

# Civil Service Retirement and Disability Fund Annual Report

Fiscal Year Ended September 30, 2022



Prepared in accordance with 5 USC § 8347(f).

# Table of Contents

## **Financial Section ..... - 3 -**

---

Statements of Net Assets Available for Benefits .....	- 4 -
Statements of Changes in Net Assets Available for Benefits .....	- 5 -
Statements of Actuarial Present Value of Accumulated Plan Benefits .....	- 6 -
Statements of Changes in Actuarial Present Value of Accumulated Plan Benefits .....	- 6 -
Schedule of Investments.....	- 7 -
Notes to Financial Statements.....	- 12 -

## **Actuarial Section ..... - 19 -**

---

General Information .....	- 20 -
Actuarial Valuation of the Civil Service Retirement and Disability Fund .....	- 23 -
Actuarial Opinion.....	- 33 -
Table 1: Actuarial Status Information as of Beginning of Plan Year .....	- 35 -
Table 1A: Projected Future Cash Flow for Current Participants.....	- 38 -
Table 1B: Statement of Changes in Actuarial Accrued Liability .....	- 41 -
Table 1C: Present Value of Future Benefits Obligations .....	- 42 -
Table 1D: Sensitivity to Actuarial Assumptions.....	- 43 -
Table 2: Past and Projected Flow of Plan Assets (Combined CSRS and FERS Systems) ..	- 44 -
Table 2A: Past and Projected Flow of Plan Assets (Combined CSRS and FERS Systems)	- 46 -
Table 3: Past and Projected Flow Assets (FERS).....	- 48 -
Table 3A: Past and Projected Flow of Assets (FERS) .....	- 50 -
Table 4: Past and Projected Flow of Plan Assets (CSRS) .....	- 52 -
Table 4A: Past and Projected Flow of Plan Assets (CSRS).....	- 54 -
Tables 2, 2A, 3, 3A, 4 and 4A: Technical Notes .....	- 56 -
Table 5: Valuation Assumption History .....	- 57 -
Table 6: Employee Population Data .....	- 58 -
Table 7: Demographic Assumptions .....	- 60 -
Table 8: Plan Provisions .....	- 146 -

---

# **Financial Section**

---

## Civil Service Retirement and Disability Fund Statements of Net Assets Available for Benefits

As of September 30, 2022 and 2021 – Unaudited  
(In Thousands)

<b>Assets and Liabilities</b>	<b>Civil Service Retirement System</b>	<b>Federal Employees Retirement System</b>	<b>Total Fund 2022</b>	<b>Total Fund 2021</b>
<b>Assets:</b>				
<b>Investments, at Fair Value [Note 6]</b>	\$127,369,347	\$884,309,506	\$1,011,678,853	\$925,846,024
<b>Receivables, Net: [Note 4]</b>				
<b>Contributions by Employers</b>	(28,699)	1,740,357	1,711,658	2,325,369
<b>Contributions by Participants</b>	9,247	197,238	206,485	290,587
<b>Accrued Interest on Investments</b>	735,090	4,919,445	5,654,535	5,428,228
<b>Other</b>	137,542	241,195	378,737	358,171
<b>Total Receivables</b>	853,180	7,098,235	7,951,415	8,402,355
<b>Cash [Note 3]</b>	(798)	12,553	11,755	60,505,456
<b>Total Assets</b>	128,221,729	891,420,294	1,019,642,023	994,753,835
<b>Liabilities:</b>				
<b>Annuities Benefits Payable</b>	5,437,356	2,119,271	7,556,627	7,155,672
<b>Refunds of Contributions Payable</b>	103,925	40,344	144,269	106,704
<b>Taxes, Insurance and Other Withholdings</b>	627,500	472,535	1,100,035	1,067,858
<b>Administrative and Other Liabilities</b>	134,882	37,806	172,688	141,569
<b>Total Liabilities</b>	6,303,663	2,669,956	8,973,619	8,471,803
<b>Net Assets Available for Benefits</b>	\$121,918,066	\$888,750,338	\$1,010,668,404	\$986,282,032

The accompanying notes are an integral part of the financial statements.

## Civil Service Retirement and Disability Fund

### Statements of Changes in Net Assets Available for Benefits

For the Years Ended September 30, 2022 and 2021 – Unaudited  
(In Thousands)

Net Assets	Civil Service Retirement System	Federal Employees Retirement System	Total Fund 2022	Total Fund 2021
<b>Additions to Net Assets Attributable to:</b>				
<b>Investment Income:</b>				
Interest	\$2,962,066	\$19,590,392	\$22,552,458	\$22,834,885
<b>Contributions:</b>				
Employer	4,032,198	45,973,884	50,006,082	45,406,567
Employees	274,577	5,441,816	5,716,393	5,221,660
Special	34,345,149	12,005,007	46,350,156	46,081,957
<b>Total Contributions</b>	<b>38,651,924</b>	<b>63,420,707</b>	<b>102,072,631</b>	<b>96,710,184</b>
<b>Total Additions to Net Assets</b>	<b>41,613,990</b>	<b>83,011,099</b>	<b>124,625,089</b>	<b>119,545,069</b>
<b>Deductions from Net Assets Attributable to:</b>				
<b>Annuities:</b>				
Retirees	60,881,034	25,399,650	86,280,684	81,972,866
Survivors	8,988,210	886,117	9,874,327	9,575,245
<b>Total Annuities</b>	<b>69,869,244</b>	<b>26,285,767</b>	<b>96,155,011</b>	<b>91,548,111</b>
<b>Refunds of Contributions</b>	<b>224,119</b>	<b>230,246</b>	<b>454,365</b>	<b>482,681</b>
<b>Transfer to Other Retirement System</b>	<b>7,436</b>	<b>-</b>	<b>7,436</b>	<b>(149)</b>
<b>Administrative and Other Expenses</b>	<b>2,414,340</b>	<b>1,207,565</b>	<b>3,621,905</b>	<b>3,480,666</b>
<b>Total Deductions from Net Assets</b>	<b>72,515,139</b>	<b>27,723,578</b>	<b>100,238,717</b>	<b>95,511,309</b>
<b>Net Increase (Decrease) in Net Assets</b>	<b>(30,901,149)</b>	<b>55,287,521</b>	<b>24,386,372</b>	<b>24,033,760</b>
<b>Net Assets Available for Benefits:</b>				
Beginning of Year	152,819,215	833,462,817	986,282,032	962,248,272
End of Year	\$121,918,066	\$888,750,338	\$1,010,668,404	\$986,282,032

The accompanying notes are an integral part of the financial statements.

**Civil Service Retirement and Disability Fund**  
**Statements of Actuarial Present Value of Accumulated Plan Benefits**

As of September 30, 2021 and 2020 – Unaudited  
(In Millions)

	<b>Civil Service Retirement System</b>	<b>Federal Employees Retirement System</b>	<b>Total Fund 2021</b>	<b>Total Fund 2020</b>
<b>Accumulated Plan Benefits</b>				
<b>Actuarial Present Value of Accumulated Plan Benefits:</b>				
<b>Participants Receiving Benefits</b>	\$956,200	\$403,700	\$1,359,900	\$1,297,200
<b>Participants Not Receiving Benefits</b>	41,300	484,900	526,200	524,500
<b>Total Actuarial Present Value of Accumulated Plan Benefits</b>	\$997,500	\$888,600	\$1,886,100	\$1,821,700

**Civil Service Retirement and Disability Fund**  
**Statements of Changes in Actuarial Present Value of Accumulated Plan Benefits**

For the Years Ended September 30, 2021 and 2020 – Unaudited  
(In Millions)

	<b>Civil Service Retirement System</b>	<b>Federal Employees Retirement System</b>	<b>Total Fund 2021</b>	<b>Total Fund 2020</b>
<b>Accumulated Plan Benefits</b>				
<b>Actuarial Present Value of Accumulated Plan Benefits at Beginning of Year</b>	\$997,700	\$824,000	\$1,821,700	\$1,806,700
<b>Increase (Decrease) During the Year Attributable to:</b>				
<b>Benefits Accumulated, Less Benefits Paid</b>	(1,700)	60,500	58,800	15,000
<b>Changes in Actuarial Assumptions</b>	1,500	4,100	5,600	
<b>Net Increase (Decrease)</b>	(200)	64,600	64,400	15,000
<b>Plan Benefits at End of Year</b>	\$997,500	\$888,600	\$1,886,100	\$1,821,700

## Civil Service Retirement and Disability Fund Schedule of Investments

As of September 30, 2022

### 2023

Maturity Date	Security	Interest	Par Value	Value
30-Jun-23	Special Bonds	1.500%	17,417,948,000.00	
30-Jun-23	Special Bonds	1.750%	262,109,000.00	
30-Jun-23	Special Bonds	1.750%	859,726,000.00	
30-Jun-23	Special Bonds	1.875%	936,036,000.00	
30-Jun-23	Special Bonds	2.000%	451,946,000.00	
30-Jun-23	Special Bonds	2.000%	442,655,000.00	
30-Jun-23	Special Bonds	2.250%	845,914,000.00	
30-Jun-23	Special Bonds	2.250%	625,057,000.00	
30-Jun-23	Special Bonds	2.250%	343,375,000.00	
30-Jun-23	Special Bonds	2.250%	668,899,000.00	
30-Jun-23	Special Bonds	2.250%	444,145,000.00	
30-Jun-23	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-23	Special Bonds	2.875%	4,189,197,000.00	
30-Jun-23	Special Bonds	4.000%	47,208,505,000.00	
<b>Subtotal</b>			75,762,623,000.00	75,762,623,000.00

### 2024

Maturity Date	Security	Interest	Par Value	Value
30-Jun-24	Special Bonds	1.375%	1,056,062,000.00	
30-Jun-24	Special Bonds	1.500%	30,000,000,000.00	
30-Jun-24	Special Bonds	1.750%	262,109,000.00	
30-Jun-24	Special Bonds	1.750%	859,726,000.00	
30-Jun-24	Special Bonds	1.875%	936,036,000.00	
30-Jun-24	Special Bonds	2.000%	451,947,000.00	
30-Jun-24	Special Bonds	2.000%	442,655,000.00	
30-Jun-24	Special Bonds	2.250%	845,913,000.00	
30-Jun-24	Special Bonds	2.250%	625,057,000.00	
30-Jun-24	Special Bonds	2.250%	343,375,000.00	
30-Jun-24	Special Bonds	2.250%	668,899,000.00	
30-Jun-24	Special Bonds	2.250%	444,145,000.00	
30-Jun-24	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-24	Special Bonds	2.875%	51,695,533,000.00	
<b>Subtotal</b>			89,698,568,000.00	89,698,568,000.00

**2025**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-25	Special Bonds	1.375%	1,056,062,000.00	
30-Jun-25	Special Bonds	1.500%	30,000,000,000.00	
30-Jun-25	Special Bonds	1.750%	262,109,000.00	
30-Jun-25	Special Bonds	1.750%	859,726,000.00	
30-Jun-25	Special Bonds	1.875%	936,036,000.00	
30-Jun-25	Special Bonds	2.000%	451,947,000.00	
30-Jun-25	Special Bonds	2.000%	442,655,000.00	
30-Jun-25	Special Bonds	2.250%	845,913,000.00	
30-Jun-25	Special Bonds	2.250%	625,057,000.00	
30-Jun-25	Special Bonds	2.250%	343,375,000.00	
30-Jun-25	Special Bonds	2.250%	668,899,000.00	
30-Jun-25	Special Bonds	2.250%	444,144,000.00	
30-Jun-25	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-25	Special Bonds	2.875%	4,512,464,000.00	
30-Jun-25	Special Bonds	2.875%	17,100,000,000.00	
30-Jun-25	Special Bonds	2.500%	31,015,159,000.00	
<b>Subtotal</b>			90,630,657,000.00	90,630,657,000.00

**2026**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-26	Special Bonds	1.375%	6,193,171,000.00	
30-Jun-26	Special Bonds	1.500%	27,012,355,000.00	
30-Jun-26	Special Bonds	1.750%	262,109,000.00	
30-Jun-26	Special Bonds	1.750%	859,726,000.00	
30-Jun-26	Special Bonds	1.875%	936,036,000.00	
30-Jun-26	Special Bonds	2.000%	451,947,000.00	
30-Jun-26	Special Bonds	2.000%	442,655,000.00	
30-Jun-26	Special Bonds	2.250%	488,889,000.00	
30-Jun-26	Special Bonds	2.250%	625,057,000.00	
30-Jun-26	Special Bonds	2.250%	343,375,000.00	
30-Jun-26	Special Bonds	2.250%	668,899,000.00	
30-Jun-26	Special Bonds	2.250%	444,144,000.00	
30-Jun-26	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-26	Special Bonds	2.500%	11,495,789,000.00	
30-Jun-26	Special Bonds	2.500%	50,000,000.00	
30-Jun-26	Special Bonds	2.500%	35,944,725,000.00	
<b>Subtotal</b>			87,285,988,000.00	87,285,988,000.00



**2027**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-27	Special Bonds	1.375%	9,191,486,000.00	
30-Jun-27	Special Bonds	1.375%	70,000,000.00	
30-Jun-27	Special Bonds	1.375%	9,322,199,000.00	
30-Jun-27	Special Bonds	1.375%	35,100,000,000.00	
30-Jun-27	Special Bonds	1.750%	1,121,835,000.00	
30-Jun-27	Special Bonds	1.875%	936,037,000.00	
30-Jun-27	Special Bonds	2.250%	625,057,000.00	
30-Jun-27	Special Bonds	2.250%	343,375,000.00	
30-Jun-27	Special Bonds	2.250%	668,898,000.00	
30-Jun-27	Special Bonds	2.250%	444,145,000.00	
30-Jun-27	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-27	Special Bonds	2.000%	451,947,000.00	
30-Jun-27	Special Bonds	2.000%	442,654,000.00	
<b>Subtotal</b>			59,784,744,000.00	59,784,744,000.00

**2028**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-28	Special Bonds	1.750%	905,520,000.00	
30-Jun-28	Special Bonds	1.750%	6,595,220,000.00	
30-Jun-28	Special Bonds	1.750%	47,304,780,000.00	
30-Jun-28	Special Bonds	1.875%	936,036,000.00	
30-Jun-28	Special Bonds	2.250%	625,058,000.00	
30-Jun-28	Special Bonds	2.250%	343,374,000.00	
30-Jun-28	Special Bonds	2.250%	668,898,000.00	
30-Jun-28	Special Bonds	2.250%	444,145,000.00	
30-Jun-28	Special Bonds	2.875%	1,067,112,000.00	
30-Jun-28	Special Bonds	2.000%	894,601,000.00	
<b>Subtotal</b>			59,784,744,000.00	59,784,744,000.00

**2029**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-29	Special Bonds	1.875%	936,036,000.00	
30-Jun-29	Special Bonds	2.000%	451,947,000.00	
30-Jun-29	Special Bonds	2.250%	625,058,000.00	
30-Jun-29	Special Bonds	2.250%	343,374,000.00	
30-Jun-29	Special Bonds	2.250%	668,899,000.00	
30-Jun-29	Special Bonds	2.250%	444,145,000.00	
30-Jun-29	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-29	Special Bonds	2.000%	442,654,000.00	
30-Jun-29	Special Bonds	2.250%	55,015,286,000.00	
<b>Subtotal</b>			59,994,510,000.00	59,994,510,000.00

**2030**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-30	Special Bonds	1.875%	936,036,000.00	
30-Jun-30	Special Bonds	2.250%	625,058,000.00	
30-Jun-30	Special Bonds	2.250%	343,374,000.00	
30-Jun-30	Special Bonds	2.250%	668,899,000.00	
30-Jun-30	Special Bonds	2.250%	444,145,000.00	
30-Jun-30	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-30	Special Bonds	2.000%	442,654,000.00	
30-Jun-30	Special Bonds	2.000%	56,103,380,000.00	
<b>Subtotal</b>			60,630,657,000.00	60,630,657,000.00

**2031**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-31	Special Bonds	1.875%	39,000,000,000.00	
30-Jun-31	Special Bonds	2.250%	968,432,000.00	
30-Jun-31	Special Bonds	2.250%	668,899,000.00	
30-Jun-31	Special Bonds	2.250%	444,145,000.00	
30-Jun-31	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-31	Special Bonds	1.875%	18,482,070,000.00	
<b>Subtotal</b>			60,630,657,000.00	60,630,657,000.00

**2032**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-32	Special Bonds	2.250%	13,200,000,000.00	
30-Jun-32	Special Bonds	2.250%	343,374,000.00	
30-Jun-32	Special Bonds	2.250%	668,899,000.00	
30-Jun-32	Special Bonds	2.250%	444,145,000.00	
30-Jun-32	Special Bonds	2.875%	1,067,111,000.00	
30-Jun-32	Special Bonds	2.250%	44,907,128,000.00	
<b>Subtotal</b>			60,630,657,000.00	60,630,657,000.00

**2033**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-33	Special Bonds	2.875%	24,217,613,000.00	
30-Jun-33	Special Bonds	2.875%	35,300,000,000.00	
30-Jun-33	Special Bonds	2.250%	1,113,044,000.00	
<b>Subtotal</b>			60,630,657,000.00	60,630,657,000.00

**2034**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-34	Special Bonds	2.250%	60,186,512,000.00	
30-Jun-34	Special Bonds	2.250%	444,145,000.00	
<b>Subtotal</b>			60,630,657,000.00	60,630,657,000.00

**2035**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-35	Special Bonds	3.000%	40,192,960,000.00	
<b>Subtotal</b>			40,192,960,000.00	40,192,960,000.00

**2036**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-36	Special Bonds	3.000%	40,192,959,000.00	
<b>Subtotal</b>			40,192,959,000.00	40,192,959,000.00

**2037**

<b>Maturity Date</b>	<b>Security</b>	<b>Interest</b>	<b>Par Value</b>	<b>Value</b>
30-Jun-37	Special Bonds	3.000%	40,192,959,000.00	
<b>Subtotal</b>			40,192,959,000.00	40,192,959,000.00

**Total Investments as of September 30, 2022**

<b>Sub Total Par Value</b>	<b>FFB</b>	<b>Total Investments</b>
1,006,831,845,000.00	4,847,008,000.00	1,011,678,853,000.00

# **Civil Service Retirement and Disability Fund**

## **Notes to Financial Statements**

September 30, 2022 and 2021

---

### **Note 1 - Description of Plans**

The following brief description of the Civil Service Retirement and Disability Fund (the “Fund”) is provided for general information purposes only. Participants should refer to Title 5, United States Code Chapters 83 and 84, for a complete description of the Fund’s provisions.

#### **A. General**

The United States Office of Personnel Management (OPM) administers two defined-benefit retirement plans, via the Fund: the Civil Service Retirement System (CSRS) and the Federal Employees' Retirement System (FERS). Combined, the two Plans cover 100 percent of all eligible employees. As government-sponsored benefit plans, the CSRS and FERS are not subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended.

The CSRS was established by the Civil Service Retirement Act, which was enacted on May 22, 1920. It is a stand-alone retirement plan intended to provide reasonable benefits for long-service Federal employees. The CSRS, which is closed to new participants, covers most Federal employees who first entered a covered position before 1984.

The FERS was established by the Federal Employees' Retirement System Act of 1986, which was enacted on June 6, 1986. Using Social Security as a base, the FERS provides an additional defined benefit and a voluntary thrift savings plan. The FERS generally covers employees who first entered a covered position after December 31, 1983. When FERS became effective on January 1, 1987, CSRS interim employees with less than 5 years of creditable civilian service on December 31, 1986, were automatically converted to FERS.

#### **B. Retirement Benefits**

The CSRS provides full retirement benefits at age 55 with 30 years of service, age 60 with 20 years of service, or age 62 with 5 years of service. Deferred benefits are payable at age 62 with 5 years of service. The annuity formula provides 1.5 percent of average salary for the first five years of service, 1.75 percent for the next five years, and 2 percent for any remaining service, up to a maximum of 80 percent of average salary (based on the highest three consecutive years of salary). Special benefits are provided for certain law enforcement officers, firefighters, air traffic controllers, bankruptcy judges, congressional employees, Members of Congress, and certain other groups.

The FERS provides full retirement benefits at the “Minimum Retirement Age” (MRA) with 30 years of service, age 60 with 20 years of service, or age 62 with 5 years of service. The MRA is 55 for those born before 1948, and incrementally increases to 57 for those born in or after 1970. Deferred retirement benefits are available at or after the MRA with 10 years of service at

reduced benefit levels. The annuity formula generally provides one percent of the employee's average salary (based on the highest three consecutive years of salary) times the number of years of creditable service. If retirement is at age 62 or later, with at least 20 years of service, a factor of 1.1 percent is used rather than 1 percent. Special benefits are provided for certain law enforcement officers, firefighters, air traffic controllers, bankruptcy judges, congressional employees, Members of Congress, and certain other groups.

