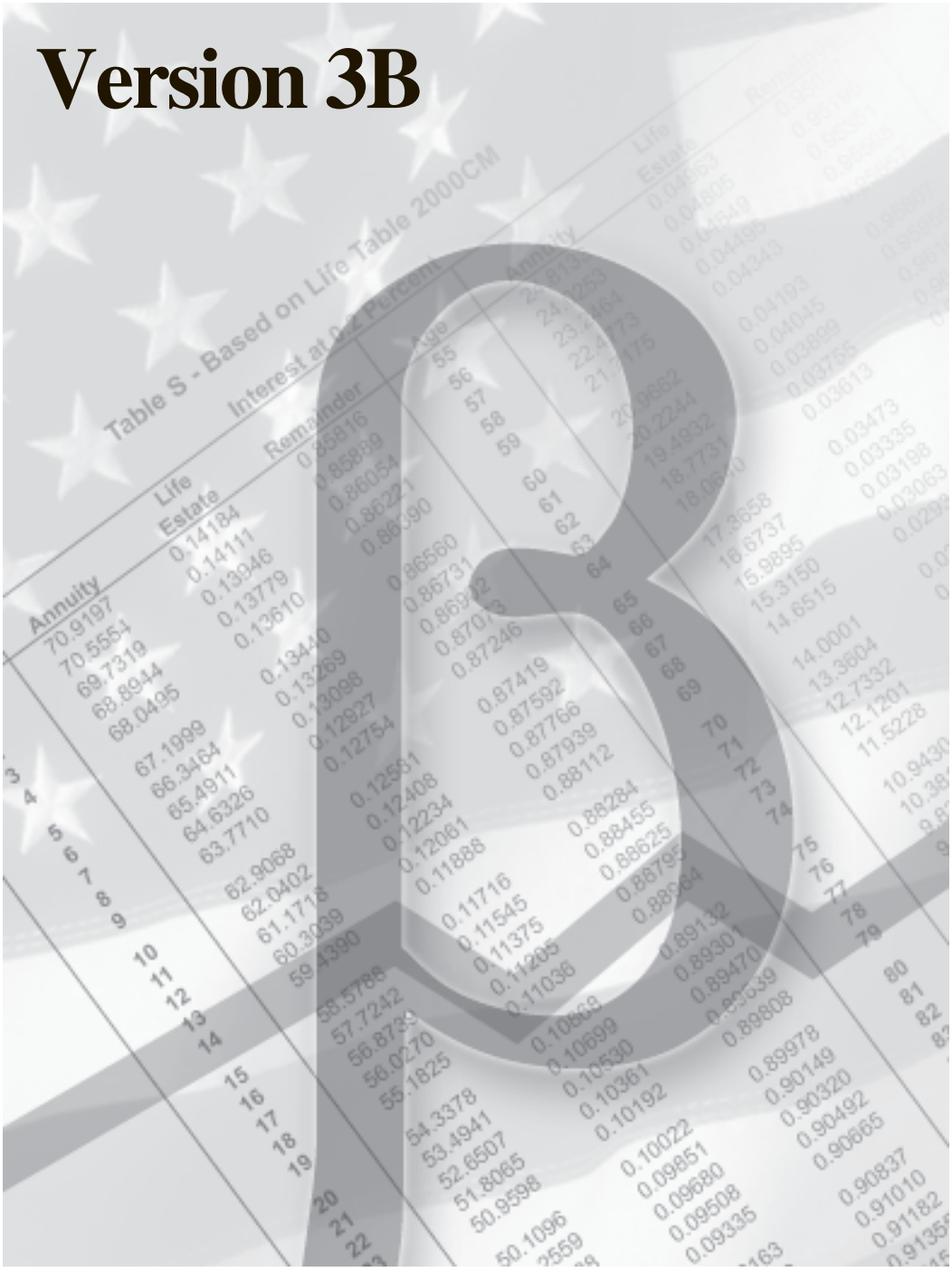
ACTUARIAL VALUATIONS

Unitrust Remainder Examples — For One Life, Two Lives, and Terms Certain

For Use in Income, Estate, and Gift Tax Purposes



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Version 3B

Unitrust Remainder and Life Estate Examples
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Department of the Treasury
Internal Revenue Service
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USE OF EXAMPLES AND TABLES

