

Lump Sum Calculation

For participants under the age of 65 as of the lump sum date, the lump sum optional form of payment is equal to the present value of the future stream of monthly pension payments the participant could receive starting at age 65 as a life annuity. If the participant is 65 or over, the lump sum is equal to the present value of the future stream of monthly pension payments the participant could currently begin receiving as a life annuity.

The present value or lump sum value is calculated using an actuarially developed mathematical formula which produces a lump sum factor and is based on the following assumptions:

- Interest rate as defined by the IRS under Section 417(e) of the Internal Revenue Code in effect as of the November before the 1st day of the calendar year in which the lump sum is paid.
- Mortality Table as defined by the IRS under Section 417(e) of the Internal Revenue Code

The Lump Sum value (=) The lump sum factor x the age 65* single life annuity benefit (*or if later, age as of lump sum date)

For instance, assuming a participant is entitled to a \$1,000 life annuity payable at age 65 (or if later as of lump sum date), if eligible for early commencement in 2017, then estimate of the lump sum optional form of payment is:

Participant age At Lump Sum Date	Estimated 2017 Lump Sum
50	\$ 75,503 (75.503 factor times \$1,000 age 65 life annuity)
51	\$ 79,695 (79.695 factor times \$1,000 age 65 life annuity)
52	\$ 84,027 (84.027 factor times \$1,000 age 65 life annuity)
53	\$ 88,508 (88.508 factor times \$1,000 age 65 life annuity)
54	\$ 93,150 (93.150 factor times \$1,000 age 65 life annuity)
55	\$ 97,961 (97.961 factor times \$1,000 age 65 life annuity)
56	\$102,962 (102.962 factor times \$1,000 age 65 life annuity)
57	\$108,174 (108.174 factor times \$1,000 age 65 life annuity)
58	\$113,606 (113.606 factor times \$1,000 age 65 life annuity)
59	\$119,271 (119.271 factor times \$1,000 age 65 life annuity)
60	\$125,185 (125.185 factor times \$1,000 age 65 life annuity)
61	\$132,272 (132.272 factor times \$1,000 age 65 life annuity)
62	\$139,495 (139.495 factor times \$1,000 age 65 life annuity)
63	\$146,869 (146.869 factor times \$1,000 age 65 life annuity)
64	\$154,439 (154.439 factor times \$1,000 age 65 life annuity)
65	\$162,209 (162.209 factor times \$1,000 age 65 life annuity)
66	\$158,043 (158.043 factor times \$1,000 age 66 life annuity)
67	\$153,831 (153.831 factor times \$1,000 age 67 life annuity)
68	\$149,539 (149.539 factor times \$1,000 age 68 life annuity)

The assumptions for 2017 lump sum are :

Interest Rate:

- 1.79% (for payments within 5 years of the commencement date)
- 3.80% (for payments between 5 and 20 years of the commencement date)
- 4.71% (for payments more than 20 years from the commencement date).

The interest rates needed to compute a 2018 or later lump sum are not available yet. A change to a lower interest rate would produce a larger lump sum amount and a change to a higher interest rate would produce a smaller lump sum amount.

Mortality : 2017 IRS applicable mortality under Internal Revenue code section 417(e). Under this table, the life expectancy under this table ranges from a life expectancy to age 83.4 for someone who is age 20 to a life expectancy to age 85.3 for someone who is age 65. A change in the IRS applicable mortality table to a table with longer life expectancies would produce a larger lump sum amount.