### **C. Disability Benefits**

The CSRS requires that employees have at least five years of creditable civilian service to qualify for disability retirement benefits. Benefits are generally equal to the higher of (1) the CSRS computation described in Note 1.B. or (2) a guaranteed minimum disability annuity, consisting of the lower of 40 percent of the highest three years' average salary or the regular earned annuity formula using service projected to age 60.

Under the FERS, disability retirement may occur at any age with 18 months of service. In the first year of retirement, disability benefits are generally 60 percent of the average of the highest three consecutive years of salary, minus the employee's Social Security disability benefits. Subsequently, disabled employees receive 40 percent of their high-three average yearly salary, minus 60 percent of their Social Security disability benefit, until re-computation at age 62.

### **D. Death Benefits**

Under the CSRS, the spouses of employees who die in service receive 55 percent of the retirement benefits the employee would have received had they retired on disability. The spouses of deceased annuitants receive 55 percent of the annuity, unless a survivor benefit was waived, or a less than full survivor benefit was elected. Children receive a flat monthly benefit amount.

Under the FERS, the spouses of employees who die in service after at least 18 months of service receive one-half of the annual rate of pay at death, or one-half of the average of the highest three consecutive years of salary as of the date of death, whichever is higher, plus a lump-sum payment adjusted annually for COLAs (cost-of-living allowances) under CSRS rules. If the employee had at least 10 years of service, the surviving spouse also receives an annuity equaling 50 percent of the accrued basic retirement benefit. The spouses of deceased annuitants receive 50 percent of the annuity, unless a survivor benefit was waived, or a less than full survivor benefit was elected. Children receive a flat monthly benefit amount, minus the amount of Social Security benefits payable to them. Annuity benefits for children end when the child reaches age 18, marries, or dies. Benefits for student children, stop at the end of the month before the one in which the student child: turns 22; marries; dies; stops attending school; transfers to a school that is not recognized; changes to less than full-time attendance; enters military service or a Government service academy; or fails to submit certification of full-time school attendance.

## **Note 2 - Summary of Significant Accounting Policies**

### **A. Reporting Entity**

The accompanying financial statements include all Fund financial activities for which OPM has fiduciary responsibility. These comprise the CSRS and the defined benefit portion of the FERS. The financial activities related to the Social Security and thrift savings plan provisions of the FERS are not activities of the Fund, are not administered by OPM and are, therefore, not included in the accompanying financial statements.

### **B. Basis of Accounting**

The accompanying financial statements are prepared on the accrual basis of accounting.

### **C. Use of Estimates**

As part of the process of preparing financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, disclosure of contingent assets and liabilities, and the actuarial present value of accumulated plan benefits at the date of the financial statements. Actual results could differ from those estimates.

### **D. Investment Valuation and Income Recognition**

All Fund investments are in interest-bearing U.S. Treasury securities guaranteed as to principal and interest. Throughout the year, monies are invested initially in Certificates of Indebtedness ("Certificates"), which are issued at par value and mature on the following June 30. The Certificates are routinely redeemed at face value to pay for authorized expenditures. Each June 30, the outstanding Certificates are "rolled over" into government account series (GAS) securities that are issued to the Fund at par-value, with maturities spread over a 15-year period and a yield equaling the average of all marketable U.S. Treasury securities with four or more years to maturity. The Fund also carries, but does not routinely invest in, securities issued by the Federal Financing Bank (FFB) as well as marketable Treasury bonds. As of September 30, 2022 and September 30, 2021, there were no Treasury bonds among the Fund's investments. The invested assets of the CSRS and FERS (and related interest income) represent allocations from the Fund's invested assets, based upon the proportionate investment contribution balance of each Plan.

The fair value of the GAS securities, Certificates, and FFB securities is equal to their par values. The fair value of the marketable Treasury bonds, as well as their appreciation and depreciation, is based on quoted market prices. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis.

### **E. Actuarial Present Value of Accumulated Plan Benefits**

Accumulated plan benefits are those future periodic payments, including lump-sum distributions that are attributable, under the Plans' provisions, to service that employees have rendered. Accumulated plan benefits include benefits expected to be paid to (a) retired

or terminated employees or their beneficiaries; (b) beneficiaries of employees who have died; and (c) present employees or their beneficiaries. Benefits under the Plans are based on employee service and compensation. The accumulated plan benefits for active employees are based on compensation as of the valuation date. Benefits payable under all circumstances -- retirement, death, disability, and termination of employment -- are included to the extent they are deemed attributable to employee service rendered to the valuation date.

The Actuarial Present Value of Accumulated Plan Benefits is determined by an actuary employed by OPM and is the amount that results from applying actuarial assumptions to adjust the accumulated plan benefits to reflect the time value of money (through discounts for interest) and the probability of payment (by means of decrements such as for death, disability, withdrawal, or retirement) between the valuation date and the expected date of payment. The Actuarial Present Value of Accumulated Plan Benefits is measured as of the first day of the fiscal year.

The significant demographic assumptions used in the valuation are mortality rates of participants and retirement age assumptions. All demographic rates are based on recent experience under the CSRS and FERS.

The following table presents the significant economic assumptions used to compute the Actuarial Present Value of Accumulated Plan Benefits for 2021 and 2020:

<b>Economic Assumptions:</b>	<b>2021</b>	<b>2020</b>
<b>Interest rate (%)</b>	4.00	4.00
<b>Rate of inflation (%)</b>	2.40	2.40

The foregoing actuarial assumptions are based on the presumption that the Plans will continue. Were the Plans to terminate, different actuarial assumptions and other factors might be applicable in determining the Actuarial Present Value of Accumulated Plan Benefits.

#### **F. Payment of Benefits**

Benefit payments to participants are recorded upon distribution.

#### **G. Risks and Uncertainties**

Contributions to the Plan and the actuarial present value of accumulated plan benefits are based on certain assumptions pertaining to interest rates, inflation rates, employee compensation and demographics. Due to the uncertainties inherent in the estimation process, it is reasonable that changes in these assumptions in the near term could have a material effect on the financial statements.

**Note 3 - Cash**

Cash represents the amount on deposit with the U.S. Treasury that is immediately available to the Fund for the payment of benefits and other expenses. There are no restrictions or pledges over cash.

**Note 4 - Receivables**

The receivable balances of \$8.0 billion (net of allowance of \$18.1 billion) and \$8.4 billion (net of allowance of \$14.6 billion) as of September 30, 2022 and 2021, respectively, primarily consist of accrued earnings on its investments and government contributions and employee withholdings receivables for the Retirement Program. As of September 30, 2022, total contributions owed by the U.S. Postal Service (USPS) was \$18.1 billion, of which \$14.6 billion was owed for FY 2014 through FY 2021. In accordance with Statements of Federal Financial Accounting Standards (SFFAS) 1, *Accounting for Selected Assets and Liabilities* and Technical Bulletin 2020-1, *Allowance for Intragovernmental Receivables*, OPM considers \$18.1 billion as an allowance of doubtful accounts due to USPS budgetary constraints.

**Note 5 - Funding Policy****A. CSRS**

Employer and Employee Contributions. As a condition of participation in the CSRS, participating employees are required to contribute a percentage of their pay to the Fund.

For fiscal years 2022 and 2021, the employee contribution rate was 7.0 percent of pay. Participating law enforcement officers, firefighters, congressional employees, and Members of Congress contributed a higher percentage.

Employing agencies contributed a higher percentage for law enforcement officers, firefighters, congressional employees, and Members of Congress.

Special Contribution. The combined 14.0 percent of pay does not cover the service cost of a CSRS benefit. To lessen the shortfall, the Fund receives an annual contribution from the U.S. Treasury that includes amounts that (a) amortize, over a 30-year period, increases in the actuarial present value of accumulated plan benefits resulting from new or liberalized benefits, increases in pay, or extension of coverage to new employee groups; (b) pays 5.0 percent interest on the unfunded portion of the actuarial present value of the static actuarial liability; and (c) reimburses the Fund for the cost of benefits attributable to military service credit and certain survivor annuities.

**B. FERS**

Employer and Employee Contributions. As a condition of participation in the FERS, participating employees are required to contribute a percentage of their pay to the Fund. FERS employee contributions are equal to a percentage of pay that is equal to the difference between the contribution rate for CSRS participants, as set forth above, 7.0 percent, and the



Old Age, Survivors, and Disability Insurance (OASDI) rate, currently 6.2 percent of pay. Thus, the contribution rate is 0.8 percent of pay for most FERS participants who entered service before calendar year 2013. The employee contribution rate is the same for FERS participants generally hired before 2013. It doesn't change by fiscal year. Only the agency contribution rate changes by fiscal year, which is detailed in the next paragraph. Participating law enforcement officers, firefighters, congressional employees, and Members of Congress contributed a higher percentage.

Employing agencies must also make contributions to the Fund on behalf of their participating employees. The employer contribution rate is equal to the FERS normal cost, less the participant contribution rate (17.3% during FY 2021 and 18.4% during FY 2022 for most participants).

The Middle Class Tax Relief and Job Creation Act of 2012, P.L. 112-96, Section 5001 - Federal Employees Retirement, increased by 2.3 percent the employee pension contribution for Federal employees entering service during calendar year 2013. The participant contribution rate for these FERS-Revised Annuity Employees (FERS-RAE) is 3.1 percent of pay and the employer contribution rate is 15.5% during FY 2021 and 16.6% during FY 2022.

The Bipartisan Budget Act of 2013 (P.L. 113-67), includes further revisions to contribution rates required for FERS-Further Revised Annuity Employees (FERS-FRAE), first hired after December 31, 2013. FERS-FRAE provides for an additional 1.3 percent increase to employee contribution rates. The FERS-FRAE agency contributions for non-Postal employing agencies are generally held at the same rate as for FERS-RAE; P.L. 113-67 requires that FERS-FRAE contributions in excess of the normal cost be used to address the unfunded actuarial liability for CSRS.

**Note 6 - Investments**

The following table presents the estimated fair value of Fund investments at September 30, 2022 and 2021 (in millions). Individual investments that represent five percent or more of the Fund's net assets available for benefits are separately identified and investments below five percent are included in the Other GAS Securities:

<b>CSRDF Investments</b>	<b>CSRS 2022</b>	<b>FERS 2022</b>	<b>Total 2022</b>	<b>Total 2021</b>
<b>GAS Securities:</b>				
<b>2.875% due 2024</b>	\$6,859	\$45,904	\$52,763	\$52,762
<b>2.500% due 2027</b>	6,979	46,705	53,684	
<b>1.750% due 2028</b>	7,125	47,681	54,806	54,805
<b>2.250% due 2029</b>	7,423	49,674	57,097	57,097
<b>2.000% due 2030</b>	7,351	49,195	56,546	56,546
<b>1.875% due 2031</b>	7,473	50,009	57,482	57,482
<b>2.250% due 2032</b>	7,743	51,820	59,563	59,564

<b>CSRDF Investments</b>	<b>CSRS 2022</b>	<b>FERS 2022</b>	<b>Total 2022</b>	<b>Total 2021</b>
<b>2.875% due 2033</b>	7,737	51,780	59,517	59,518
<b>2.250% due 2034</b>	7,882	52,749	60,631	60,631
<b>Other GAS Securities</b>	56,847	437,896	494,743	461,388
<b>Total GAS Securities</b>	123,419	883,413	1,006,832	919,793
<b>Other Securities</b>	3,951	896	4,847	6,053
<b>Total Investments</b>	\$127,369	\$884,310	\$1,011,679	\$925,846

**Note 7 - Plan Termination**

Since the Plans have been established by an act of Congress, they cannot be terminated unless legislation should be enacted to do so. As there is no anticipation that such legislation will be introduced, the Plans are expected to continue indefinitely.

**Note 8 - Contingencies**

Certain claims, lawsuits, and complaints have been filed against the Fund. It is the opinion of the administrator and OPM's General Counsel that the resolution of these matters would not materially affect the financial position or the results of operations of the Fund.

**Note 9 - Tax Status**

The Fund is not subject to income taxes by Federal statute.

---

---

# **Actuarial Section**

---

# Civil Service Retirement & Disability Fund

## General Information

Report for the Fiscal Year ended September 30, 2022

---

### 1. Name of plan:

The Civil Service Retirement and Disability Fund, consisting of two components: Civil Service Retirement System (CSRS) and Federal Employees' Retirement System (FERS).

### 2. Name and address of plan sponsor:

U.S. Office of Personnel Management  
1900 E Street, NW  
Washington, DC 20415-0001

### 3. Type of plan entity:

Single-employer plan.

### 4. Date plans were established:

CSRS was established on May 22, 1920; FERS, on June 6, 1986.

### 5. Plan participants at beginning of fiscal year (9/30/2021):

Participants	CSRS	FERS	Total
Active employees*	44,000	2,788,000	2,832,000
Separated employees entitled to deferred benefits	2,000	58,000	60,000
Annuitants:			
<i>Retirees</i>	1,186,000	1,056,000	2,242,000
<i>Survivors</i>	403,000	93,000	496,000
Total annuitants	1,589,000	1,149,000	2,738,000

### 6. Type of plan:

Defined benefit. FERS also has a defined contribution component (the Thrift Savings Plan), which is not part of the Civil Service Retirement and Disability Fund.

### 7. Administrative costs:

Administrative costs are borne by the Fund.

---

\* Number of employees determined on a full-time equivalent basis; includes those employees on leave without pay who retain coverage. See Table 6 for additional detail.

**8. In this plan year, was the plan merged or consolidated into another plan or were assets or liabilities transferred to another plan?**

No.

**9. Funding arrangement:**

Trust Fund.

**10. Date of most recent actuarial valuation:**

September 30, 2021

**11. Actuarial cost method:**

Actuarial valuations are performed using an aggregate entry-age normal cost method, as consistent with the requirements of 5 U.S.C. 8331(17) and 5 U.S.C. 8401(23).

The CSRS Board of Actuaries, established by 5 U.S.C. 8347(f), provides recommendations regarding methods and assumptions. For the fiscal year ended September 30, 2022, the members of the Board are:

Thomas S. Terry, Chair  
R. Evan Inglis  
Ellen L. Kleinstuber

**12. Actuarial assumptions:**

A. Economic:

1. Rate of return on Plan investments: 4.00 percent.
2. Rate of general salary increase: 2.65 percent, plus individual merit increases based on Plan experience.
3. Inflation rate: 2.40 percent. Assumed FERS annuitant COLA: 1.92 percent.

B. Decrements (See Table 7 for additional detail):

1. Basis of mortality assumptions: Plan experience.
2. Normal Retirement age\*:
  - a. CSRS:
    - 55 with 30 years of service
    - 60 with 20 years of service
    - 62 with 5 years of service
  - b. FERS:
    - 56-57 with 30 years of service (transitioning from age 56 to age 57)
    - 60 with 20 years of service
    - 62 with 5 years of service

---

\* Certain special groups may retire at younger ages.

3. Basis of withdrawal assumptions: Plan experience.
4. Basis of disability assumptions: Plan experience.

**13. Major Plan Provisions:**

See Table 8.

## **Actuarial Valuation of the Civil Service Retirement and Disability Fund**

Since the Civil Service Retirement and Disability Fund (CSRDF) is available to pay both the Civil Service Retirement System (CSRS) and the Federal Employees' Retirement System (FERS) benefits, it comprises a single retirement plan, even though each has different benefit tiers and funding methods, and the activities associated with each tier are accounted for separately.

This report reflects results produced with an actuarial valuation model developed and maintained by OPM's Office of the Actuaries for the purpose of modeling the benefit provisions of CSRS and FERS. The model projects future system costs based on the initial population of CSRS and FERS participants and assumptions about future economic and demographic experience.

The results of the actuarial valuation for plan participants as of September 30, 2021 are shown for CSRS and FERS on a combined basis in Table 1. Table 1A shows the projected future cash flows associated with these participants. Table 2 shows the total combined cash flows for the CSRDF as a whole and assumes additional future new entrants into FERS; Table 3 and Table 4 show these past and future projected cash flows separately for FERS and CSRS.

### **Employee and Annuitant Population**

Most employees who have been hired since December 31, 1983, are covered under FERS. Employees covered under CSRS were given an opportunity to elect FERS during an open enrollment period from July 1, 1987, through December 31, 1987, and during a second open enrollment period from July 1, 1998 through December 31, 1998. Most employees hired during calendar year 2013 are classified as FERS Revised Annuity Employees (FERS-RAE), and most employees hired after December 31, 2013 are classified as FERS Further Revised Annuity Employees (FERS-FRAE). While the benefit provisions are generally the same for most employees covered under FERS, FERS-RAE and FERS-FRAE, the required employee contribution rates are greater for the newer groups.

The actuarial valuation of the CSRDF is based on the employee and annuitant populations as of September 30, 2021.

On a full-time equivalent basis, the active employee population as of September 30, 2021 is as follows:

CSRS-Offset:	8,900
CSRS:	<u>35,100</u>
CSRS Total:	44,000
FERS-Elect:	5,600
FERS:	1,536,600
FERS-RAE:	71,200
FERS-FRAE:	<u>1,174,600</u>
FERS Total:	2,788,000
CSRS+FERS Total:	2,832,000

The inactive population as of September 30, 2021, consists of: 2,242,000 retired employees (2,049,000 non-disability retirees, average age 73; and 193,000 disability retirees, average age 66); 483,000 spouse survivors; 13,000 child survivors; and 60,000 separated employees entitled to deferred benefits.

The population of active employees is based on data from OPM's Enterprise Human Resources Integration (EHRI) Statistical Data Mart and from the United States Postal Service. These sources provide demographic information for most employee participants in CSRS and FERS but do not contain records for some participants (e.g. Legislative and Judicial branch employees, security sensitive employees of Executive branch agencies). The population data is controlled to accounting records of employee withholdings and agency contributions in order to represent the complete full-time equivalent population of CSRS and FERS active employee participants.

There is no census data for separated employees entitled to a deferred annuity. This population is constructed at the time the demographic data is developed based on information about recent ascensions of new deferred annuitants. The assumed population of separated employees has been projected to the valuation date according to the employee demographic rate assumptions as applied to the prior populations.

The data for annuitants as of the beginning of the year (September 30, 2021) is obtained from the OPM annuity roll. In order to capture annuitants in special pay status as of the beginning of the fiscal year (i.e. individuals who recently became annuitants for whom the retirement claim is still being processed), the population data is obtained from the annuity roll in March during the fiscal year. A small adjustment is made to the data to account for annuitants retired as of the beginning of the year but still in special pay status in March.

### **Economic and Demographic Assumptions**

The actuarial valuation results presented in this report are dependent on assumptions about future economic and demographic factors. Future actuarial reports may reflect



measurements that differ significantly from these results due to such factors as: actual experience that has differed from assumptions, future revisions to actuarial assumptions, and future changes to plan provisions.

The demographic assumptions used for this actuarial valuation as of September 30, 2021 are revised from those used for the prior year actuarial valuation as of September 30, 2020. There are no changes to the long term economic assumptions from those used for the prior actuarial valuation.

The actuarial valuation presented in Table 1 is based on “dynamic” economic assumptions that explicitly account for expected future inflation and general salary increases.

On April 2, 2020, the Board of Actuaries determined the following long term economic assumptions for use beginning with the actuarial valuation as of September 30, 2019. At its meeting on May 10, 2022, the Board of Actuaries reviewed these long term economic assumptions and determined that these assumptions should continue to be used for this actuarial valuation as of September 30, 2021:

- 2.40 percent inflation rate;
- 1.92 percent rate of FERS annuitant cost-of-living adjustment (COLA);
- 2.65 percent rate of general salary increase; and
- 4.00 percent interest rate

These economic assumptions are selected to be used primarily for funding purposes and for the long term projections of the system reflected in this report. In determining the economic assumptions the Board considered long term history as well as the recent and anticipated future economic environment.

The inflation assumption represents a long term expectation and was selected in consideration of the recent historical period of sustained low inflation, the current environment of increased inflation, and long term inflation history. The assumed rate of CSRS annuitant COLA equals the assumed inflation rate. The assumed rate of FERS annuitant COLA is 80 percent of the assumed inflation rate, as based on the application of the FERS COLA formula to observed long term inflation history. The general salary increase rate was selected in consideration of the long term history of real increases in federal General Schedule and Postal Service pay tables relative to inflation, recent federal salary increase trends and the expected impact of the future federal budgetary environment.

The interest rate assumption represents a long term expected rate of return, encompassing returns on future investments as well as returns on the current investment schedule of plan assets. The assumption was selected in consideration of the rate of return on current CSRDF investments relative to inflation, the current real rate of return on new CSRDF investments, and the assumed ultimate long term real rate of return on future CSRDF investments. The interest rate assumption is developed in recognition that plan assets are valued at par for

determining the unfunded actuarial liabilities. At the assumed valuation interest rate, discounting the scheduled principal and coupon payments of current CSRDF investments would produce a present value that is less than par value. The Board would expect to revisit the selection of the valuation interest rate assumption were the asset valuation method revised from valuation at par.