This publication sets forth examples for using actuarial factors for certain income, gift, and estate tax valuations of future interests. This publication *does not contain* the tables of actuarial factors used in these examples. The actuarial tables cited in the examples below can be found on the IRS website at the following address:

Website: http://www.irs.gov/retirement/article/0,,id=206601,00.html

The examples provided are for the computation of interests in unitrusts. A unitrust is a trust wherein the trustee is directed to pay annually a fixed percentage of the fair market value of the trust computed each year, either for a life or lives or for a term of years, or for a combination of lives and years. The fixed percentage is called the payout rate. If payments are made other than annually at the beginning of each year, the payout rate must be adjusted (using Table F) in order to compute the interest involved. Some unitrusts may pay the lesser of a stated payout rate or the net trust income for the year (sometimes referred to as a Net Income Charitable Remainder Unitrust).

Example 1 provides the method of computing the Adjusted Payout Rate given the trust's stated payout rate and the section 7520 interest rate.

Example 2 provides the valuation of the remainder interest in a unitrust which continues until the death of a single person.

Example 3 shows the method for computing the remainder interest following the death of the last to die of two persons.

Example 4 illustrates the computation of the term estate interest in a unitrust which continues for a term certain.

Example 5 shows the computation of a remainder interest following the earlier to occur of either the death of a person or the end of a term of years.

Actuarial Tables

The factors and tables associated with this publication involving life contingencies are derived from the values of l_x taken from the Life Table for the Total Population appearing as Table 1, in "*U.S. Decennial Life Tables for 1999-2001*" published by the U.S. Department of Health and Human Services, Public Health Service, National Center for Health Statistics. That mortality table appears in the associated set of tables in Section 6, labeled as Table 2000CM.

The factors in Sections 1, 2, 3, and 5 are based on adjusted payout rates ranging from 0.2 percent to 20.0 percent in intervals of 0.2 percent.

Table U(1), Section 1, contains factors for the present worth of the remainder interest in a single life unitrust.

Table U(2), Section 2, contains factors for the present worth of the remainder interest in a unitrust due at the death of the last to die of two persons.

Table D, Section 3, contains factors for the present worth of the remainder interest in a unitrust following a term certain.

Table F, Section 4, contains factors for computing adjusted payout rates for annual, semiannual, quarterly, and monthly payment periods at interest rates from 0.2 percent to 20.0 percent.

Table Z, Section 5, contains commutation factors for the present worth of certain interests in a single life unitrust.

Table 2000CM, Section 6, is the underlying mortality table used to calculate factors involving life contingencies.

All of the factors associated with this publication reflect annual compounding of interest.

Historical Synopsis of Tables

Period	Mortality Table	Interest Rate	Publications
1-1-1951 to 12-31-1970	US1938	3.5%	11
1-1-1971 to 11-30-1983	Table LN	6%	723, 723A, 723B
12-1-1983 to 4-30-1989	Table CM	10%	723C, 723D, 723E
5-1-1989 to 4-30-1989*	80CNSMT	§ 7520 rates	1457, 1458, 1459 (5-1989 release)
5-1-1999 to 4-30-2009	90CM	§ 7520 rates	1457, 1458, 1459 (7-1999 release)
5-1-2009 --	2000CM	§ 7520 rates	1457, 1458, 1459 (5-2009 release)

* On October 22, 1988, section 7520 was enacted which prescribed the use of an interest rate equal to 120 percent of the midterm applicable federal rate, rounded to the nearest two tenths of a percent for actuarial computations.

EXAMPLES

A. Adjusted Payout Rate

Example 1. If the unitrust makes the annual distributions in the form of installments paid periodically during the year, or if the unitrust makes payments annually at a time during the year other than one year from the annual valuation date, it is necessary to adjust the payout rate to reflect the periodic installments and the period of time between the annual valuation date and the payments. This results in an "adjusted payout rate," which is used to find the factors in the actuarial tables.