At its meeting on May 10, 2022, the Board of Actuaries recommended the adoption of new demographic assumptions based on the results of an experience study conducted by OPM. Except where otherwise described below, the demographic assumptions are generally based on actual experience over the ten year period 2010 through 2019, and on separate experience for non-Postal participants and Postal Service participants. The choice of the ten year experience period reflects a balance between using the most recently available data to best represent current expected behavior within the system, and sufficient exposure to historical data to soften the effects of any short term fluctuations.

The assumed rates of voluntary, early and involuntary retirement for Non-Postal and Postal Service employees are based on ten years of experience from years 2011 through 2020. Because CSRS is a closed population, certain CSRS retirement assumptions are based on earlier experience. For both CSRS and FERS, the assumed maximum age of retirement has been increased to age 85, from the maximum age of 75 that was previously assumed. The assumed rates disability retirement for Non-Postal and Postal Service employees are based on ten years of experience from years 2010 through 2019. The percentage of newly disabled FERS employees assumed to be subject to a benefit offset for Social Security is 62.5% for Non-Postal employees and 71.4% for Postal Service employees. Postal Service employee withdrawal rates are based on experience years 2010 through 2019 excluding year 2016, for which anomalies were observed with the data. Assumed rates of election of refunds of FERS employee contributions, for separating employees with 20 or more years of service, are based on recent government-wide refund experience relative to the withdrawal rates. Assumed refund rates for FERS employees separating with at least 5 years but less than 20 years of service were developed such that, if applied to historical employee populations, the rates would produce new deferred annuity amounts approximating recent averages.

Mortality rates incorporate projected generational mortality improvement for employees, survivors, and disabled and non-disabled retirees. An ultimate 1.0 percent annual rate of mortality improvement is assumed beginning in fiscal year 2029. For employees, survivors and non-disabled retirees, the mortality improvement rates grade down below 1.0 percent for ages greater than 85. For disability mortality, the improvement rates grade down below 1.0 percent for ages greater than 65. Assumed mortality improvement rates prior to fiscal year 2029 grade linearly from separate non-Postal and Postal experience-based improvement rates, which are given 100 percent weight through year 2019, to the ultimate rate, generally 1.0 percent, that is given 100 percent weight in 2029 and beyond.

The Aggregate Entry Age Normal Cost Percentages are determined using an assumed new entrant distribution and actuarial assumptions that are level for each year of the valuation projection. For determination of the Normal Cost Percentages, the assumed mortality rates for employees and annuitants (disabled and non-disabled retirees and survivors), beginning with the actuarial valuation as of September 30, 2021, are those projected to a fixed year as follows:

Assumed Mortality Rate Projection Year for Determining Normal Cost Percentages

<b>Mortality Rate</b>	<b>CSRS</b>	<b>FERS</b>	<b>FERS-RAE</b>	<b>FERS-FRAE</b>
Employee				
Non-Postal	2005	2020	2027	2030
Postal Service	2005	2015	2026	2030
Annuitant				
Non-Postal	2037	2053	2060	2064
Postal Service	2036	2047	2055	2061

Employee and employing agency contributions are paid for employees in active pay status. The assumed percentage of payroll on leave without pay for which no contributions are paid is 2.2% for non-Postal employees and 3.6% for Postal Service employees. Administrative expenses are assumed to equal 0.23% of benefits.

The demographic rates are displayed in Table 7.

### **Dynamic Normal Cost**

The dynamic normal cost is the level percentage of pay, determined based on dynamic economic assumptions, which would have to be contributed for a typical group of new employees over their entire working careers in order to fully finance, with interest, all of their retirement benefits. FERS is funded under an entry age normal funding method as prescribed in Chapter 84 of Title 5, United States Code, and employees and agencies together contribute the full amount of the dynamic normal cost. Separate normal cost percentages are determined for non-Postal versus Postal participants; for FERS, FERS-RAE and FERS-FRAE participants; and for FERS employees subject to special plan provisions.

Unlike FERS, CSRS is financed under a statutory funding method that does not directly account for the cost of benefit increases that are due to expected future inflation. Most employees and non-Postal agencies each contribute 7.0 percent of pay for CSRS. The employee contribution rate is lower for those CSRS employees who are covered under CSRS-Offset. In Fiscal Year 2021, CSRS employee contributions totaled approximately \$0.3 billion and agency contributions for CSRS employees totaled approximately \$0.2 billion.

If all agencies including the Postal Service were to contribute the full dynamic normal cost for CSRS, less employee contributions, the agency contributions for CSRS employees would have totaled approximately \$1.2 billion in Fiscal Year 2021. This assumes CSRS dynamic normal

cost percentages consistent with the FERS agency contribution rates in effect for FY 2021, determined under the assumptions recommended at the April 12, 2018 meeting of the Board of Actuaries.

### **Unfunded Actuarial Liability**

The unfunded actuarial liability is a projection of the amount which, if deposited in the Fund, would fully finance the total cost of the CSRS and FERS retirement benefits for the current, closed group of employees and annuitants, assuming that the full normal cost is contributed over the balance of the employees' working careers.

As shown in Table 1 in the report below, the unfunded actuarial liability amounted to \$1,062.8 billion as of September 30, 2021. This represents the difference between the par value of net assets on September 30, 2021, \$986.3 billion, and that which would theoretically be the balance of the Fund's net assets if the full normal cost had been contributed over the entire working careers of all participants.

The Fund's assets are held in securities of the U.S. Treasury, and the interest assumption used for measuring the present values is selected for performing actuarial measurements consistent with these investments. As such, the actuarial liabilities shown in Table 1 represent a low default risk measurement of the Fund's obligations.

In Table 1, the unfunded actuarial liability is expressed as:

- less* (1) the actuarial present value of future benefits and expenses;
- less* (2) the present value of future normal cost contributions;
- less* (3) the net assets in the fund.

The actuarial present value of future benefits and expenses is the value of plan benefits that are expected to be paid in the future to current employees and annuitants stated in today's dollars, i.e., future amounts discounted for the time value of money. It assumes that current employees will continue to earn benefits over their expected future working lives, that their salaries will increase by the assumed salary increases and that annuities will rise based on the assumed Cost of Living Adjustments (COLAs).

The present value of future normal costs is the value, in today's dollars, of the future normal cost contributions to be made over the expected future working lifetimes of all current employees. In Table 1, the present value of future normal cost contributions is determined separately for various populations under CSRS and FERS. Normal cost percentages are determined separately for employees of the Postal Service and for non-Postal employees.

Different normal cost percentages also apply for certain groups within CSRS and FERS with special retirement system provisions (e.g. Law Enforcement Officers and Firefighters). The additional actuarial liability attributable to special retirement system provisions for active

employees in these groups amounted to \$0.1 billion for CSRS and \$37.5 billion for FERS as of September 30, 2021.

### **Funding Provisions for CSRS**

The CSRS is financed under a statutory funding method established in 1969 under Public Law 91-93. This funding method is based on the “static” economic assumptions of no future inflation, no future general schedule salary increases, and a 5.00 percent interest rate.

Under CSRS, regular employees contribute 7.0 percent of pay. Law enforcement officers and firefighters, and Congressional employees contribute an extra 0.5 percent of pay, and Members of Congress an extra 1.0 percent of pay. Non-Postal agencies match the employee contributions.

Separate provisions have been enacted for funding the Postal Service obligations under CSRS. The Postal Civil Service Retirement System Funding Reform Act of 2003 (P. L. 108-18) and the Postal Accountability and Enhancement Act of 2006 (P.L. 109-435) established dynamic funding rules for the Postal Service for CSRS. The Postal Service is responsible for the cost of all CSRS benefits attributable to post-1971 civilian service for its employees and annuitants. Postal Service agency contributions for CSRS employees were cancelled starting September 30, 2006. Postal Service CSRS employees continue to contribute 7.0 percent of pay.

An actuarial surplus as of September 30, 2006, in the amount of \$17.1 billion for CSRS, was transferred to a Postal Health Benefits Fund on June 30, 2007, to help finance Postal Service post-retirement health care benefits. CSRS law provides that any future actuarial surplus for Postal Service participants as of September 30, 2025, 2035 or 2039, would be transferred to the Postal Service Retiree Health Benefits Fund.

Beginning in 2017, the Postal Service was required to make annual payments to amortize any supplemental actuarial liabilities for its participants under CSRS. A payment of \$2.284 billion for CSRS was due from the Postal Service to the CSRDF on September 30, 2022. This amount is to amortize, through 2043, a supplemental liability of \$33.0 billion for Postal Service CSRS participants as of September 30, 2021, as determined according to the dynamic actuarial assumptions recommended at the May 10, 2022 meeting of the CSRS Board of Actuaries. As of the valuation date, CSRS payments totaling approximately \$8.472 billion, due September 30, 2017 through September 30, 2021, remain unpaid to the CSRDF from the Postal Service.

Under the “static” funding method for CSRS, which remains in effect for funding the benefits for non-Postal CSRS participants, the Treasury pays interest on any static unfunded liabilities for CSRS benefits attributable to civilian service that are not being financed by the Postal Service. The Treasury also makes payments to amortize, over a 30-year period, any increases in the static unfunded liability due to salary increases that occurred during the year for non-Postal CSRS employees. In addition the Treasury pays the cost of benefits paid out during the year to all CSRS annuitants (Postal and non-Postal) that were attributable to military service.

In fiscal year 2007 the Treasury made a retroactive payment to cover CSRS military service benefit costs that previously had been attributed to the Postal Service for FY2003 through FY2006.

The unfunded liability under the “static” funding method for non-Postal CSRS was \$487.5 billion as of September 30, 2021, as determined under static economic assumptions of 5.00 percent interest with no future inflation and no future general salary increases, and using the demographic assumptions recommended at the May 10, 2022 meeting of the CSRS Board of Actuaries. Based on the statutory funding provisions, the Treasury made a payment to the CSRDF of approximately \$34.345 billion for CSRS on September 30, 2022, consisting of:

Interest on Static Unfunded Liability (UL):	\$24.375 billion
30-year Amortization of Increases in Static UL:	\$ 6.931 billion
Military Service Payment:	\$ 3.007 billion
Other CSRS Funding Provisions:	\$ 0.032 billion

Measured according to the dynamic economic assumptions reflected in Table 1, the unfunded actuarial liability for CSRS was \$801.8 billion as of September 30, 2021, net of assets and obligations allocated to the Postal Service. At the assumed dynamic interest rate of 4.00%, the interest cost on this unfunded actuarial liability would be \$32.1 billion for fiscal year 2022. Thus, the statutory Treasury payment of approximately \$34.345 billion made on September 30, 2022, was greater than the amount that would be needed to meet the interest cost on the dynamic unfunded actuarial liability for non-Postal CSRS.

### **Funding Provisions for FERS**

Under FERS, employees and agencies contribute the full dynamic normal cost. This normal cost is for the defined benefit plan only; it does not include the cost of Social Security or the Thrift Savings Plan. Most FERS employees hired before January 1, 2013, contribute a percentage of salary that is equal to the contribution rate for CSRS employees, as set forth above, less the 6.2 percent tax rate applicable under the Old Age, Survivors and Disability Insurance (OASDI) portion of Social Security. Thus for these regular employees in FERS, the contribution rate is 0.8 percent of the employee’s total salary. FERS-RAE generally covers employees hired during calendar year 2013, who are required to contribute an additional 2.3 percent of salary above the FERS rate. FERS-FRAE generally covers employees hired after December 31, 2013, who are required to contribute an additional 3.6 percent of salary above the FERS rate. An extra 0.5 percent of pay is contributed by certain employees with enhanced benefit provisions (e.g. air traffic controllers, law enforcement officers and firefighters). Agencies contribute the normal cost of FERS, less the employee contributions. Non-Postal agencies are required to contribute above the normal cost for employees under FERS-FRAE, with the excess used to address the CSRS unfunded actuarial liability.

Under FERS, any supplemental liabilities are amortized over 30 years. The payments on the initial supplemental liability as of September 30, 1988, began on September 30, 1989. Each

year thereafter, any new supplemental liability is amortized by means of a new series of 30-year payments. Supplemental liabilities attributable to non-Postal participants are made by the Treasury; supplemental liabilities attributable to Postal participants are amortized by separate 30-year payments made by the Postal Service. A negative supplemental liability generates a schedule of negative amortization payments, which is used only to offset any positive payments that have already been scheduled. If the net assets exceed the actuarial liability, all remaining amortization payments are cancelled. Apart from cancellation of any future amortization payments there is no provision in the law for disposition of any FERS surplus either for non-Postal or Postal participants; in this case the excess assets remain in the fund where they accrue interest and are available to offset potential future losses.

A Treasury payment for FERS of approximately \$12.035 billion was made to the CSRDF on September 30, 2022. This amount included a new 30-year payment of \$0.555 billion to amortize a supplemental liability of \$9.6 billion for non-Postal FERS participants as of September 30, 2021, as determined according to the actuarial assumptions recommended at the May 10, 2022 meeting of the Board of Actuaries.

A payment of \$1.627 billion for FERS was due from the Postal Service to the CSRDF on September 30, 2022. This amount included a new 30-year payment of \$0.226 billion to amortize a supplemental liability of \$3.9 billion for Postal FERS participants as of September 30, 2021, as determined according to the actuarial assumptions recommended at the May 10, 2022 meeting of the Board of Actuaries. As of the valuation date, FERS payments totaling approximately \$6.174 billion, due September 30, 2014 through September 30, 2021, remain unpaid to the CSRDF from the Postal Service.

### **Projected Flow of Plan Assets**

Tables 2 and 2A show a 75-year projection of the actual funding for the CSRDF under conditions of expected future inflation. A sufficient number of new employees are assumed to be hired each year so that the total employee population remains constant. Along with this consolidated projection for the entire CSRDF, there are also separate tables for the FERS population (Tables 3 and 3A) and CSRS population (Tables 4 and 4A).

The Projected Flow of plan assets calculated in Tables 2 and 3 for future years reflects the provisions for FERS, FERS-RAE and FERS-FRAE. The Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) established FERS-RAE, which provides for increased employee contributions and lower agency contributions for employees first hired during calendar year 2013. P.L. 112-96 also provides that Members of Congress and Congressional staff initially employed after December 31, 2012, accrue FERS benefits according a regular, rather than enhanced, benefit formula. FERS-FRAE, as established by the Bipartisan Budget Act of 2013 (P.L. 113-67), provides an additional increase to employee contribution rates for employees first hired after December 31, 2013. Although the employee contribution rate for FERS-FRAE exceeds the employee contribution rate for FERS-RAE, the FERS-FRAE agency contributions for non-Postal employing agencies are held at the same rate as determined for FERS-RAE.

Thus the non-Postal agency contributions for FERS-FRAE, combined with the employee contributions, exceed the normal cost for non-Postal employees. These excess FERS-FRAE contributions are allocated to CSRS to address the CSRS unfunded actuarial liability. Excess agency contributions for FERS-FRAE expected to be allocated to CSRS are included in the projected Agency Contributions shown for FERS in Table 3 and in the projected transfer payments from FERS to CSRS shown in Tables 3 and 4. In this projection the excess agency contributions for FERS-FRAE cease in fiscal year 2060.

The CSRS assets shown in Table 4 represent the combined Postal and non-Postal share. In this projection the CSRS assets attributable to non-Postal participants are depleted in fiscal year 2022. Because the CSRS benefits continue to be paid from the assets of the CSRDF, the assets attributable to non-Postal FERS participants (as shown in Table 3) will be reduced each year by the amount that the non-Postal CSRS benefits exceed the non-Postal CSRS contributions. The Postal Service is required to make payments to amortize the dynamic actuarial liabilities for the Postal share of CSRS benefits, so the Postal share of CSRS assets is not projected to be depleted until all benefits to Postal annuitants have been paid. The total assets of the CSRDF as projected in Table 2, including both CSRS and FERS, are expected to continue to grow throughout the term of the projection under the existing statutory funding provisions.

These tables also include a projection of the dynamic unfunded actuarial liability (UAL) under CSRS and FERS. These actuarial liabilities are defined in the same manner as in Table 1 but they apply to future years. A projection of the total unfunded actuarial liability for CSRS and FERS combined is shown in Tables 2 and 2A. The projected future assets and unfunded actuarial liabilities when shown separately for FERS (Tables 3 and 3A) and CSRS (Tables 4 and 4A) are affected by projected future asset balance transfers from FERS to CSRS.

When the non-Postal CSRS balance is depleted, projected to occur in 2022, the resulting transfers from the FERS balance to the CSRS balance create supplemental liabilities for the non-Postal FERS balance. These supplemental liabilities for non-Postal FERS must then be amortized by means of 30-year payments made by the Treasury. In addition, the CSRS amortization amounts that are overdue from the Postal Service are projected to result in the future depletion of the Postal CSRS balance. This would result in additional future transfers from FERS to CSRS. Amounts transferred from FERS, in excess of overdue Postal CSRS amortization amounts, are projected to create future supplemental liabilities for the Postal FERS balance. These supplemental liabilities would be amortized by means of 30-year payments made by the Postal Service for FERS. As a result of the unpaid balance due from the Postal Service for FY 2017 through FY 2021, the Postal CSRS balance is projected to be depleted in 2051, assuming payment of all required amounts due for FY 2022 and beyond.

The projections in Table 3 reflect increases in the FERS UAL for years 2022 and beyond, due to the use of assets in the FERS balance for payment of CSRS benefits.



## Actuarial Opinion

### Civil Service Retirement and Disability Fund

---

#### **Actuarial Valuation of the Civil Service Retirement and Disability Fund as of September 30, 2021**

The purpose of this report is to represent the actuarial valuation of the Civil Service Retirement and Disability Fund (CSRDF), which includes both the Civil Service Retirement System (CSRS) and the Federal Employees' Retirement System (FERS), prepared according to the methodology and dynamic long term assumptions used for funding. The methodologies, assumptions and results may differ from those reflected in the actuarial liabilities reported in the U.S. Office of Personnel Management's Annual Financial Statement.

The demographic assumptions are revised from those used for the previous year's actuarial valuation. The long term economic assumptions are unchanged from those used for the previous year's actuarial valuation.

This actuarial valuation incorporates the economic assumptions first determined by the CSRS Board of Actuaries at its meeting on April 2, 2020. The long-term economic assumptions are: 2.40 percent inflation rate; 2.65 percent rate of general salary increase; and 4.00 percent rate of long-term interest. This report assumes a general salary increase of 2.7 percent for non-Postal employees for fiscal year 2022, based on the actual increase in the federal General Schedule salary tables. A 5.9 percent CSRS annuitant Cost of Living Adjustment (COLA) and 4.9 percent FERS annuitant COLA are assumed in year 2022 based on the actual COLAs received. At its meeting on May 10, 2022, the Board of Actuaries reviewed these economic assumptions and recommended their use for the actuarial valuation as of September 30, 2021.

The demographic assumptions used for this actuarial valuation are those recommended for adoption at the May 10, 2022 Board of Actuaries meeting. No adjustment to demographic assumptions has been made for coronavirus pandemic experience, due to the uncertainty about the magnitude and direction of the impact in the medium-to-long-term future.

In my opinion, the actuarial methods and assumptions used in preparation of this report are reasonable individually and in the aggregate, and reflect a fair estimate of anticipated CSRS and FERS experience based on the plan provisions in effect at the beginning of the fiscal year. Future actuarial reports may reflect measurements that differ significantly from these results due to such factors as: actual experience that has differed from assumptions, future revisions to actuarial assumptions, and future changes to plan provisions. Measurements of the effect on the actuarial liability of changes to certain actuarial assumptions are presented in Table 1D.

I have prepared this statement in accordance with generally accepted principles and practices of the Actuarial Standards Board. To the best of my knowledge this statement is complete and accurate, and fairly reflects the results of the actuarial valuation. In preparing this statement, I have relied upon the financial information provided by OPM's Office of the Chief Financial Officer, and upon population data provided by OPM's Office of Retirement Services, Chief

Information Office and Data Support and Analysis Group, and have reviewed the contributions of other OPM actuaries.

I certify that I meet the U.S. Qualification Standards for issuing this statement of actuarial opinion.

Prepared by:

Gregory Kissel, A.S.A., E.A., M.A.A.A.  
U.S. Office of Personnel Management  
1900 E Street, NW  
Washington, D.C. 20415-3000  
Phone: (202) 606-0722  
Email: [actuary@opm.gov](mailto:actuary@opm.gov)

**Table 1: Actuarial Status Information as of Beginning of Plan Year**  
(Dollars in Billions)

Unfunded Actuarial Accrued Liability September 30, 2021	CSRS	FERS	Total
1. Actuarial Present Value of Future Benefits & Expenses			
(a) Annuitants on roll	\$956.2	\$403.7	\$1,359.9
(b) Separated Employees	0.5	4.8	5.3
(c) Active Employees	47.5	1,340.5	1,388.0
Total	1,004.2	1,749.0	2,753.2
2. Less: Present Value of Future Normal Costs:	5.5	698.6	704.1
3. Actuarial Accrued Liability	998.7	1,050.4	2,049.1
4. Assets (at Par Value)	155.4	830.9	986.3
5. Unfunded Actuarial Liability <sup>1</sup>	\$843.3	\$219.5	\$1,062.8

Normal Cost as a Percentage of Covered Payroll for Regular Non-Postal Employees<sup>2</sup>:

Category	CSRS	FERS	FERS-RAE	FERS-FRAE
Employee	7.0%	0.8%	3.1%	4.4%
Employing Agency	7.0%	18.4%	16.5%	16.5%
Other/(Excess)	23.8% <sup>3</sup>	0.0%	0.0%	(1.0%) <sup>4</sup>
Total Normal Cost %	37.8%	19.2%	19.6%	19.9%

<sup>1</sup> A portion of the CSRS unfunded actuarial liability will be met with transfers from FERS assets; see Technical notes.

<sup>2</sup> Different normal cost percentages apply for employees of the Postal Service and for special groups; see Technical Notes.

<sup>3</sup> The combined employee and agency contribution for CSRS is generally less than the full dynamic normal cost percentage.

<sup>4</sup> Non-Postal agencies are required to contribute at the RAE rate for FRAE; contributions in excess of the normal cost percentage are transferred to the CSRS balance.

### **Table 1 Technical Notes**

The date of the actuarial valuation is the beginning of the fiscal year (i.e. the end of the previous fiscal year). Thus, the actuarial liabilities reported for fiscal year 2022 are determined as of September 30, 2021. The valuation of the CSRDF as of September 30, 2021 is based on the employee and annuitant populations as of that date.

The present values of future benefits and normal costs as of September 30, 2021, are based on the demographic assumptions recommended for adoption at the May 10, 2022 meeting of the CSRS Board of Actuaries, and the long term economic assumptions the Board first determined at its April 2, 2020 meeting. The demographic assumptions are revised, and the long term economic assumptions are unchanged, from those used for the prior year's actuarial valuation. The long term economic assumptions are 2.40 percent inflation; 1.92 percent FERS annuitant Cost of Living Adjustment (COLA), 2.65 percent annual general salary increase, and 4.00 percent rate of interest. A general salary increase of 2.7 percent for non-Postal employees is assumed in year 2022 to match the actual increase in federal General Schedule pay tables. The long term general salary increase assumption, 2.65 percent, is assumed for Postal Service employees in year 2022. A 5.9 percent CSRS annuitant COLA and 4.9 percent FERS annuitant COLA are assumed in year 2022 based on the actual COLAs received. The long term annuitant COLA rates, 2.4 percent for CSRS and 1.92 percent for FERS, are assumed for years 2023 and beyond.

Table 1 displays the normal cost percentages for regular non-Postal employees. Different normal cost percentages apply for employees of the Postal Service and for special groups. The CSRS normal cost is defined as the level percentage of pay necessary to fully fund all retirement benefits for a typical group of new Federal employees who are assumed to be covered under CSRS, even though all new Federal employees are now actually covered under FERS.

For regular Postal Service employees, the normal cost is 32.0 percent of pay for CSRS, 16.9 percent of pay for FERS, 17.3 percent of pay for FERS-RAE and 17.6 percent of pay for FERS-FRAE. Postal employee contribution rates are the same as non-Postal employee contribution rates for CSRS, FERS, FERS-RAE and FERS-FRAE. By statute, there is no Postal Service agency contribution for CSRS employees. For FERS, FERS-RAE and FERS-FRAE, the Postal Service agency contribution rate equals the full normal cost percentage less the employee contribution rate.

The September 30, 2021, unfunded actuarial liability of \$843.3 billion for CSRS, as shown in Table 1, consists of an unfunded actuarial liability of \$41.5 billion for Postal Service obligations for its CSRS participants, and an unfunded actuarial liability of \$801.8 billion for the remainder of the obligations for CSRS participants. Overdue CSRS funding payments from the Postal Service totaling approximately \$8.5 billion as of September 30, 2021, are not included in the CSRS asset balance as of September 30, 2021.

The September 30, 2021, unfunded actuarial liability of \$219.5 billion for FERS, as shown in Table 1, consists of an unfunded actuarial liability of \$32.2 billion for Postal FERS participants and an unfunded actuarial liability of \$187.3 billion for non-Postal FERS participants. Overdue FERS funding payments from the Postal Service totaling approximately \$6.2 billion as of September 30, 2021, are not included in the FERS asset balance as of September 30, 2021.

Supplemental liabilities under FERS are amortized by 30-year payments to be made by the Treasury for non-Postal participants, and by the Postal Service for Postal participants. The supplemental liability is determined by subtracting, from the amount of the unfunded actuarial liability, the present value of any remaining 30-year payments that have already been scheduled. The CSRS unfunded actuarial liability will be met with future payments made by the Treasury and by the Postal Service as required under CSRS statute, plus excess contributions required for FERS-FRAE from non-Postal employing agencies, plus transfers from FERS as needed to pay CSRS benefits. The transfers from FERS to pay benefits for CSRS participants will create supplemental liabilities for FERS, which are then amortized by means of thirty-year payments made by the Treasury and/or the Postal Service that are credited to the FERS balance. The present values of projected future funding components are shown in Table 1C.

The Treasury funding payments for fiscal year 2022 totaled approximately \$34.3 billion for CSRS and approximately \$12.0 billion for FERS. The Postal Service funding payments due for fiscal year 2022 totaled approximately \$2.3 billion for CSRS and \$1.6 billion for FERS. These amounts are in addition to the ongoing contributions from employees and employing agencies.

**Table 1A: Projected Future Cash Flow for Current Participants**

The present value of future benefits and expenses, and the present value of future normal costs, shown in Table 1 are based on projected future cash flow for participants in CSRS and FERS as of September 30, 2021. The projected future cash flow is as follows:

(Dollars in Millions)

Fiscal Year	CSRS				FERS			
	Benefits: Annuitants	Benefits: Separate Employees	Benefits: Active Employees	Normal Costs	Benefits: Annuitants	Benefits: Separate Employees	Benefits: Active Employees	Normal Costs
2022	69,907	4	391	1,309	24,509	2	1,931	49,728
2023	69,766	12	945	1,053	24,537	29	4,845	49,465
2024	68,983	18	1,406	846	24,396	54	7,751	49,076
2025	68,125	22	1,790	677	24,244	67	10,615	48,649
2026	67,186	25	2,108	540	24,043	82	13,479	48,159
2027	66,157	27	2,373	428	23,835	104	16,490	47,537
2028	65,032	28	2,589	338	23,734	125	19,526	46,826
2029	63,805	29	2,765	265	23,695	145	22,680	46,036
2030	62,468	29	2,909	208	23,625	163	25,945	45,172
2031	61,016	30	3,025	161	23,513	180	29,312	44,241
2032	59,444	30	3,120	125	23,363	195	32,749	43,252
2033	57,750	31	3,192	95	23,174	210	36,253	42,203
2034	55,931	31	3,246	72	22,947	225	39,859	41,090
2035	53,987	31	3,282	54	22,675	239	43,609	39,904
2036	51,921	32	3,304	40	22,353	253	47,525	38,617
2037	49,737	32	3,311	30	21,976	266	51,582	37,228
2038	47,441	32	3,303	22	21,543	279	55,793	35,743
2039	45,043	33	3,280	16	21,054	291	60,132	34,160
2040	42,557	33	3,243	12	20,509	303	64,613	32,440
2041	39,998	33	3,192	9	19,906	313	69,229	30,578
2042	37,385	33	3,127	6	19,248	323	73,871	28,614
2043	34,738	33	3,047	4	18,538	332	78,453	26,629
2044	32,078	32	2,954	3	17,779	340	82,927	24,662
2045	29,429	32	2,848	2	16,976	346	87,273	22,704
2046	26,813	31	2,728	1	16,134	352	91,503	20,755
2047	24,256	31	2,597	1	15,259	357	95,571	18,829
2048	21,778	30	2,454	0	14,358	360	99,430	16,950
2049	19,401	29	2,303	0	13,439	363	103,093	15,126
2050	17,142	28	2,143	0	12,509	364	106,568	13,346
2051	15,019	26	1,978	0	11,575	364	109,816	11,619
2052	13,042	25	1,809	0	10,645	363	112,769	9,968
2053	11,222	23	1,639	0	9,729	361	115,298	8,447
2054	9,565	21	1,470	0	8,833	357	117,323	7,088
2055	8,073	20	1,304	0	7,966	352	118,837	5,893
2056	6,745	18	1,145	0	7,134	346	119,829	4,859
2057	5,577	16	993	0	6,344	339	120,330	3,979
2058	4,564	14	851	0	5,600	331	120,361	3,241
2059	3,695	12	720	0	4,908	321	119,977	2,624
2060	2,959	10	602	0	4,269	310	119,243	2,108

Fiscal Year	CSRS				FERS			
	Benefits: Annuitants	Benefits: Separate Employees	Benefits: Active Employees	Normal Costs	Benefits: Annuitants	Benefits: Separate Employees	Benefits: Active Employees	Normal Costs
2061	2,344	8	496	0	3,686	299	118,191	1,681
2062	1,837	7	403	0	3,158	286	116,861	1,332
2063	1,424	6	323	0	2,686	273	115,254	1,048
2064	1,093	5	255	0	2,268	259	113,373	820
2065	831	4	199	0	1,902	244	111,236	637
2066	627	3	152	0	1,584	229	108,853	492
2067	470	2	115	0	1,311	214	106,236	379
2068	351	2	85	0	1,078	199	103,401	291
2069	263	1	62	0	881	184	100,366	222
2070	198	1	45	0	716	169	97,145	168
2071	151	1	32	0	580	155	93,753	126
2072	117	0	22	0	468	141	90,204	94
2073	94	0	16	0	377	128	86,511	69
2074	77	0	11	0	303	115	82,687	51
2075	66	0	8	0	244	103	78,750	37
2076	57	0	6	0	198	92	74,717	28
2077	51	0	4	0	161	82	70,607	20
2078	47	0	4	0	132	72	66,441	15
2079	43	0	3	0	109	63	62,244	11
2080	40	0	3	0	91	55	58,041	8
2081	37	0	2	0	77	48	53,859	5
2082	34	0	2	0	66	42	49,721	0
2083	32	0	2	0	58	36	45,653	0
2084	30	0	2	0	51	31	41,688	0
2085	28	0	2	0	45	26	37,848	0
2086	25	0	2	0	40	22	34,155	0
2087	23	0	2	0	36	19	30,630	0
2088	21	0	2	0	33	16	27,288	0
2089	19	0	2	0	30	13	24,144	0
2090	18	0	1	0	28	11	21,211	0
2091	16	0	1	0	25	10	18,495	0
2092	14	0	1	0	23	8	16,003	0
2093	13	0	1	0	21	7	13,736	0
2094	12	0	1	0	19	6	11,691	0
2095	10	0	1	0	17	5	9,863	0
2096	9	0	1	0	16	5	8,246	0
2097	8	0	1	0	14	4	6,832	0
2098	7	0	1	0	13	4	5,607	0
2099	6	0	1	0	12	4	4,558	0
2100	5	0	1	0	11	3	3,669	0
2101	5	0	1	0	9	3	2,924	0
2102	4	0	1	0	8	3	2,308	0
2103	3	0	0	0	7	3	1,805	0
2104	3	0	0	0	7	3	1,398	0
2105	2	0	0	0	6	3	1,073	0

Fiscal Year	CSRS				FERS			
	Benefits: Annuitants	Benefits: Separate Employees	Benefits: Active Employees	Normal Costs	Benefits: Annuitants	Benefits: Separate Employees	Benefits: Active Employees	Normal Costs
2106	2	0	0	0	5	2	818	0
2107	2	0	0	0	4	2	621	0
2108	1	0	0	0	4	2	472	0
2109	1	0	0	0	3	2	360	0
2110	1	0	0	0	3	2	278	0
2111	1	0	0	0	2	2	218	0
2112	1	0	0	0	2	2	173	0
2113	0	0	0	0	2	2	140	0
2114	0	0	0	0	1	1	116	0
2115	0	0	0	0	1	1	99	0
2116	0	0	0	0	1	1	86	0
2117	0	0	0	0	1	1	76	0
2118	0	0	0	0	1	1	69	0
2119	0	0	0	0	1	1	63	0
2120	0	0	0	0	0	1	58	0
2121	0	0	0	0	0	1	53	0



**Table 1B: Statement of Changes in Actuarial Accrued Liability**

The actuarial liabilities shown in Table 1 are based on actuarial assumptions about future economic and demographic factors. Future statements of actuarial liabilities may reflect different results due to actual experience that has differed from assumptions, future revisions to actuarial assumptions, and potential future revisions to plan provisions. The actuarial accrued liability as of September 30, 2021 as shown in Table 1 reflects an overall actuarial loss of \$25.8 billion from the actuarial accrued liability which would have been expected based on the prior year valuation. The overall actuarial loss consists of an actuarial loss of \$31.5 billion due to experience that has varied from the assumptions used for the prior valuation, and an actuarial gain of \$5.7 billion due to changes to the actuarial assumptions.

Dollars in Billions

<b>Actuarial Accrued Liability</b>	<b>CSRS</b>	<b>FERS</b>	<b>Total</b>
1. Actuarial Accrued Liability (9/30/2020)	\$999.9	\$987.2	\$1,987.1
Expense			
Normal Cost	1.6	48.1	49.7
Interest Expense	38.7	40.0	78.7
Loss(Gain) Due to Experience	26.3	5.2	31.5
Loss(Gain) Due to Plan Amendments	0.0	0.0	0.0
Loss(Gain) Due to Assumptions	1.1	(6.8)	(5.7)
2. Plus: Total Expense	67.7	86.5	154.2
3. Less: Amounts Paid	(68.9)	(23.3)	(92.2)
4. Actuarial Accrued Liability (9/30/2021)	998.7	1,050.4	2,049.1

### **Table 1C: Present Value of Future Benefits Obligations**

The present value of future benefits and expenses shown in Table 1 is \$2,753.2 billion as of September 30, 2021, consisting of \$1,004.2 billion for CSRS and \$1,749.0 billion for FERS. These benefits obligations for participants as of September 30, 2021 are projected to be met under existing statutory funding provisions as follows:

(dollars in billions)

<b>Present Values as of September 30, 2021</b>	<b>CSRS</b>	<b>FERS</b>	<b>Total</b>
PV Future Contributions from Employee & Employing Agency:	\$ 1.8	\$698.6	\$700.4
+ PV Fut. Excess Contrib. from Employing Agency for FERS-FRAE:	0.0	52.0	52.0
+ PV Future Treasury Amortization Payments (already established):	52.1	187.2	239.3
+ PV Future Treasury Amortization Payments (to be established):	1.4	360.6	362.0
+ PV Future Postal Service Amortization Pmts (already established):	41.5	32.2	73.7
+ PV Future Treasury Payments of Interest on Static UAL:	303.2	0.0	303.2
+ PV Future Treasury Payments for Military Service costs:	36.3	0.0	36.3
PV Future Statutory Funding Payments:	\$436.3	\$1,330.6	\$1,766.9
+ Assets (at Par Value)*:	155.4	830.9	986.3
PV Total Amt Available under Statutory Funding Provisions:	\$591.7	\$2,161.5	\$2,753.2
+ PV Future Transfers to CSRS from FERS:	412.5	(412.5)	0.0
PV Future Benefits and Expenses:	\$1,004.2	\$1,749.0	\$2,753.2

\* Amounts for payments overdue from the U.S. Postal Service (USPS) as of September 30, 2021 are included in the Present Value of Future Postal Service Amortization Payments (already established).

## Table 1D: Sensitivity to Actuarial Assumptions

The present values shown in Table 1 are estimates that are determined according to actuarial assumptions about future experience. Changes to the actuarial assumptions would result in changes to these present values. The following table illustrates the effect on the Actuarial Liability of changes to specific long term and short term actuarial assumptions:

(dollars in billions)

<b>Actuarial Accrued Liability as of September 30, 2021</b>	<b>CSRS</b>	<b>FERS</b>	<b>Total</b>
Actuarial Accrued Liability as shown in Table 1	\$998.7	\$1,050.4	\$2,049.1

<b>Actuarial Assumption</b>	<b>Change to Actuarial Liability</b>			<b>Percent Change to Actuarial Liability</b>		
	<b>CSRS</b>	<b>FERS</b>	<b>Total</b>	<b>CSRS</b>	<b>FERS</b>	<b>Total</b>
Long Term Interest Rate plus 0.25 percent	(\$24.1)	(\$43.1)	(\$67.2)	(2.4%)	(4.1%)	(3.3%)
Long Term Interest Rate minus 0.25 percent	\$25.1	\$45.9	\$71.0	2.5%	4.4%	3.5%
Long Term Inflation Rate plus 0.25 percent	\$23.5	\$33.3	\$56.8	2.4%	3.2%	2.8%
Long Term Inflation Rate minus 0.25 percent	(\$22.6)	(\$31.9)	(\$54.5)	(2.3%)	(3.0%)	(2.7%)
Long Term General Salary Increase plus 0.25 percent	\$0.0	\$8.5	\$8.5	0.0%	0.8%	0.4%
Long Term General Salary Increase minus 0.25 percent	(\$0.0)	(\$8.4)	(\$8.4)	(0.0%)	(0.8%)	(0.4%)
Ultimate Rate of Mortality Improvement equals 0.75 percent	(\$8.0)	(\$14.1)	(\$22.1)	(0.8%)	(1.3%)	(1.1%)
Ultimate Rate of Mortality Improvement equals 1.25 percent	\$8.7	\$16.0	\$24.7	0.9%	1.5%	1.2%
Annuitant Mortality Rates Increase by 15% for Fiscal Year 2022	(\$2.8)	(\$0.5)	(\$3.3)	(0.3%)	(0.1%)	(0.2%)
9.0% Inflation assumed for Jan. 2023 COLA, rather than long term rate	\$56.5	\$21.6	\$78.1	5.7%	2.1%	3.8%

**Table 2: Past and Projected Flow of Plan Assets (Combined CSRS and FERS Systems)****Past Flow**

(Dollars in Billions)

Fiscal Year	Employee Contributions	Agency Contributions	Other Government Contributions	Investment Income	Total Income	Total Outlays	Net Assets End of Year	Dynamic Total UAL EOY	Combined Payroll
1993	\$4.7	\$9.7	\$23.0	\$25.5	\$62.9	\$(35.1)	\$317.4	\$540.1	\$100.1
1994	4.6	10.1	22.7	26.3	63.8	(36.5)	344.3	540.6	102.8
1995	4.5	9.9	23.2	28.5	66.1	(38.6)	371.3	545.8	104.9
1996	4.4	10.4	23.4	29.5	67.7	(39.9)	398.9	512.4	107.8
1997	4.4	10.7	24.5	30.9	70.4	(41.8)	427.5	505.6	109.1
1998	4.3	11.3	24.7	32.5	72.8	(43.2)	457.1	496.1	109.6
1999	4.3	11.9	24.8	32.6	73.7	(44.0)	486.8	506.6	115.7
2000	4.7	12.4	25.1	33.8	76.0	(45.2)	521.5	509.5	120.8
2001	4.4	12.9	25.4	35.2	77.9	(47.1)	548.2	510.9	125.2
2002	4.3	13.7	26.0	36.1	80.1	(48.7)	579.5	523.6	131.3
2003	4.3	14.6	21.9	37.0	77.8	(50.0)	607.1	527.1	139.3
2004	4.2	16.2	25.9	35.8	82.1	(52.0)	637.1	534.8	145.6
2005	4.1	17.2	25.9	36.3	83.5	(54.5)	665.9	576.1	151.0
2006	3.9	18.0	28.4	36.6	87.0	(57.6)	695.0	581.8	155.5
2007	3.8	17.4	31.1	37.2	89.5	(78.1) <sup>1</sup>	706.4	634.5	161.2
2008	3.7	18.8	31.0	37.3	90.8	(63.5)	733.7	674.2	168.9
2009	3.7	20.5	31.5	37.1	92.7	(67.6)	758.7	673.1	181.1
2010	3.6	22.0	33.2	36.4	95.2	(69.3)	784.6	622.3	191.0
2011	3.5	23.9	31.3	35.4	94.1	(70.3)	808.4	761.5	197.3
2012	3.3	24.5	33.1	34.0	94.8	(73.9)	829.1	789.8	196.4
2013	3.3	24.6	33.3	31.4	92.6	(77.1)	844.6	785.0	195.4
2014	3.0	24.8	35.0	30.5	93.3	(79.4)	858.6	804.3	196.0
2015	3.5	28.0	36.7	28.4	96.6	(81.7)	873.3	789.6	199.7
2016	3.2	29.8	36.5	28.3	97.8	(82.5)	888.4	911.5	206.0
2017	3.9	30.2	43.8	25.6	103.5	(83.6)	908.7	968.1	209.2
2018	3.9	30.6	44.8	26.2	105.5	(85.8)	928.8	980.3	211.7
2019	4.4	31.3	46.4	25.6	107.6	(88.7)	948.2	1025.0	220.6
2020	4.8	37.5	45.9	24.5	112.7	(99.2) <sup>2</sup>	962.2	1024.9	229.5
2021	5.2	41.5	46.1	22.8	115.6	(92.2)	986.3	1062.8	236.3