For all of the following examples, we assume that the unitrust pays out 5.0 percent per year in equal quarterly installments at the end of each quarter, and that the standard annual valuation date is the last day of the trust year, December 31. It is irrelevant if the trust is initiated and funded on another date during the year creating a short trust year, as this initial short trust year is not used to determine the period from the standard annual valuation date to the first periodic payment each year. In addition, we assume that the unitrust interest involved is to be valued at the section 7520 interest rate of 6.2 percent. Time periods are rounded to the nearest whole number of months. Based on these facts, the adjusted payout rate is 4.816 percent, determined as follows:

Applicable Section 7520 Interest Rate	=	6.2 %
Quarterly Payout Adjustment Factor Table F(6.2)	=	0.963238

(First payment made at least 3 months but less than 4 months from annual valuation)

Stated Annual Payout Percentage	=	5.0 %
Adjusted Payout Rate	=	5.0 % times 0.963238
	=	4.816 %

B. Single Life Remainder Interest

Example 2. On August 15, a person who is nearest to age 53 contributes $1,500,000 to a charitable remainder unitrust. The trust pays to him the lesser of 5 percent per year of the annually computed value of the trust assets, or the trust net income, paid in equal quarterly installments at the end of each calendar quarter. After his death, the trust distributes the remaining corpus to a qualified charity.

Under section 7520 of the Internal Revenue Code, if a charitable contribution is allowed for a transfer of property to the trust, the taxpayer may elect to use either the section 7520 rate for the month of transfer or the rate for either of the two preceding months. We assume the taxpayer elects to use the rate for the month of transfer, 6.2 percent.

The trust pays the lesser of the stated payout rate of 5 percent or the trust net income . Under the provisions of section 1.664-4(a)(3) of the Federal Income Tax Regulations, we compute the remainder interest based on the trust's stated payout rate of 5 percent. Using the method illustrated in Example 1 above, the adjusted payout rate is found to be 4.816 percent. The required remainder factor is found by using the remainder factors found in Table U(1) for adjusted payout rates immediately above and below this adjusted payout rate, and interpolating between these factors for the remainder factor at the adjusted payout rate of 4.816 percent.

Remainder Factor, Table U(1), at 4.8 %	=	0.30453
minus Remainder Factor, Table U(1), at 5.0 %	=	0.29148

Difference	=	0.01305

$$\frac{4.816\ \% - 4.8\ \%}{5.0\ \% - 4.8\ \%} = \frac{X}{0.01305}$$

$$X = 0.00104$$

Remainder Factor at 4.8 %	=	0.30453
minus X	=	0.00104

Required Interpolated Remainder Factor at 4.816 %	=	0.30349

times Initial Trust Corpus Value	=	$1,500,000

Present Value of Remainder Interest	=	$455,235

C. Two Life Last-to-Die Factor

Example 3. On March 25, a person who is nearest to age 75 contributes $800,000 to a charitable remainder unitrust. The trust pays to him 5 percent per year of the annually computed value of the trust assets, paid in equal quarterly installments at the end of each quarter. After his death, the trust makes the same payments to his wife (nearest to age 70) if she is then living, for such time as she survives him.

Under section 7520 of the Internal Revenue Code, if a charitable contribution is allowed for a transfer of property to the trust, the taxpayer may elect to use either the section 7520 rate for the month of transfer or the rate for either of the two preceding months. We assume the taxpayer elects to use a month for which the section 7520 rate is 6.2 percent.

Using the same method as illustrated in Example 1 above, the adjusted payout rate is 4.816 percent. The required remainder factor is found by using the remainder factors found in Table U(2) for adjusted payout rates immediately above and below this adjusted payout rate, and interpolating between these factors for the remainder factor at the adjusted payout rate of 4.816 percent.