<sup>1</sup> FY 2007 Outlays include a transfer of \$17.1 billion to the Postal Service Retiree Health Benefit Fund on June 30, 2007<sup>2</sup> FY 2020 Outlays include an expense of \$8.2 billion for doubtful accounts, for unpaid amounts due from the Postal Service in FY 2014-2019

**Projected Flow**  
(Dollars in Billions)

<b>Fiscal Year</b>	<b>Employee Contributions</b>	<b>Agency Contributions</b>	<b>Other Government Contributions</b>	<b>Investment Income</b>	<b>Total Income</b>	<b>Total Outlays</b>	<b>Net Assets End of Year</b>	<b>Dynamic Total UAL EOY</b>	<b>Combined Payroll</b>
2022	\$5.7	\$46.2	\$50.3	\$38.6	\$140.8	\$(96.7)	\$1030.3	\$1055.2	\$245.3
2023	6.2	47.6	51.4	40.3	145.5	(100.1)	1075.7	1045.8	253.1
2024	6.6	49.0	51.7	42.1	149.5	(102.7)	1122.5	1035.5	261.1
2025	7.1	50.5	52.0	44.0	153.6	(105.0)	1171.1	1024.3	269.4
2026	7.7	51.9	52.5	45.9	158.0	(107.2)	1221.8	1011.9	277.9
2027	8.2	53.4	52.8	47.9	162.3	(109.3)	1274.8	998.6	286.4
2028	8.8	54.8	53.2	50.0	166.8	(111.5)	1330.1	984.1	295.1
2029	9.4	56.3	53.5	52.3	171.4	(113.7)	1387.8	968.6	304.1
2030	10.0	57.8	53.7	54.6	176.0	(115.9)	1447.9	952.1	313.2
2031	10.6	59.3	53.9	57.0	180.8	(118.0)	1510.7	934.6	322.6
2032	11.2	60.9	54.0	59.5	185.6	(120.0)	1576.3	916.0	332.2
2033	11.8	62.5	54.1	62.1	190.6	(121.9)	1644.9	896.5	342.1
2034	12.5	64.2	54.2	64.9	195.7	(123.8)	1716.8	875.9	352.1
2035	13.2	65.9	54.3	67.7	201.1	(125.7)	1792.3	854.2	362.4
2040	16.6	74.7	55.0	84.4	230.7	(135.6)	2227.3	727.2	415.9
2045	20.2	84.2	49.0	104.9	258.4	(146.9)	2755.8	580.3	473.1
2050	23.7	95.4	39.4	128.4	286.9	(161.1)	3357.2	445.8	537.6
2055	27.3	108.2	34.2	155.0	324.8	(181.5)	4041.2	314.4	610.7
2060	31.1	121.4	25.8	184.6	363.0	(207.4)	4798.2	193.1	695.5
2065	35.5	133.5	18.2	215.8	403.0	(239.1)	5592.4	119.6	793.5
2070	40.6	152.3	11.3	249.3	453.5	(276.4)	6450.8	69.1	905.7
2075	46.3	173.7	5.9	285.6	511.5	(318.9)	7381.5	40.7	1033.1
2080	52.8	198.0	2.6	325.3	578.7	(366.9)	8400.6	28.9	1177.6
2085	60.1	225.6	1.4	369.0	656.1	(421.8)	9526.1	25.6	1341.7
2090	68.5	257.1	1.2	417.3	744.0	(485.5)	10769.9	24.4	1528.5
2095	78.0	292.9	1.1	470.4	842.4	(559.5)	12135.5	23.8	1741.6
2100	88.9	333.8	1.0	528.2	952.0	(644.9)	13622.8	23.4	1984.9

**Table 2A: Past and Projected Flow of Plan Assets (Combined CSRS and FERS Systems)****Past Flow**

[Percentage of Total Payroll (CSRS &amp; FERS)]

Fiscal Year	Employee Contributions	Agency Contributions	Other Government Contributions	Investment Income	Total Income	Total Outlays	Net Assets End of Year	Dynamic Total UAL EOY	Combined Payroll
1993	4.7%	9.6%	23.0%	25.5%	62.8%	(35.1)%	316.9%	539.6%	100.0%
1994	4.5%	9.8%	22.1%	25.6%	62.1%	(35.5)%	335.0%	525.9%	100.0%
1995	4.3%	9.5%	22.1%	27.1%	63.0%	(36.8)%	354.0%	520.3%	100.0%
1996	4.1%	9.6%	21.7%	27.4%	62.8%	(37.0)%	370.2%	475.3%	100.0%
1997	4.0%	9.8%	22.4%	28.3%	64.5%	(38.3)%	392.0%	463.6%	100.0%
1998	3.9%	10.3%	22.5%	29.7%	66.4%	(39.4)%	417.1%	452.7%	100.0%
1999	3.7%	10.3%	21.5%	28.2%	63.7%	(38.0)%	420.9%	438.0%	100.0%
2000	3.9%	10.2%	20.8%	28.0%	62.9%	(37.4)%	431.8%	421.9%	100.0%
2001	3.5%	10.3%	20.3%	28.1%	62.2%	(37.6)%	437.8%	408.1%	100.0%
2002	3.2%	10.5%	19.8%	27.5%	61.0%	(37.1)%	441.4%	398.8%	100.0%
2003	3.1%	10.5%	15.7%	26.6%	55.9%	(35.9)%	435.9%	378.5%	100.0%
2004	2.9%	11.1%	17.8%	24.6%	56.4%	(35.7)%	437.6%	367.3%	100.0%
2005	2.7%	11.4%	17.2%	24.0%	55.3%	(36.7)%	441.0%	381.5%	100.0%
2006	2.5%	11.6%	18.3%	23.6%	55.9%	(37.1)%	447.0%	374.2%	100.0%
2007	2.4%	10.8%	19.2%	23.1%	55.5%	(48.4)% <sup>1</sup>	438.2%	393.6%	100.0%
2008	2.2%	11.1%	18.4%	22.1%	53.8%	(37.6)%	434.5%	399.2%	100.0%
2009	2.0%	11.3%	17.4%	20.5%	51.2%	(37.3)%	418.9%	371.7%	100.0%
2010	1.9%	11.5%	17.4%	19.1%	49.8%	(36.3)%	413.0%	327.5%	100.0%
2011	1.8%	12.1%	15.9%	17.9%	47.7%	(35.6)%	409.7%	386.0%	100.0%
2012	1.7%	12.5%	16.9%	17.3%	48.3%	(37.6)%	422.1%	402.1%	100.0%
2013	1.7%	12.6%	17.0%	16.1%	47.4%	(39.5)%	432.2%	401.7%	100.0%
2014	1.5%	12.7%	17.9%	15.6%	47.6%	(40.5)%	438.1%	410.4%	100.0%
2015	1.8%	14.0%	18.4%	14.2%	48.3%	(40.9)%	437.3%	395.4%	100.0%
2016	1.6%	14.5%	17.7%	13.7%	47.4%	(40.0)%	431.3%	442.5%	100.0%
2017	1.9%	14.4%	20.9%	12.2%	49.5%	(40.0)%	434.4%	462.8%	100.0%
2018	1.8%	14.5%	21.2%	12.4%	49.8%	(40.5)%	438.7%	463.1%	100.0%
2019	2.0%	14.2%	21.0%	11.6%	48.8%	(40.2)%	429.8%	464.6%	100.0%
2020	2.1%	16.3%	20.0%	10.7%	49.1%	(43.2)% <sup>2</sup>	419.3%	446.6%	100.0%
2021	2.2%	17.6%	19.5%	9.6%	48.9%	(39.0)%	417.4%	449.8%	100.0%

<sup>1</sup> FY 2007 Outlays include a transfer of \$17.1 billion to the Postal Service Retiree Health Benefit Fund on June 30, 2007<sup>2</sup> FY 2020 Outlays include an expense of \$8.2 billion for doubtful accounts, for unpaid amounts due from the Postal Service in FY 2014-2019

## Projected Flow

[Percentage of Total Payroll (CSRS & FERS)]

Fiscal Year	Employee Contributions	Agency Contributions	Other Government Contributions	Investment Income	Total Income	Total Outlays	Net Assets End of Year	Dynamic Total UAL EOY	Combined Payroll
2022	2.3%	18.9%	20.5%	15.7%	57.4%	(39.4)%	420.1%	430.2%	100.0%
2023	2.4%	18.8%	20.3%	15.9%	57.5%	(39.6)%	424.9%	413.2%	100.0%
2024	2.5%	18.8%	19.8%	16.1%	57.3%	(39.3)%	429.9%	396.6%	100.0%
2025	2.7%	18.7%	19.3%	16.3%	57.0%	(39.0)%	434.7%	380.2%	100.0%
2026	2.8%	18.7%	18.9%	16.5%	56.8%	(38.6)%	439.7%	364.2%	100.0%
2027	2.9%	18.6%	18.4%	16.7%	56.7%	(38.2)%	445.1%	348.7%	100.0%
2028	3.0%	18.6%	18.0%	17.0%	56.5%	(37.8)%	450.7%	333.4%	100.0%
2029	3.1%	18.5%	17.6%	17.2%	56.4%	(37.4)%	456.4%	318.5%	100.0%
2030	3.2%	18.5%	17.1%	17.4%	56.2%	(37.0)%	462.2%	304.0%	100.0%
2031	3.3%	18.4%	16.7%	17.7%	56.0%	(36.6)%	468.3%	289.7%	100.0%
2032	3.4%	18.3%	16.3%	17.9%	55.9%	(36.1)%	474.5%	275.7%	100.0%
2033	3.5%	18.3%	15.8%	18.2%	55.7%	(35.6)%	480.9%	262.1%	100.0%
2034	3.5%	18.2%	15.4%	18.4%	55.6%	(35.2)%	487.6%	248.7%	100.0%
2035	3.6%	18.2%	15.0%	18.7%	55.5%	(34.7)%	494.5%	235.7%	100.0%
2040	4.0%	18.0%	13.2%	20.3%	55.5%	(32.6)%	535.5%	174.9%	100.0%
2045	4.3%	17.8%	10.4%	22.2%	54.6%	(31.1)%	582.4%	122.6%	100.0%
2050	4.4%	17.7%	7.3%	23.9%	53.4%	(30.0)%	624.5%	82.9%	100.0%
2055	4.5%	17.7%	5.6%	25.4%	53.2%	(29.7)%	661.7%	51.5%	100.0%
2060	4.5%	17.5%	3.7%	26.5%	52.2%	(29.8)%	689.8%	27.8%	100.0%
2065	4.5%	16.8%	2.3%	27.2%	50.8%	(30.1)%	704.7%	15.1%	100.0%
2070	4.5%	16.8%	1.3%	27.5%	50.1%	(30.5)%	712.3%	7.6%	100.0%
2075	4.5%	16.8%	0.6%	27.6%	49.5%	(30.9)%	714.5%	3.9%	100.0%
2080	4.5%	16.8%	0.2%	27.6%	49.1%	(31.2)%	713.4%	2.5%	100.0%
2085	4.5%	16.8%	0.1%	27.5%	48.9%	(31.4)%	710.0%	1.9%	100.0%
2090	4.5%	16.8%	0.1%	27.3%	48.7%	(31.8)%	704.6%	1.6%	100.0%
2095	4.5%	16.8%	0.1%	27.0%	48.4%	(32.1)%	696.8%	1.4%	100.0%
2100	4.5%	16.8%	0.1%	26.6%	48.0%	(32.5)%	686.3%	1.2%	100.0%

**Table 3: Past and Projected Flow Assets (FERS)****Past Flow**

(Dollars in Billions)

Fiscal Year	Employee Contributions	Agency Contributions	Treasury Amortized Payment	Postal Amortized Payment	Total Government Contributions	Investment Income	Total Income	FERS Benefit Payment	Transfer from (to) CSRS	Total Outlays	Net Assets End of Year	Dynamic FERS UAL EOY	FERS Payroll
1993	\$0.3	\$5.4	\$0.5	\$0.0	\$5.9	\$2.8	\$9.0	\$(0.3)	\$0.0	\$(0.3)	\$40.7	\$1.8	\$38.9
1994	0.4	5.8	0.2	0.0	6.0	3.4	9.8	(0.4)	0.0	(0.4)	50.0	(0.1)	42.2
1995	0.4	5.7	0.2	0.0	6.0	4.1	10.5	(0.6)	0.0	(0.6)	59.9	(0.6)	46.4
1996	0.5	6.3	0.0	0.0	6.3	3.9	10.7	(0.6)	0.0	(0.6)	69.9	(5.8)	50.2
1997	0.5	6.6	0.0	0.0	6.6	7.2	14.3	(0.8)	0.0	(0.8)	83.4	(9.6)	53.0
1998	0.5	6.7	0.0	0.0	6.7	6.8	14.0	(0.9)	0.0	(0.9)	96.5	(7.9)	54.4
1999	0.6	7.4	0.0	0.0	7.4	7.3	15.3	(1.0)	0.0	(1.0)	110.8	(6.3)	62.6
2000	0.9	8.0	0.0	0.0	8.0	8.2	17.1	(1.2)	0.0	(1.2)	126.8	(11.3)	68.1
2001	0.7	8.7	0.0	0.0	8.7	9.1	18.5	(1.4)	0.0	(1.4)	143.8	(14.9)	73.9
2002	0.7	9.6	0.0	0.0	9.6	9.9	20.2	(1.6)	0.0	(1.6)	162.4	(9.3)	80.4
2003	0.8	10.6	0.0	0.0	10.6	10.6	22.0	(1.8)	0.0	(1.8)	182.6	(11.7)	89.5
2004	0.9	11.6	0.0	0.0	11.6	11.3	23.8	(2.1)	0.0	(2.1)	204.3	(12.1)	97.6
2005	1.0	13.2	0.0	0.0	13.2	12.2	26.4	(2.5)	0.0	(2.5)	228.1	(5.2)	105.7
2006	1.0	14.1	0.2	0.0	14.4	12.9	28.3	(2.9)	0.0	(2.9)	253.4	(6.1)	113.4
2007	1.1	15.2	0.2	0.0	15.4	14.1	30.6	(3.6)	0.0	(3.6)	280.4	1.0	121.6
2008	1.2	16.7	0.7	0.0	17.4	15.6	34.2	(4.1)	0.0	(4.1)	310.5	0.9	131.6
2009	1.3	18.5	0.6	0.0	19.1	16.5	36.9	(4.8)	0.0	(4.8)	342.0	9.7	146.0
2010	1.4	20.1	1.2	0.0	21.3	16.7	39.4	(5.4)	0.0	(5.4)	376.0	(12.2)	159.1
2011	1.5	22.2	0.0	0.0	22.2	17.5	41.3	(6.1)	0.0	(6.1)	411.2	20.1	168.7
2012	1.5	23.1	1.5	0.0	24.6	16.8	43.0	(7.2)	0.0	(7.2)	446.9	38.9	172.0
2013	1.6	23.4	2.9	0.0	26.4	17.4	45.4	(8.4)	0.0	(8.4)	483.8	33.6	175.0
2014	1.8	23.7	2.3	0.0	26.0	17.1	44.9	(9.7)	0.0	(9.7)	519.0	49.9	178.6
2015	2.1	27.1	3.6	0.2	30.9	16.0	49.0	(11.3)	(0.1)	(11.4)	556.5	50.0	184.9
2016	2.6	29.0	2.9	0.2	32.1	16.7	51.4	(12.7)	(0.2)	(12.9)	595.2	120.5	193.5
2017	3.0	29.6	7.2	0.9	37.7	17.9	58.6	(14.3)	(0.3)	(14.5)	640.0	155.6	198.7
2018	3.4	30.1	8.3	1.0	39.4	19.4	62.2	(16.4)	(0.3)	(16.7)	685.8	164.3	203.1
2019	3.8	31.0	9.3	1.1	41.3	19.7	64.8	(18.7)	(0.5)	(19.2)	731.9	201.5	213.5
2020	4.4	37.2	11.1	0.0	48.3	19.9	72.6	(21.2)	(0.5)	(25.1) <sup>1</sup>	777.9	209.3	223.7
2021	4.9	41.3	11.6	0.0	52.9	19.2	76.9	(23.3)	(0.6)	(23.9)	830.9	219.5	231.7

<sup>1</sup> FY 2020 Outlays include an expense of \$3.4 billion for doubtful accounts, for unpaid amounts due from the Postal Service in FY 2014-2019



**Projected Flow**

(Dollars in Billions)

Fiscal Year	Employee Contributions	Agency Contributions	Treasury Amortized Payment	Postal Amortized Payment	Total Government Contributions	Investment Income	Total Income	FERS Benefit Payment	Transfer from (to) CSRS	Total Outlays	Net Assets End of Year	Dynamic FERS UAL EOY	FERS Payroll
2022	\$5.4	\$46.0	\$12.0	\$1.6	\$59.7	\$33.7	\$98.9	\$(26.4)	\$(1.1)	\$(27.5)	\$902.2	\$215.0	\$241.6
2023	6.0	47.5	12.1	1.6	61.2	36.5	103.7	(29.4)	(23.7)	(53.1)	952.7	232.7	250.1
2024	6.5	48.9	13.4	1.7	63.9	38.5	109.0	(32.3)	(24.5)	(56.8)	1004.9	250.5	258.7
2025	7.0	50.4	14.7	1.7	66.8	40.6	114.4	(35.1)	(25.3)	(60.4)	1059.0	268.4	267.4
2026	7.6	51.8	16.1	1.7	69.6	42.8	120.0	(37.9)	(25.8)	(63.7)	1115.3	285.9	276.3
2027	8.1	53.3	17.6	1.7	72.5	45.0	125.7	(40.8)	(26.3)	(67.1)	1173.9	303.1	285.2
2028	8.7	54.8	19.0	1.7	75.5	47.3	131.5	(43.9)	(26.7)	(70.6)	1234.8	319.7	294.2
2029	9.3	56.3	20.5	1.7	78.4	49.7	137.5	(47.1)	(27.1)	(74.2)	1298.1	335.9	303.3
2030	9.9	57.8	21.9	1.7	81.5	52.2	143.6	(50.5)	(27.4)	(77.9)	1363.8	351.4	312.6
2031	10.5	59.3	23.4	1.8	84.5	54.8	149.9	(53.9)	(27.6)	(81.5)	1432.1	366.0	322.1
2032	11.2	60.9	24.9	1.8	87.6	57.5	156.3	(57.4)	(27.8)	(85.2)	1503.2	379.9	331.8
2033	11.8	62.5	26.4	1.8	90.7	60.4	162.9	(61.0)	(27.9)	(88.9)	1577.2	392.7	341.8
2034	12.5	64.2	27.9	1.8	93.9	63.3	169.7	(64.6)	(27.9)	(92.6)	1654.3	404.4	351.9
2035	13.1	65.9	29.4	1.8	97.1	66.3	176.6	(68.4)	(27.8)	(96.2)	1734.7	414.8	362.3
2040	16.6	74.7	36.4	1.9	113.0	83.6	213.2	(89.7)	(24.9)	(114.6)	2190.4	440.2	415.9
2045	20.2	84.2	38.7	1.7	124.7	104.5	249.4	(114.6)	(18.7)	(133.3)	2735.4	416.5	473.1
2050	23.7	95.4	34.2	0.7	130.3	128.5	282.5	(141.8)	(11.9)	(153.7)	3355.1	359.5	537.6
2055	27.3	108.2	31.9	0.5	140.6	155.1	322.9	(172.1)	(7.6)	(179.7)	4041.2	279.6	610.7
2060	31.1	121.4	24.7	0.8	146.9	184.3	362.4	(203.8)	(4.9)	(208.7)	4789.1	191.2	695.5
2065	35.5	133.5	17.2	1.0	151.7	215.6	402.9	(238.1)	(0.1)	(238.2)	5589.9	119.1	793.5
2070	40.6	152.3	10.2	1.1	163.6	249.3	453.5	(276.2)	(0.0)	(276.2)	6450.0	68.9	905.7
2075	46.3	173.7	4.7	1.2	179.6	285.6	511.5	(318.8)	(0.0)	(318.8)	7381.1	40.6	1033.1
2080	52.8	198.0	1.3	1.3	200.6	325.2	578.6	(366.8)	(0.0)	(366.8)	8400.3	28.8	1177.6
2085	60.1	225.6	0.0	1.4	227.0	369.0	656.1	(421.8)	(0.0)	(421.8)	9525.9	25.6	1341.7
2090	68.5	257.1	0.0	1.2	258.2	417.3	744.0	(485.5)	(0.0)	(485.5)	10769.8	24.4	1528.5
2095	78.0	292.9	0.0	1.1	293.9	470.4	842.4	(559.5)	(0.0)	(559.5)	12135.4	23.8	1741.6
2100	88.9	333.8	0.0	1.0	334.8	528.2	952.0	(644.9)	(0.0)	(644.9)	13622.8	23.4	1984.9

**Table 3A: Past and Projected Flow of Assets (FERS)****Past Flow**

[Percentage of Total Payroll (CSRS &amp; FERS)]

Fiscal Year	Employee Contributions	Agency Contributions	Treasury Amortized Payment	Postal Amortized Payment	Total Government Contributions	Investment Income	Total Income	FERS Benefit Payment	Transfer from (to) CSRS	Total Outlays	Net Assets End of Year	Dynamic FERS UAL EOY	FERS Payroll
1992	0.3%	5.0%	0.5%	0.0%	5.8%	2.3%	8.1%	(0.3)%	0.0%	(0.3)%	32.6%	4.8%	36.3%
1993	0.3%	5.4%	0.5%	0.0%	5.9%	2.8%	9.0%	(0.3)%	0.0%	(0.3)%	40.6%	1.8%	38.8%
1994	0.3%	5.7%	0.2%	0.0%	5.9%	3.3%	9.5%	(0.4)%	0.0%	(0.4)%	48.6%	(0.1)%	41.1%
1995	0.4%	5.5%	0.2%	0.0%	5.7%	3.9%	10.0%	(0.5)%	0.0%	(0.5)%	57.1%	(0.6)%	44.2%
1996	0.4%	5.8%	0.0%	0.0%	5.8%	3.7%	9.9%	(0.6)%	0.0%	(0.6)%	64.9%	(5.4)%	46.6%
1997	0.4%	6.1%	0.0%	0.0%	6.1%	6.6%	13.1%	(0.7)%	0.0%	(0.7)%	76.5%	(8.8)%	48.6%
1998	0.5%	6.1%	0.0%	0.0%	6.1%	6.2%	12.8%	(0.8)%	0.0%	(0.8)%	88.1%	(7.2)%	49.6%
1999	0.6%	6.4%	0.0%	0.0%	6.4%	6.3%	13.2%	(0.9)%	0.0%	(0.9)%	95.8%	(5.4)%	54.1%
2000	0.7%	6.6%	0.0%	0.0%	6.6%	6.8%	14.1%	(1.0)%	0.0%	(1.0)%	105.0%	(9.4)%	56.4%
2001	0.6%	6.9%	0.0%	0.0%	6.9%	7.3%	14.8%	(1.1)%	0.0%	(1.1)%	114.8%	(11.9)%	59.0%
2002	0.5%	7.3%	0.0%	0.0%	7.3%	7.6%	15.4%	(1.2)%	0.0%	(1.2)%	123.7%	(7.1)%	61.3%
2003	0.6%	7.6%	0.0%	0.0%	7.6%	7.6%	15.8%	(1.3)%	0.0%	(1.3)%	131.1%	(8.4)%	64.3%
2004	0.6%	8.0%	0.0%	0.0%	8.0%	7.7%	16.3%	(1.4)%	0.0%	(1.3)%	140.3%	(8.3)%	67.1%
2005	0.6%	8.7%	0.0%	0.0%	8.7%	8.1%	17.5%	(1.7)%	0.0%	(1.7)%	151.1%	(3.4)%	70.0%
2006	0.7%	9.1%	0.1%	0.0%	9.2%	8.3%	18.2%	(1.9)%	0.0%	(1.9)%	163.0%	(3.9)%	72.9%
2007	0.7%	9.4%	0.2%	0.0%	9.6%	8.7%	19.0%	(2.2)%	0.0%	(2.2)%	174.0%	0.6%	75.5%
2008	0.7%	9.9%	0.4%	0.0%	10.3%	9.2%	20.3%	(2.4)%	0.0%	(2.4)%	183.9%	0.5%	77.9%
2009	0.7%	10.2%	0.3%	0.0%	10.5%	9.1%	20.4%	(2.6)%	0.0%	(2.6)%	188.8%	5.4%	80.6%
2010	0.7%	10.5%	0.6%	0.0%	11.2%	8.7%	20.6%	(2.8)%	0.0%	(2.8)%	196.9%	(6.4)%	83.2%
2011	0.8%	11.3%	0.0%	0.0%	11.3%	8.9%	20.9%	(3.1)%	0.0%	(3.1)%	208.4%	10.2%	85.5%
2012	0.8%	11.8%	0.8%	0.0%	12.5%	8.6%	21.9%	(3.7)%	0.0%	(3.7)%	227.5%	19.8%	87.6%
2013	0.8%	12.0%	1.5%	0.0%	13.5%	8.9%	23.2%	(4.3)%	0.0%	(4.3)%	247.6%	17.2%	89.6%
2014	0.9%	12.1%	1.2%	0.0%	13.3%	8.7%	22.9%	(4.9)%	0.0%	(4.9)%	264.8%	25.5%	91.1%
2015	1.1%	13.6%	1.8%	0.1%	15.5%	8.0%	24.5%	(5.7)%	(0.1)%	(5.7)%	278.7%	25.0%	92.6%
2016	1.3%	14.1%	1.4%	0.1%	15.6%	8.1%	25.0%	(6.2)%	(0.1)%	(6.3)%	288.9%	58.5%	93.9%
2017	1.4%	14.1%	3.4%	0.4%	18.0%	8.6%	28.0%	(6.8)%	(0.1)%	(6.9)%	305.9%	74.4%	95.0%
2018	1.6%	14.2%	3.9%	0.5%	18.6%	9.2%	29.4%	(7.7)%	(0.1)%	(7.9)%	323.9%	77.6%	95.9%
2019	1.7%	14.1%	4.2%	0.5%	18.7%	8.9%	29.4%	(8.5)%	(0.2)%	(8.7)%	331.8%	91.3%	96.8%
2020	1.9%	16.2%	4.8%	0.0%	21.0%	8.7%	31.6%	(9.2)%	(0.2)%	(10.9)% <sup>1</sup>	339.0%	91.2%	97.5%
2021	2.1%	17.5%	4.9%	0.0%	22.4%	8.1%	32.5%	(9.9)%	(0.3)%	(10.1)%	351.6%	92.9%	98.1%

<sup>1</sup> FY 2020 Outlays include an expense of \$3.4 billion for doubtful accounts, for unpaid amounts due from the Postal Service in FY 2014-2019

**Projected Flow**

[Percentage of Total Payroll (CSRS & FERS)]

Fiscal Year	Employee Contributions	Agency Contributions	Treasury Amortized Payment	Postal Amortized Payment	Total Government Contributions	Investment Income	Total Income	FERS Benefit Payment	Transfer from (to) CSRS	Total Outlays	Net Assets End of Year	Dynamic FERS UAL EOY	FERS Payroll
2022	2.2%	18.8%	4.9%	0.7%	24.3%	13.7%	40.3%	(10.8)%	(0.4)%	(11.2)%	367.8%	87.6%	98.5%
2023	2.4%	18.8%	4.8%	0.6%	24.2%	14.4%	41.0%	(11.6)%	(9.4)%	(21.0)%	376.4%	91.9%	98.8%
2024	2.5%	18.7%	5.1%	0.6%	24.5%	14.8%	41.7%	(12.4)%	(9.4)%	(21.8)%	384.8%	95.9%	99.1%
2025	2.6%	18.7%	5.5%	0.6%	24.8%	15.1%	42.5%	(13.0)%	(9.4)%	(22.4)%	393.1%	99.6%	99.3%
2026	2.7%	18.7%	5.8%	0.6%	25.1%	15.4%	43.2%	(13.6)%	(9.3)%	(22.9)%	401.4%	102.9%	99.4%
2027	2.8%	18.6%	6.1%	0.6%	25.3%	15.7%	43.9%	(14.2)%	(9.2)%	(23.4)%	409.9%	105.8%	99.6%
2028	3.0%	18.6%	6.4%	0.6%	25.6%	16.0%	44.6%	(14.9)%	(9.0)%	(23.9)%	418.4%	108.3%	99.7%
2029	3.1%	18.5%	6.7%	0.6%	25.8%	16.4%	45.2%	(15.5)%	(8.9)%	(24.4)%	426.9%	110.5%	99.7%
2030	3.2%	18.4%	7.0%	0.6%	26.0%	16.7%	45.8%	(16.1)%	(8.8)%	(24.9)%	435.4%	112.2%	99.8%
2031	3.3%	18.4%	7.3%	0.5%	26.2%	17.0%	46.5%	(16.7)%	(8.6)%	(25.3)%	443.9%	113.5%	99.9%
2032	3.4%	18.3%	7.5%	0.5%	26.4%	17.3%	47.1%	(17.3)%	(8.4)%	(25.7)%	452.5%	114.3%	99.9%
2033	3.5%	18.3%	7.7%	0.5%	26.5%	17.6%	47.6%	(17.8)%	(8.2)%	(26.0)%	461.1%	114.8%	99.9%
2034	3.5%	18.2%	7.9%	0.5%	26.7%	18.0%	48.2%	(18.4)%	(7.9)%	(26.3)%	469.8%	114.9%	99.9%
2035	3.6%	18.2%	8.1%	0.5%	26.8%	18.3%	48.7%	(18.9)%	(7.7)%	(26.5)%	478.6%	114.5%	100.0%
2040	4.0%	18.0%	8.8%	0.5%	27.2%	20.1%	51.3%	(21.6)%	(6.0)%	(27.6)%	526.6%	105.8%	100.0%
2045	4.3%	17.8%	8.2%	0.4%	26.4%	22.1%	52.7%	(24.2)%	(4.0)%	(28.2)%	578.1%	88.0%	100.0%
2050	4.4%	17.7%	6.4%	0.1%	24.2%	23.9%	52.5%	(26.4)%	(2.2)%	(28.6)%	624.0%	66.9%	100.0%
2055	4.5%	17.7%	5.2%	0.1%	23.0%	25.4%	52.9%	(28.2)%	(1.2)%	(29.4)%	661.7%	45.8%	100.0%
2060	4.5%	17.5%	3.5%	0.1%	21.1%	26.5%	52.1%	(29.3)%	(0.7)%	(30.0)%	688.5%	27.5%	100.0%
2065	4.5%	16.8%	2.2%	0.1%	19.1%	27.2%	50.8%	(30.0)%	(0.0)%	(30.0)%	704.4%	15.0%	100.0%
2070	4.5%	16.8%	1.1%	0.1%	18.1%	27.5%	50.1%	(30.5)%	(0.0)%	(30.5)%	712.2%	7.6%	100.0%
2075	4.5%	16.8%	0.5%	0.1%	17.4%	27.6%	49.5%	(30.9)%	(0.0)%	(30.9)%	714.5%	3.9%	100.0%
2080	4.5%	16.8%	0.1%	0.1%	17.0%	27.6%	49.1%	(31.2)%	(0.0)%	(31.2)%	713.4%	2.4%	100.0%
2085	4.5%	16.8%	0.0%	0.1%	16.9%	27.5%	48.9%	(31.4)%	(0.0)%	(31.4)%	710.0%	1.9%	100.0%
2090	4.5%	16.8%	0.0%	0.1%	16.9%	27.3%	48.7%	(31.8)%	(0.0)%	(31.8)%	704.6%	1.6%	100.0%
2095	4.5%	16.8%	0.0%	0.1%	16.9%	27.0%	48.4%	(32.1)%	(0.0)%	(32.1)%	696.8%	1.4%	100.0%
2100	4.5%	16.8%	0.0%	0.1%	16.9%	26.6%	48.0%	(32.5)%	(0.0)%	(32.5)%	686.3%	1.2%	100.0%

**Table 4: Past and Projected Flow of Plan Assets (CSRS)****Past Flow**

(Dollars in Billions)

Fiscal Year	Employee Contributions	Agency Contributions	Treasury 30 Year Payment	Postal Amort. Payment	Interest Payment on UAL	Military Service Payment	Total Government Contrib.	Transfer from (to) FERS	Investment Income	Total Income	Total Outlays	Fund End of Year	Dynamic CSRS UAL EOY	CSRS Payroll
1992	\$4.4	\$4.4	\$8.0	\$0.8	\$9.8	\$2.8	\$25.8	\$0.0	\$21.9	\$52.0	\$(32.9)	\$256.4	\$595.0	\$62.5
1993	4.4	4.3	9.0	0.9	9.7	2.9	26.8	0.0	22.7	53.9	(34.8)	276.7	538.3	61.3
1994	4.2	4.3	9.2	1.0	9.3	3.0	26.8	0.0	23.0	54.0	(36.1)	294.3	540.7	60.5
1995	4.1	4.2	9.6	1.2	9.1	3.1	27.2	0.0	24.4	55.6	(38.1)	311.4	546.4	58.5
1996	4.0	4.1	10.1	1.0	9.1	3.2	27.5	0.0	25.6	57.1	(39.2)	329.0	518.2	57.6
1997	3.9	4.1	10.5	1.0	9.8	3.4	28.6	0.0	23.7	56.3	(41.0)	344.1	515.2	56.1
1998	3.8	4.6	10.9	0.9	9.4	3.4	29.2	0.0	25.8	58.8	(42.3)	360.6	504.0	55.2
1999	3.6	4.6	11.3	0.9	9.2	3.5	29.4	0.0	25.3	58.4	(43.0)	376.0	512.9	53.1
2000	3.8	4.4	11.7	1.0	9.0	3.5	29.5	0.0	25.6	58.9	(44.0)	394.7	520.8	52.7
2001	3.6	4.2	11.9	1.1	8.7	3.7	29.6	0.0	26.2	59.4	(45.7)	404.4	525.8	51.3
2002	3.5	4.2	12.3	1.2	8.8	3.7	30.2	0.0	26.2	59.9	(47.1)	417.1	532.9	50.9
2003	3.5	4.0	9.9	0.0	8.8	3.2	25.9	0.0	26.4	55.8	(48.2)	424.5	538.8	49.8
2004	3.3	4.6	10.2	0.2	12.2	3.3	30.5	0.0	24.5	58.3	(49.9)	432.8	546.9	47.9
2005	3.1	4.1	10.2	0.3	12.1	3.2	30.0	0.0	24.0	57.1	(52.0)	437.8	581.3	45.3
2006	2.9	3.9	10.4	0.3	14.2	3.3	32.0	0.0	23.7	58.7	(54.7)	441.5	587.9	42.1
2007	2.7	2.2	10.2	0.0	14.4	6.2	33.0	0.0	23.2	58.9	(74.5) <sup>1</sup>	426.0	634.5	39.5
2008	2.5	2.1	10.2	0.0	16.1	4.0	32.4	0.0	21.7	56.6	(59.4)	423.2	673.3	37.3
2009	2.3	2.0	10.2	0.0	16.4	4.1	32.9	0.0	20.6	55.8	(62.9)	416.7	663.4	35.1
2010	2.2	1.8	10.0	0.0	17.8	4.1	33.9	0.0	19.7	55.8	(63.9)	408.6	634.5	31.9
2011	2.0	1.7	9.5	0.0	17.7	4.0	33.0	0.0	17.8	52.8	(64.2)	397.2	741.4	28.6
2012	1.7	1.4	9.2	0.0	18.3	4.0	32.9	0.0	17.2	51.8	(66.8)	382.2	750.9	24.5
2013	1.6	1.2	8.9	0.0	17.4	3.9	31.5	0.0	14.0	47.2	(68.6)	360.8	751.4	20.4
2014	1.2	1.0	8.7	0.0	20.1	3.8	33.7	0.0	13.5	48.4	(69.6)	339.6	754.4	17.4
2015	1.3	0.9	8.5	0.0	20.6	3.8	33.9	0.1	12.3	47.6	(70.4)	316.8	739.6	14.8
2016	0.6	0.7	8.5	0.0	21.3	3.6	34.2	0.2	11.6	46.5	(69.8)	293.2	791.0	12.5
2017	0.9	0.6	8.3	1.7	22.1	3.5	36.3	0.3	7.6	45.1	(69.3)	268.7	812.5	10.5
2018	0.4	0.5	8.2	1.4	22.5	3.4	36.1	0.3	6.8	43.7	(69.4)	243.0	816.0	8.6
2019	0.5	0.3	7.9	1.6	23.1	3.3	36.3	0.5	6.0	43.3	(70.0)	216.3	823.5	7.0
2020	0.4	0.3	7.7	0.0	23.8	3.2	35.0	0.5	4.6	40.6	(74.6) <sup>2</sup>	184.3	815.6	5.8
2021	0.3	0.2	7.3	0.0	24.1	3.1	34.7	0.6	3.7	39.4	(68.9)	155.4	843.3	4.6

<sup>1</sup> FY 2007 Outlays include a transfer of \$17.1 billion to the Postal Service Retiree Health Benefit Fund on June 30, 2007<sup>2</sup> FY 2020 Outlays include an expense of \$4.8 billion for doubtful accounts, for unpaid amounts due from the Postal Service in FY 2017-2019

**Projected Flow**

Fiscal Year	Employee Contributions	Agency Contributions	Treasury 30 Year Payment	Postal Amortized Payment	Interest Payment on UAL	Military Service Payment	Total Government Contributions	Transfer from (to) FERS	Investment Income	Total Income	Total Outlays	Fund End of Year	Dynamic CSRS UAL EOY	CSRS Payroll
2022	\$0.2	\$0.2	\$6.9	\$2.3	\$24.4	\$3.0	\$36.8	\$1.1	\$4.8	\$43.0	\$(70.3)	\$128.1	\$840.2	\$3.7
2023	0.2	0.2	6.5	2.3	25.9	3.0	37.9	23.7	3.7	65.5	(70.7)	122.9	813.1	3.0
2024	0.2	0.1	6.1	2.3	25.4	2.8	36.8	24.5	3.5	65.0	(70.4)	117.6	785.0	2.4
2025	0.1	0.1	5.7	2.4	24.8	2.7	35.7	25.3	3.3	64.5	(69.9)	112.1	755.9	1.9
2026	0.1	0.1	5.5	2.4	24.2	2.6	34.7	25.8	3.1	63.8	(69.3)	106.6	726.1	1.6
2027	0.1	0.1	5.1	2.4	23.5	2.5	33.6	26.3	2.9	62.9	(68.6)	100.9	695.5	1.2
2028	0.1	0.1	4.8	2.4	22.8	2.4	32.5	26.7	2.7	62.0	(67.6)	95.3	664.4	1.0
2029	0.0	0.0	4.5	2.5	22.0	2.3	31.3	27.1	2.5	61.0	(66.6)	89.7	632.7	0.8
2030	0.0	0.0	4.0	2.5	21.2	2.3	30.0	27.4	2.3	59.8	(65.4)	84.1	600.7	0.6
2031	0.0	0.0	3.6	2.5	20.4	2.2	28.7	27.6	2.1	58.5	(64.1)	78.5	568.5	0.5
2032	0.0	0.0	3.1	2.6	19.5	2.2	27.4	27.8	1.9	57.1	(62.6)	73.1	536.1	0.4
2033	0.0	0.0	2.6	2.6	18.6	2.1	25.9	27.9	1.8	55.6	(61.0)	67.7	503.8	0.3
2034	0.0	0.0	2.1	2.7	17.6	2.1	24.5	27.9	1.6	54.0	(59.2)	62.6	471.5	0.2
2035	0.0	0.0	1.8	2.7	16.7	2.0	23.1	27.8	1.4	52.3	(57.3)	57.6	439.4	0.2
2040	0.0	0.0	0.4	3.0	11.7	1.6	16.7	24.9	0.8	42.4	(45.8)	36.9	287.1	0.0
2045	0.0	0.0	0.4	0.0	7.1	1.1	8.6	18.7	0.4	27.7	(32.3)	20.4	163.8	0.0
2050	0.0	0.0	0.1	0.0	3.7	0.7	4.5	11.9	0.0	16.3	(19.3)	2.2	86.3	0.0
2055	0.0	0.0	0.0	0.0	1.6	0.3	1.9	7.6	0.0	9.4	(9.4)	0.0	34.8	0.0
2060	0.0	0.0	0.0	0.0	0.2	0.1	0.3	4.9	0.3	5.5	(3.6)	9.2	1.9	0.0
2065	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	(1.0)	2.5	0.5	0.0
2070	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	(0.2)	0.8	0.2	0.0
2075	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.1)	0.4	0.1	0.0
2080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.3	0.1	0.0
2085	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.2	0.0	0.0
2090	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.1	0.0	0.0
2095	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.0	0.0	0.0
2100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.0	0.0	0.0

**Table 4A: Past and Projected Flow of Plan Assets (CSRS)**

**Past Flow**

[Percentage of Total Payroll (CSRS & FERS)]