Remainder Factor, Table U(2), at 4.8 %	=	0.45576
minus Remainder Factor, Table U(2), at 5.0 %	=	0.44168
Difference	=	0.01408

$$\frac{4.816\ \% - 4.8\ \%}{5.0\ \% - 4.8\ \%} = \frac{X}{0.01408}$$

$$X = 0.00113$$

Remainder Factor at 4.8 %	=	0.45576
minus X	=	0.00113
Required Interpolated Remainder Factor at 5.820 %	=	0.45463

times Initial Trust Corpus Value	=	$800,000
Present Value of Remainder Interest	=	$363,704

D. Trust for Term Certain

Example 4. On July 1, a person contributes $5,000,000 to a charitable lead unitrust. The trustee pays to a qualified charitable organization 5 percent per year of the annually computed value of the trust assets, paid in equal quarterly installments at the end of each quarter. The trustee is to continue making these payments for 15 years. At the end of the 15 years, after all of the required charitable payments have been made, the trustee distributes the remaining trust assets to the donor.

Under section 7520 of the Internal Revenue Code, if a charitable contribution is allowed for a transfer of property to the trust, the taxpayer may elect to use either the section 7520 rate for the month of transfer or the rate for either of the two preceding months. We assume the taxpayer elects to use the rate for a month in which the section 7520 rate is 6.2 percent.

Using the same method as illustrated in Example 1 above, the adjusted payout rate is 4.816 percent. The required remainder factor is found by using the remainder factors found in Table D for adjusted payout rates immediately above and below this adjusted payout rate, and interpolating between these factors for the remainder factor at the adjusted payout rate of 4.816 percent.

Remainder Factor, Table D, at 4.8 %	=	0.478139
minus Remainder Factor, Table D, at 5.0 %	=	0.463291

Difference	=	0.014848

$$\frac{4.816\ \% - 4.8\ \%}{5.0\ \% - 4.8\ \%} = \frac{X}{0.014848}$$

$$X = 0.001188$$

Remainder Factor at 4.8 %	=	0.478139
minus X	=	0.001188

Required Interpolated Remainder Factor at 4.816 %	=	0.476951
times Initial Trust Corpus Value	=	$5,000,000

Present Value of Remainder Interest	=	$2,384,755
Present Value of the Charitable Lead Interest	=	$5,000,000 - $2,384,755
	=	$2,615,245

E. Factors Involving One Life and a Term of Years

Example 5. On July 1st, a person transfers $900,000 to a Grantor's Retained Unitrust which pays 5 percent per year in equal quarterly installments at the end of each quarter for 10 years or until the prior death of the grantor, who is nearest to age 60. The section 7520 interest rate for July is 6.2 percent. In order to determine the present value of the grantor's retained interest in the trust, it will be necessary to perform two computations and interpolate between the two results to get the required factor at the adjusted payout rate of 4.816 percent.

First Computation: Payout Rate	=	4.8 %
Equivalent Interest Rate Factor at 4.8 % Payout Rate	=	4.8 % / (1 – 4.8 %)
	=	0.05042
Initial age	=	60
p*lus* Term of years	=	10
	=	70
Terminal age		
${}^{U}N_{60}^{o}$, Table Z (4.8)	=	55390.00
minus ${}^{U}N_{70}^{o}$, Table Z (4.8)	=	22203.24
Difference	=	33186.76
${}^{U}D_{x}$, Table Z (4.8)	=	4578.215
Payout Accumulation Factor at 4.8 %	=	33186.76 / 4578.215
	=	7.24884
times Equivalent Interest Rate Factor at 4.8 %	=	0.05042
First Payout Interest Factor, at 4.8% Payout Rate	=	0.36549

Second Computation: Payout Rate	=	5.0 %
Using the same method as above, compute:		
Second Payout Interest Factor, at 5.0 % Payout Rate	=	0.37755

Using the interpolation method shown in Example 2, interpolate between the Second Payout Interest Factor of 0.37756 and the First Payout Interest Factor of 0.36549:

Required Interpolated Payout Interest Factor at 4.816 %	=	0.36645
times Initial Trust Corpus Value	=	$900,000
Present Value of Grantor's Retained Interest	=	$329,805