Fiscal Year	Employee Contributions	Agency Contributions	Treasury 30 Year Payment	Postal Amortized Payment	Interest Payment on UAL	Military Service Payment	Total Government Contributions	Transfer from (to) FERS	Investment Income	Total Income	Total Outlays	Fund End of Year	Dynamic CSRS UAL EOY	CSRS Payroll
1992	4.5%	4.5%	8.1%	0.8%	10.0%	2.8%	26.2%	0.0%	22.4%	53.1%	(33.6)%	261.6%	607.1%	63.7%
1993	4.4%	4.3%	9.0%	0.9%	9.7%	2.9%	26.8%	0.0%	22.6%	53.8%	(34.7)%	276.3%	537.8%	61.2%
1994	4.1%	4.2%	8.9%	1.0%	9.7%	2.9%	26.1%	0.0%	22.4%	52.6%	(35.1)%	286.3%	526.0%	58.9%
1995	3.9%	4.0%	9.2%	1.1%	8.7%	2.9%	25.9%	0.0%	23.2%	53.0%	(36.3)%	296.9%	520.9%	55.8%
1996	3.7%	3.8%	9.4%	0.9%	8.4%	3.0%	25.5%	0.0%	23.7%	52.9%	(36.4)%	305.3%	480.7%	53.4%
1997	3.6%	3.7%	9.6%	1.0%	9.0%	3.1%	26.2%	0.0%	21.7%	51.7%	(37.6)%	315.5%	472.4%	51.4%
1998	3.5%	4.2%	9.9%	0.8%	8.6%	3.1%	26.7%	0.0%	23.5%	53.6%	(38.6)%	329.1%	459.9%	50.4%
1999	3.1%	4.0%	9.7%	0.8%	7.9%	3.0%	25.4%	0.0%	21.9%	50.5%	(37.2)%	325.1%	443.4%	45.9%
2000	3.2%	3.6%	9.7%	0.8%	7.4%	2.9%	24.4%	0.0%	21.2%	48.8%	(36.4)%	326.8%	431.3%	43.6%
2001	2.9%	3.3%	9.5%	0.9%	6.9%	3.0%	23.6%	0.0%	20.9%	47.4%	(36.5)%	323.0%	420.0%	41.0%
2002	2.7%	3.2%	9.3%	1.0%	6.7%	2.8%	23.0%	0.0%	19.9%	45.6%	(35.9)%	317.7%	405.9%	38.7%
2003	2.5%	2.9%	7.1%	0.0%	6.3%	2.3%	18.6%	0.0%	19.0%	40.1%	(34.6)%	304.8%	386.9%	35.7%
2004	2.3%	3.2%	7.0%	0.2%	8.4%	2.2%	21.0%	0.0%	16.8%	40.1%	(34.3)%	297.3%	375.6%	32.9%
2005	2.1%	2.7%	6.8%	0.2%	8.1%	2.1%	19.9%	0.0%	15.9%	37.8%	(34.4)%	290.0%	385.0%	30.0%
2006	1.9%	2.5%	6.7%	0.2%	9.1%	2.1%	20.6%	0.0%	15.2%	37.7%	(35.2)%	284.0%	378.2%	27.1%
2007	1.7%	1.4%	6.4%	0.0%	8.9%	3.8%	20.5%	0.0%	14.3%	36.5%	(46.2)% <sup>1</sup>	264.3%	393.0%	24.5%
2008	1.5%	1.2%	6.0%	0.0%	9.5%	2.4%	19.1%	0.0%	12.9%	33.5%	(35.2)%	250.6%	398.7%	22.1%
2009	1.3%	1.1%	5.6%	0.0%	9.1%	2.3%	18.2%	0.0%	11.4%	30.8%	(34.7)%	230.1%	366.3%	19.4%
2010	1.2%	0.9%	5.2%	0.0%	9.3%	2.1%	17.7%	0.0%	10.3%	29.2%	(33.5)%	213.9%	332.2%	16.7%
2011	1.0%	0.9%	4.8%	0.0%	9.0%	2.0%	16.7%	0.0%	9.0%	26.8%	(32.5)%	201.3%	375.8%	14.5%
2012	0.9%	0.7%	4.7%	0.0%	9.3%	2.0%	16.8%	0.0%	8.8%	26.4%	(34.0)%	194.6%	382.3%	12.5%
2013	0.8%	0.6%	4.6%	0.0%	8.9%	2.0%	16.1%	0.0%	7.2%	24.2%	(35.1)%	184.6%	384.5%	10.4%
2014	0.6%	0.5%	4.4%	0.0%	10.3%	1.9%	17.2%	0.0%	6.9%	24.7%	(35.5)%	173.3%	384.9%	8.9%
2015	0.7%	0.5%	4.3%	0.0%	10.3%	1.9%	17.0%	0.1%	6.2%	23.8%	(35.3)%	158.6%	370.4%	7.4%
2016	0.3%	0.3%	4.1%	0.0%	10.3%	1.7%	16.6%	0.1%	5.6%	22.6%	(33.9)%	142.3%	384.0%	6.1%
2017	0.4%	0.3%	4.0%	0.8%	10.6%	1.7%	17.4%	0.1%	3.6%	21.6%	(33.1)%	128.4%	388.4%	5.0%
2018	0.2%	0.2%	3.9%	0.7%	10.6%	1.6%	17.1%	0.1%	3.2%	20.6%	(32.8)%	114.8%	385.5%	4.1%
2019	0.2%	0.1%	3.6%	0.7%	10.5%	1.5%	16.5%	0.2%	2.7%	19.6%	(31.7)%	98.1%	373.3%	3.2%
2020	0.2%	0.1%	3.4%	0.0%	10.4%	1.4%	15.3%	0.2%	2.0%	17.7%	(32.5)% <sup>2</sup>	80.3%	355.4%	2.5%
2021	0.1%	0.1%	3.1%	0.0%	10.2%	1.3%	14.7%	0.3%	1.6%	16.7%	(29.2)%	65.8%	356.9%	1.9%

<sup>1</sup> FY 2007 Outlays include a transfer of \$17.1 billion to the Postal Service Retiree Health Benefit Fund on June 30, 2007

<sup>2</sup> FY 2020 Outlays include an expense of \$4.8 billion for doubtful accounts, for unpaid amounts due from the Postal Service in FY 2017-2019

**Projected Flow**

[Percentage of Total Payroll (CSRS & FERS)]

Fiscal Year	Employee Contributions	Agency Contributions	Treasury 30 Year Payment	Postal Amortized Payment	Interest Payment on UAL	Military Service Payment	Total Government Contributions	Transfer from (to) FERS	Investment Income	Total Income	Total Outlays	Fund End of Year	Dynamic CSRS UAL EOY	CSRS Payroll
2022	0.1%	0.1%	2.8%	0.9%	9.9%	1.2%	15.0%	0.4%	2.0%	17.5%	(28.7)%	52.2%	342.6%	1.5%
2023	0.1%	0.1%	2.6%	0.9%	10.2%	1.2%	15.0%	9.4%	1.5%	25.9%	(27.9)%	48.6%	321.2%	1.2%
2024	0.1%	0.1%	2.4%	0.9%	9.7%	1.1%	14.1%	9.4%	1.4%	24.9%	(27.0)%	45.0%	300.6%	0.9%
2025	0.0%	0.0%	2.1%	0.9%	9.2%	1.0%	13.3%	9.4%	1.2%	23.9%	(26.0)%	41.6%	280.6%	0.7%
2026	0.0%	0.0%	2.0%	0.9%	8.7%	0.9%	12.5%	9.3%	1.1%	22.9%	(24.9)%	38.3%	261.3%	0.6%
2027	0.0%	0.0%	1.8%	0.8%	8.2%	0.9%	11.7%	9.2%	1.0%	22.0%	(23.9)%	35.2%	242.8%	0.4%
2028	0.0%	0.0%	1.6%	0.8%	7.7%	0.8%	11.0%	9.0%	0.9%	21.0%	(22.9)%	32.3%	225.1%	0.3%
2029	0.0%	0.0%	1.5%	0.8%	7.2%	0.8%	10.3%	8.9%	0.8%	20.0%	(21.9)%	29.5%	208.1%	0.3%
2030	0.0%	0.0%	1.3%	0.8%	6.8%	0.7%	9.6%	8.8%	0.7%	19.1%	(20.9)%	26.8%	191.8%	0.2%
2031	0.0%	0.0%	1.1%	0.8%	6.3%	0.7%	8.9%	8.6%	0.7%	18.1%	(19.9)%	24.3%	176.2%	0.1%
2032	0.0%	0.0%	0.9%	0.8%	5.9%	0.7%	8.2%	8.4%	0.6%	17.2%	(18.8)%	22.0%	161.4%	0.1%
2033	0.0%	0.0%	0.8%	0.8%	5.4%	0.6%	7.6%	8.2%	0.5%	16.3%	(17.8)%	19.8%	147.3%	0.1%
2034	0.0%	0.0%	0.6%	0.8%	5.0%	0.6%	7.0%	7.9%	0.4%	15.3%	(16.8)%	17.8%	133.9%	0.1%
2035	0.0%	0.0%	0.5%	0.7%	4.6%	0.6%	6.4%	7.7%	0.4%	14.4%	(15.8)%	15.9%	121.3%	0.0%
2040	0.0%	0.0%	0.1%	0.7%	2.8%	0.4%	4.0%	6.0%	0.2%	10.2%	(11.0)%	8.9%	69.0%	0.0%
2045	0.0%	0.0%	0.1%	0.0%	1.5%	0.2%	1.8%	4.0%	0.1%	5.9%	(6.8)%	4.3%	34.6%	0.0%
2050	0.0%	0.0%	0.0%	0.0%	0.7%	0.1%	0.8%	2.2%	0.0%	3.0%	(3.6)%	0.4%	16.1%	0.0%
2055	0.0%	0.0%	0.0%	0.0%	0.3%	0.1%	0.3%	1.2%	0.0%	1.5%	(1.5)%	0.0%	5.7%	0.0%
2060	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.8%	(0.5)%	1.3%	0.3%	0.0%
2065	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.1)%	0.3%	0.1%	0.0%
2070	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0)%	0.1%	0.0%	0.0%
2075	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0)%	0.0%	0.0%	0.0%
2080	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0)%	0.0%	0.0%	0.0%
2085	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0)%	0.0%	0.0%	0.0%
2090	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0)%	0.0%	0.0%	0.0%
2095	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0)%	0.0%	0.0%	0.0%
2100	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	(0.0)%	0.0%	0.0%	0.0%

**Tables 2, 2A, 3, 3A, 4 and 4A: Technical Notes**

Tables 2, 2A, 3 and 3A reflect an open group projection that assumes a sufficient number of new employees are hired each year so that the total employee population remains constant, based on the active employee population as of September 30, 2021.

The dynamic Unfunded Actuarial Liability (UAL) amounts shown for past years in Tables 2, 3 and 4 were determined for each year according to the actuarial assumptions in place for that year, as outlined in Table 5.

The Payroll amounts in Tables 2, 3 and 4 are reduced to reflect assumed leave without pay.

The past Postal Amortized Payments and Total Income shown in Tables 2, 3 and 4 include receivables for the amounts due and unpaid from the United States Postal Service, for scheduled amortized amounts in FY 2014 through FY 2019. For past amounts shown in FY 2020 and beyond, all unpaid amounts due from the Postal Service are excluded from the Income and Assets. The projected Postal Amortized Payments shown in Table 2, 3 and 4 assume payment of all future scheduled amortized amounts.

For FERS, projected agency contributions shown in Tables 2 and 3 are generally assumed to equal the full normal cost less the employee contributions. However, for non-Postal FERS-FRAE, statute requires combined agency and employee contributions that exceed the normal cost. These excess contributions for FERS-FRAE are required to be allocated to CSRS. All FERS-FRAE contributions are included in the contribution amounts shown for FERS in Tables 2 and 3. The excess FERS-FRAE contributions projected to be allocated to CSRS are included in the projected transfer payments from FERS to CSRS shown in Tables 3 and 4.

The projections in Table 3 reflect future increases in the FERS UAL due to the use of amounts in the FERS asset balance for payment of CSRS benefits in FY 2022 and beyond.

The Projected Flow of plan assets shown for future years in Tables 2, 3 and 4 is based on the following economic assumptions:<sup>\*</sup>

<b>Rate of Inflation for Determination of COLA</b>	<b>General Salary Increase*</b>	<b>Rate of Interest on CSRDF Investments</b>
FY 2022. . . . . 5.90%	FY 2022 Non-Postal...2.70%	FY 2022. . . . . 4.00%
	FY 2022 Postal . . . . 2.65%	
<i>Future Years: 2.40%</i>	<i>Future Years: 2.65%</i>	<i>Future Years: 4.00%</i>

<sup>\*</sup> The General Salary Increase assumption incorporates the general pay raise component plus the locality pay differential component. A separate additional assumption applies for individual merit & longevity pay increases; see Demographic Assumptions in Table 7.



**Table 5: Valuation Assumption History**

Recommendation Date	Effective for Valuation Dates	Long Term Economic Assumptions		
		Interest	Inflation	Salary Growth
10/1/1979	<b>9/30/1979 - 9/30/1982</b>	6.00%	5.00%	5.50%
10/1/1983*	<b>9/30/1983 - 9/30/1986</b>	6.50%	5.00%	5.50%
10/1/1987	<b>9/30/1987 - 9/30/1988</b>	7.00%	5.00%	5.00%
4/1/1989	<b>9/30/1989 - 9/30/1992</b>	7.00%	5.00%	5.00%
12/31/1992	<b>9/30/1993 - 9/30/1995</b>	7.00%	4.50%	4.50%
2/11/1997*	<b>9/30/1996 - 9/30/1999</b>	7.00%	4.00%	4.25%
3/16/2001	<b>9/30/2000 - 9/30/2001</b>	6.75%	3.75%	4.25%
5/8/2003	<b>9/30/2002 - 9/30/2004</b>	6.25%	3.25%	4.00%
6/8/2006*	<b>9/30/2005 - 9/30/2006</b>	6.25%	3.50%	4.25%
7/25/2008*	<b>9/30/2007 - 9/30/2008</b>	6.25%	3.50%	4.25%
6/11/2010	<b>9/30/2009 - 9/30/2010</b>	5.75%	3.00%	3.75%
7/13/2012*	<b>9/30/2011 - 9/30/2011</b>	5.25%	3.00%	3.25%
6/18/2013*	<b>9/30/2012 - 9/30/2015</b>	5.25%	3.00%	3.25%
6/1/2017*	<b>9/30/2016 - 9/30/2016</b>	4.50%	2.50%	2.75%
4/12/2018*	<b>9/30/2017 - 9/30/2018</b>	4.25%	2.50%	2.75%
4/2/2020*	<b>9/30/2019 - 9/30/2020</b>	4.00%	2.40%	2.65%
5/10/2022*	<b>9/30/2021 -</b>	4.00%	2.40%	2.65%

\* Change in Demographic Assumptions

**Table 6: Employee Population Data****Active Employee Population\* as of September 30, 2021**

Employees	Non-Postal	Postal	Total	Avg Age	Avg Service
<b>CSRS</b>	31,000	13,000	44,000	65.8	40.3
<b>FERS</b>	2,289,000	499,000	2,788,000	47.1	12.4
<b>Total</b>	2,320,000	512,000	2,832,000	47.4	12.9

\*Employee counts are determined on a full-time equivalent basis

**CSRS Active Employees****Number\* as of September 30, 2021**

Age Nearest Birthday	Closest Whole Years of Service							Total
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
< 55	0	0	0	0	0	0	0	0
55 - 59	0	35	26	66	127	162	3,469	3,886
60 - 64	0	85	154	260	371	513	14,571	15,954
65 - 69	0	54	114	205	331	356	13,454	14,515
70 - 74	0	22	37	59	101	125	6,352	6,696
75+	0	10	19	26	31	53	2,811	2,949
<b>CSRS Total</b>	0	206	350	617	961	1,209	40,657	44,000

\*Employee counts are determined on a full-time equivalent basis

**Average Salary as of September 30, 2021**

Age Nearest Birthday	Closest Whole Years of Service							Total
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
< 55	--	--	--	--	--	--	--	--
55 - 59	--	\$80,322	\$87,494	\$91,551	\$91,189	\$100,014	\$103,454	\$102,390
60 - 64	--	91,391	90,790	93,786	95,602	99,185	98,841	98,577
65 - 69	--	99,425	87,352	102,539	96,280	98,034	92,723	93,056
70 - 74	--	118,658	123,740	99,506	104,328	109,126	97,471	98,026
75+	--	174,948	106,557	127,961	126,884	105,424	105,450	106,113
<b>CSRS Total</b>	--	\$98,501	\$93,767	\$98,468	\$97,166	\$100,257	\$97,453	\$97,514

## FERS Active Employees

### Number\* as of September 30, 2021

Age Nearest Birthday	Closest Whole Years of Service							Total
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
15 - 19	777	0	0	0	0	0	0	777
20 - 24	40,980	433	0	0	0	0	0	41,413
25 - 29	126,823	25,953	475	0	0	0	0	153,251
30 - 34	145,042	86,757	24,770	1,045	0	0	0	257,615
35 - 39	122,377	100,947	93,463	29,465	1,305	0	0	347,557
40 - 44	95,481	81,795	91,859	78,107	25,602	777	0	373,621
45 - 49	76,155	63,585	67,016	67,387	57,348	17,218	1,954	350,663
50 - 54	68,089	64,814	69,764	62,008	63,029	46,717	38,493	412,914
55 - 59	49,194	51,828	70,823	62,612	51,040	41,091	94,230	420,817
60 - 64	27,457	33,626	47,913	47,925	36,561	24,413	69,118	287,012
65 - 69	8,544	12,396	18,105	18,119	14,629	9,400	25,615	106,806
70 - 74	2,242	3,036	4,640	4,507	3,741	2,613	6,522	27,302
75+	821	838	1,214	1,328	1,149	828	2,073	8,251
<b>FERS Total</b>	<b>763,982</b>	<b>526,006</b>	<b>490,042</b>	<b>372,505</b>	<b>254,403</b>	<b>143,057</b>	<b>238,006</b>	<b>2,788,000</b>

\*Employee counts are determined on a full-time equivalent basis

### Average Salary as of September 30, 2021

Age Nearest Birthday	Closest Whole Years of Service							Total
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
15 - 19	\$36,475	--	--	--	--	--	--	\$36,475
20 - 24	48,305	\$52,935	--	--	--	--	--	48,353
25 - 29	57,117	68,787	\$70,489	--	--	--	--	59,135
30 - 34	63,826	75,401	88,344	\$79,040	--	--	--	70,143
35 - 39	70,165	82,599	96,290	95,057	\$95,682	--	--	83,008
40 - 44	70,813	86,245	98,386	100,619	101,227	\$104,135	--	89,355
45 - 49	72,154	85,539	100,046	99,813	100,418	99,938	\$110,094	91,425
50 - 54	73,102	84,470	96,365	97,644	98,840	100,544	109,505	92,930
55 - 59	73,358	85,366	96,272	94,773	96,044	97,541	106,474	94,408
60 - 64	74,061	85,315	96,532	94,649	94,683	97,670	102,789	94,122
65 - 69	82,946	88,996	99,606	97,680	97,288	98,503	102,989	97,112
70 - 74	83,205	95,308	103,615	98,820	100,198	101,217	106,780	100,282
75+	71,104	100,857	108,613	106,190	102,518	106,508	107,528	102,372
<b>FERS Total</b>	<b>\$66,657</b>	<b>\$82,558</b>	<b>\$97,024</b>	<b>\$97,582</b>	<b>\$98,209</b>	<b>\$99,050</b>	<b>\$105,566</b>	<b>\$86,989</b>

**Table 7: Demographic Assumptions****Non-Postal, Male****Normal Retirement Rates-CSRS**

Age (ANB)	Years of Service						
	5 - 9	10-14	15-19	20	21-29	30	31+
55	0.0000	0.0000	0.0000	0.0000	0.0000	0.1508	0.3420
56 - 59	0.0000	0.0000	0.0000	0.0000	0.0000	0.1245	0.1705
60	0.0000	0.0000	0.0000	0.2434	0.2051	0.1645	0.2040
61	0.0000	0.0000	0.0000	0.1906	0.1098	0.1131	0.1989
62	0.2897	0.3702	0.3308	0.2722	0.1309	0.1209	0.2166
63	0.1538	0.1641	0.1655	0.1985	0.1210	0.1312	0.2168
64	0.1756	0.1937	0.1782	0.1900	0.1309	0.1221	0.2273
65	0.3046	0.3649	0.2527	0.2317	0.1723	0.1099	0.2470
66 - 69	0.2104	0.2300	0.2074	0.2087	0.1604	0.1418	0.2262
70-74	0.1775	0.2006	0.2203	0.1904	0.1677	0.1694	0.2115
75-84	0.1775	0.2006	0.2203	0.1904	0.1848	0.1980	0.1908

**Normal Retirement Rates-FERS**

Age (ANB)	Years of Service						
	5 - 9	10-14	15-19	20	21-29	30	31+
MRA	0.0000	0.0000	0.0000	0.0000	0.0000	0.1937	0.3207
58 - 59	0.0000	0.0000	0.0000	0.0000	0.0000	0.1461	0.1452
60	0.0000	0.0000	0.0000	0.2258	0.1487	0.1428	0.1423
61	0.0000	0.0000	0.0000	0.1237	0.0777	0.0937	0.1288
62	0.2577	0.1787	0.1834	0.1975	0.1501	0.1828	0.2839
63	0.0782	0.0984	0.1027	0.1764	0.1171	0.1371	0.1964
64	0.0896	0.1073	0.1113	0.1620	0.1248	0.1377	0.1907
65	0.1106	0.1512	0.1526	0.1989	0.1644	0.1732	0.2477
66 - 69	0.1356	0.1732	0.1849	0.2518	0.1922	0.2142	0.2640
70-74	0.1392	0.1744	0.1786	0.2426	0.1910	0.2474	0.2304
75-84	0.1262	0.1890	0.1701	0.2776	0.1947	0.1654	0.2248

### Involuntary Retirement

<b>Age</b>	<b>CSRS</b>	<b>FERS</b>
<b>42</b>	0.0053	0.0053
<b>43</b>	0.0053	0.0053
<b>44</b>	0.0053	0.0053
<b>45</b>	0.0053	0.0053
<b>46</b>	0.0047	0.0047
<b>47</b>	0.0065	0.0065
<b>48</b>	0.0054	0.0054
<b>49</b>	0.0073	0.0073
<b>50</b>	0.0062	0.0062
<b>51</b>	0.0064	0.0064
<b>52</b>	0.0064	0.0064
<b>53</b>	0.0080	0.0080
<b>54</b>	0.0093	0.0093
<b>55</b>	0.0100	0.0100
<b>56</b>	0.0120	0.0120
<b>57</b>	0.0104	0.0104
<b>58</b>	0.0094	0.0094
<b>59+</b>	0.0083	0.0083

### MRA+10 Retirement

<b>Age</b>	<b>FERS</b>
<b>&lt;=57</b>	0.0187
<b>58</b>	0.0149
<b>59</b>	0.0182
<b>60</b>	0.0369
<b>61</b>	0.0393

### Merit/Longevity Salary Increases

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-44	45-54	55+
0	0.1188	0.0977	0.0703	0.0531	0.0442	0.0354
1	0.1228	0.1040	0.0784	0.0585	0.0474	0.0377
2	0.1108	0.0937	0.0696	0.0516	0.0415	0.0335
3	0.0913	0.0772	0.0585	0.0433	0.0338	0.0268
4	0.0814	0.0651	0.0520	0.0392	0.0303	0.0237
5	0.0735	0.0580	0.0465	0.0361	0.0283	0.0223
6	0.0748	0.0515	0.0430	0.0339	0.0269	0.0208
7	0.0730	0.0489	0.0395	0.0321	0.0249	0.0192
8	0.0000	0.0479	0.0372	0.0300	0.0231	0.0178
9	0.0000	0.0469	0.0350	0.0288	0.0221	0.0169
10	0.0000	0.0470	0.0334	0.0274	0.0208	0.0157
11	0.0000	0.0455	0.0329	0.0263	0.0205	0.0156
12	0.0000	0.0470	0.0326	0.0252	0.0197	0.0148
13	0.0000	0.0000	0.0335	0.0243	0.0192	0.0136
14	0.0000	0.0000	0.0339	0.0236	0.0187	0.0138
15	0.0000	0.0000	0.0346	0.0227	0.0179	0.0132
16	0.0000	0.0000	0.0324	0.0224	0.0176	0.0128
17	0.0000	0.0000	0.0335	0.0222	0.0173	0.0128
18	0.0000	0.0000	0.0000	0.0220	0.0168	0.0124
19	0.0000	0.0000	0.0000	0.0214	0.0165	0.0121
20-24	0.0000	0.0000	0.0000	0.0209	0.0152	0.0112
25-29	0.0000	0.0000	0.0000	0.0203	0.0131	0.0092
30+	0.0000	0.0000	0.0000	0.0000	0.0123	0.0077

### Assumed Distribution of New Entrants

Age (ANB)	Amount Prior Service (Years)				
	0-1	2-5	6-10	11-15	16-20
17-20	449	11	0	0	0
21-25	5,738	635	17	0	0
26-30	6,752	2,372	275	10	0
31-35	5,706	2,771	410	101	3
36-40	4,443	2,025	279	123	19
41-45	5,092	1,979	215	96	30
46-50	4,954	1,914	188	87	25
51-55	3,758	1,440	155	68	23
56-60	2,481	955	99	47	16
61-65	1,098	484	42	17	8
66-70	309	136	14	5	2
71-75	73	29	3	1	1

**Assumed New Entrants : Average Salary (as of FY 2020)**

Age (ANB)	Amount Prior Service (Years)				
	0-1	2-5	6-10	11-15	16-20
17-20	\$35,173	\$30,837	-	-	-
21-25	\$46,603	\$42,684	\$45,613	-	-
26-30	\$54,281	\$52,100	\$53,455	\$59,938	-
31-35	\$67,923	\$61,105	\$64,457	\$62,412	\$69,177
36-40	\$72,968	\$66,244	\$73,749	\$76,719	\$77,914
41-45	\$71,568	\$65,272	\$75,687	\$83,297	\$92,171
46-50	\$73,475	\$65,107	\$75,961	\$80,665	\$99,009
51-55	\$76,720	\$66,029	\$75,566	\$84,232	\$92,931
56-60	\$77,566	\$63,324	\$75,664	\$89,898	\$90,008
61-65	\$86,540	\$69,380	\$86,383	\$101,864	\$104,842
66-70	\$96,241	\$82,152	\$96,552	\$103,372	\$113,302
71-75	\$110,363	\$113,967	\$106,790	\$138,364	\$130,401

**Withdrawal Rates (Offset for Re-entry)**

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-39	40-44	45+
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.1164	0.0885	0.0774	0.0702	0.0577	0.0613
2	0.0876	0.0701	0.0623	0.0563	0.0440	0.0420
3	0.0785	0.0611	0.0514	0.0496	0.0384	0.0354
4	0.0616	0.0516	0.0435	0.0426	0.0320	0.0257
5	0.0630	0.0483	0.0375	0.0365	0.0292	0.0216
6	0.0617	0.0432	0.0324	0.0304	0.0280	0.0183
7	0.0337	0.0403	0.0277	0.0268	0.0237	0.0168
8	0.0000	0.0349	0.0249	0.0245	0.0222	0.0153
9	0.0000	0.0353	0.0234	0.0222	0.0196	0.0121
10	0.0000	0.0297	0.0220	0.0184	0.0174	0.0123
11	0.0000	0.0267	0.0209	0.0176	0.0173	0.0104
12	0.0000	0.0141	0.0208	0.0151	0.0138	0.0094
13	0.0000	0.0000	0.0186	0.0127	0.0130	0.0085
14	0.0000	0.0000	0.0199	0.0118	0.0125	0.0082
15	0.0000	0.0000	0.0215	0.0123	0.0085	0.0060
16	0.0000	0.0000	0.0196	0.0108	0.0088	0.0068
17	0.0000	0.0000	0.0094	0.0126	0.0071	0.0049
18	0.0000	0.0000	0.0000	0.0121	0.0083	0.0047
19	0.0000	0.0000	0.0000	0.0068	0.0044	0.0049
20+	0.0000	0.0000	0.0000	0.0078	0.0051	0.0017

**Fraction of Withdrawing Employees Electing Refunds**

<b>Service</b>	<b>CSRS</b>	<b>FERS</b>	<b>FERS-RAE</b>	<b>FERS-FRAE</b>	<b>Fraction of Withdrawing Employees with Workers Compensation</b>
<b>0</b>	1.0000	1.0000	1.0000	1.0000	0.0000
<b>1</b>	0.9940	0.9940	0.9940	0.9940	0.0060
<b>2</b>	0.9920	0.9920	0.9920	0.9920	0.0080
<b>3</b>	0.9900	0.9900	0.9900	0.9900	0.0100
<b>4</b>	0.9880	0.9880	0.9880	0.9880	0.0120
<b>5</b>	0.9940	0.8900	0.9720	0.9800	0.0140
<b>6</b>	0.9680	0.8350	0.9220	0.9350	0.0170
<b>7</b>	0.9430	0.7810	0.8720	0.8910	0.0190
<b>8</b>	0.9170	0.7260	0.8220	0.8460	0.0220
<b>9</b>	0.8920	0.6720	0.7720	0.8010	0.0250
<b>10</b>	0.8660	0.6170	0.7220	0.7560	0.0280
<b>11</b>	0.8400	0.5630	0.6720	0.7120	0.0310
<b>12</b>	0.8150	0.5080	0.6220	0.6670	0.0350
<b>13</b>	0.7890	0.4540	0.5730	0.6220	0.0380
<b>14</b>	0.7640	0.3990	0.5230	0.5770	0.0410
<b>15</b>	0.7380	0.3450	0.4730	0.5330	0.0450
<b>16</b>	0.7120	0.2900	0.4230	0.4880	0.0530
<b>17</b>	0.6870	0.2360	0.3730	0.4430	0.0660
<b>18</b>	0.6610	0.1810	0.3230	0.3980	0.0900
<b>19</b>	0.6360	0.1270	0.2730	0.3540	0.1250
<b>20+</b>	0.6100	0.0720	0.2230	0.3090	0.1740



## Employee Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
21	0.00012	0.00012	0.00012	0.00012	0.00012	0.00011	0.00011	0.00011	0.00011	0.0100
22	0.00022	0.00022	0.00022	0.00022	0.00021	0.00021	0.00021	0.00021	0.00020	0.0100
23	0.00030	0.00030	0.00029	0.00029	0.00029	0.00029	0.00028	0.00028	0.00028	0.0100
24	0.00035	0.00035	0.00035	0.00034	0.00034	0.00034	0.00033	0.00033	0.00033	0.0100
25	0.00039	0.00038	0.00038	0.00037	0.00037	0.00037	0.00036	0.00036	0.00036	0.0100
26	0.00040	0.00039	0.00039	0.00039	0.00038	0.00038	0.00038	0.00037	0.00037	0.0100
27	0.00039	0.00039	0.00038	0.00038	0.00038	0.00037	0.00037	0.00036	0.00036	0.0100
28	0.00038	0.00038	0.00037	0.00037	0.00037	0.00036	0.00036	0.00036	0.00035	0.0100
29	0.00039	0.00039	0.00038	0.00038	0.00038	0.00037	0.00037	0.00037	0.00036	0.0100
30	0.00042	0.00041	0.00041	0.00040	0.00040	0.00040	0.00039	0.00039	0.00039	0.0100
31	0.00044	0.00043	0.00043	0.00042	0.00042	0.00042	0.00041	0.00041	0.00040	0.0100
32	0.00043	0.00043	0.00043	0.00042	0.00042	0.00041	0.00041	0.00041	0.00040	0.0100
33	0.00041	0.00041	0.00041	0.00040	0.00040	0.00039	0.00039	0.00039	0.00038	0.0100
34	0.00038	0.00038	0.00037	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.0100
35	0.00036	0.00036	0.00035	0.00035	0.00035	0.00034	0.00034	0.00033	0.00033	0.0100
36	0.00039	0.00038	0.00038	0.00037	0.00037	0.00037	0.00036	0.00036	0.00036	0.0100
37	0.00044	0.00044	0.00044	0.00043	0.00043	0.00042	0.00042	0.00041	0.00041	0.0100
38	0.00049	0.00049	0.00048	0.00047	0.00047	0.00047	0.00046	0.00046	0.00045	0.0100
39	0.00052	0.00051	0.00051	0.00050	0.00050	0.00049	0.00049	0.00048	0.00048	0.0100
40	0.00055	0.00054	0.00053	0.00052	0.00052	0.00051	0.00051	0.00050	0.00050	0.0100
41	0.00059	0.00058	0.00057	0.00056	0.00055	0.00055	0.00054	0.00054	0.00053	0.0100
42	0.00063	0.00062	0.00061	0.00060	0.00059	0.00058	0.00058	0.00057	0.00057	0.0100
43	0.00067	0.00066	0.00065	0.00064	0.00063	0.00062	0.00061	0.00061	0.00060	0.0100
44	0.00072	0.00071	0.00069	0.00068	0.00067	0.00067	0.00066	0.00065	0.00064	0.0100
45	0.00078	0.00077	0.00076	0.00074	0.00073	0.00072	0.00072	0.00071	0.00070	0.0100
46	0.00086	0.00085	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.0100
47	0.00093	0.00092	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.0100
48	0.00101	0.00099	0.00098	0.00096	0.00095	0.00094	0.00092	0.00091	0.00091	0.0100
49	0.00107	0.00105	0.00104	0.00102	0.00101	0.00099	0.00098	0.00097	0.00096	0.0100
50	0.00110	0.00108	0.00106	0.00104	0.00103	0.00102	0.00100	0.00099	0.00098	0.0100
51	0.00113	0.00111	0.00109	0.00108	0.00106	0.00105	0.00104	0.00103	0.00102	0.0100
52	0.00119	0.00117	0.00115	0.00113	0.00112	0.00110	0.00109	0.00108	0.00107	0.0100
53	0.00129	0.00126	0.00124	0.00123	0.00121	0.00119	0.00118	0.00117	0.00115	0.0100
54	0.00140	0.00138	0.00136	0.00134	0.00132	0.00130	0.00128	0.00127	0.00126	0.0100
55	0.00150	0.00148	0.00145	0.00143	0.00141	0.00139	0.00138	0.00136	0.00135	0.0100
56	0.00158	0.00155	0.00153	0.00151	0.00148	0.00147	0.00145	0.00143	0.00142	0.0100
57	0.00164	0.00161	0.00158	0.00156	0.00154	0.00152	0.00150	0.00148	0.00147	0.0100
58	0.00169	0.00166	0.00164	0.00161	0.00159	0.00157	0.00155	0.00153	0.00152	0.0100
59	0.00174	0.00171	0.00168	0.00166	0.00164	0.00161	0.00159	0.00158	0.00156	0.0100
60	0.00180	0.00177	0.00174	0.00171	0.00169	0.00167	0.00165	0.00163	0.00161	0.0100
61	0.00190	0.00187	0.00184	0.00181	0.00179	0.00177	0.00174	0.00173	0.00171	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
62	0.00204	0.00201	0.00197	0.00194	0.00192	0.00189	0.00187	0.00185	0.00183	0.0100
63	0.00217	0.00213	0.00209	0.00206	0.00203	0.00201	0.00198	0.00196	0.00194	0.0100
64	0.00228	0.00224	0.00220	0.00217	0.00214	0.00211	0.00209	0.00206	0.00204	0.0100
65	0.00243	0.00239	0.00235	0.00232	0.00228	0.00225	0.00223	0.00220	0.00218	0.0100
66	0.00271	0.00266	0.00262	0.00258	0.00255	0.00251	0.00248	0.00246	0.00243	0.0100
67	0.00318	0.00312	0.00307	0.00303	0.00298	0.00294	0.00291	0.00288	0.00285	0.0100
68	0.00384	0.00378	0.00372	0.00366	0.00361	0.00356	0.00352	0.00348	0.00345	0.0100
69	0.00468	0.00460	0.00453	0.00446	0.00440	0.00434	0.00429	0.00424	0.00420	0.0100
70	0.00553	0.00543	0.00534	0.00526	0.00519	0.00512	0.00506	0.00501	0.00496	0.0100
71	0.00624	0.00613	0.00604	0.00595	0.00586	0.00579	0.00572	0.00565	0.00560	0.0100
72	0.00674	0.00663	0.00652	0.00643	0.00634	0.00625	0.00618	0.00611	0.00605	0.0100
73	0.00703	0.00691	0.00680	0.00670	0.00660	0.00652	0.00644	0.00637	0.00630	0.0100
74	0.00715	0.00703	0.00692	0.00682	0.00672	0.00663	0.00655	0.00648	0.00642	0.0100
75	0.00728	0.00716	0.00704	0.00694	0.00684	0.00675	0.00667	0.00660	0.00653	0.0100
76	0.00763	0.00750	0.00738	0.00727	0.00717	0.00707	0.00699	0.00691	0.00684	0.0100
77	0.00831	0.00817	0.00804	0.00792	0.00781	0.00771	0.00762	0.00753	0.00746	0.0100
78	0.00931	0.00915	0.00901	0.00887	0.00875	0.00863	0.00853	0.00844	0.00835	0.0100
79	0.01055	0.01037	0.01020	0.01005	0.00991	0.00978	0.00966	0.00955	0.00946	0.0100
80	0.01194	0.01174	0.01155	0.01138	0.01122	0.01107	0.01094	0.01082	0.01071	0.0100
81	0.01345	0.01322	0.01301	0.01282	0.01264	0.01247	0.01232	0.01219	0.01207	0.0100
82	0.01515	0.01489	0.01465	0.01443	0.01423	0.01405	0.01388	0.01373	0.01359	0.0100
83	0.01709	0.01680	0.01653	0.01629	0.01606	0.01585	0.01566	0.01549	0.01533	0.0100
84	0.01933	0.01900	0.01870	0.01842	0.01816	0.01793	0.01771	0.01752	0.01734	0.0100
85	0.02192	0.02154	0.02120	0.02088	0.02059	0.02032	0.02008	0.01986	0.01966	0.0100
86	0.02488	0.02446	0.02407	0.02371	0.02338	0.02308	0.02280	0.02256	0.02233	0.0099
87	0.02841	0.02795	0.02752	0.02712	0.02675	0.02642	0.02611	0.02583	0.02558	0.0097
88	0.03275	0.03226	0.03181	0.03139	0.03100	0.03064	0.03030	0.02999	0.02970	0.0096
89	0.03774	0.03725	0.03679	0.03635	0.03594	0.03555	0.03518	0.03483	0.03450	0.0094
90	0.04345	0.04297	0.04251	0.04207	0.04164	0.04122	0.04082	0.04043	0.04006	0.0093
91	0.04993	0.04949	0.04905	0.04861	0.04818	0.04774	0.04731	0.04688	0.04646	0.0091
92	0.05725	0.05687	0.05648	0.05606	0.05564	0.05519	0.05474	0.05426	0.05378	0.0089
93	0.06548	0.06520	0.06488	0.06451	0.06411	0.06367	0.06319	0.06268	0.06213	0.0088
94	0.07414	0.07395	0.07369	0.07338	0.07299	0.07255	0.07205	0.07149	0.07087	0.0086
95	0.08241	0.08220	0.08193	0.08158	0.08116	0.08068	0.08013	0.07952	0.07884	0.0085
96	0.09126	0.09104	0.09074	0.09038	0.08994	0.08943	0.08885	0.08820	0.08749	0.0081
97	0.10067	0.10044	0.10013	0.09975	0.09928	0.09875	0.09814	0.09746	0.09671	0.0077
98	0.11065	0.11041	0.11009	0.10968	0.10920	0.10865	0.10801	0.10730	0.10652	0.0073
99	0.12119	0.12094	0.12061	0.12019	0.11969	0.11912	0.11846	0.11772	0.11691	0.0069
100	0.13230	0.13204	0.13170	0.13127	0.13076	0.13016	0.12949	0.12873	0.12789	0.0065
101	0.14397	0.14371	0.14336	0.14292	0.14240	0.14179	0.14110	0.14032	0.13947	0.0061
102	0.15621	0.15594	0.15558	0.15514	0.15461	0.15399	0.15329	0.15251	0.15164	0.0057
103	0.16901	0.16874	0.16838	0.16794	0.16740	0.16678	0.16607	0.16528	0.16441	0.0053
104	0.18237	0.18211	0.18175	0.18130	0.18077	0.18015	0.17945	0.17865	0.17778	0.0049
105	0.18240	0.18215	0.18182	0.18141	0.18092	0.18035	0.17970	0.17898	0.17817	0.0045

### Rate of Employee Death with Spouse Survivor

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
29	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.0100
30	0.00002	0.00002	0.00002	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.0100
31	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0100
32	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.0100
33	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00004	0.00004	0.0100
34	0.00007	0.00007	0.00007	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.0100
35	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.0100
36	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00009	0.00009	0.0100
37	0.00012	0.00012	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.0100
38	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00012	0.00012	0.0100
39	0.00016	0.00016	0.00015	0.00015	0.00015	0.00015	0.00015	0.00015	0.00015	0.0100
40	0.00018	0.00018	0.00018	0.00018	0.00017	0.00017	0.00017	0.00017	0.00017	0.0100
41	0.00021	0.00020	0.00020	0.00020	0.00019	0.00019	0.00019	0.00019	0.00019	0.0100
42	0.00023	0.00022	0.00022	0.00022	0.00022	0.00021	0.00021	0.00021	0.00021	0.0100
43	0.00025	0.00025	0.00025	0.00024	0.00024	0.00024	0.00023	0.00023	0.00023	0.0100
44	0.00027	0.00027	0.00026	0.00026	0.00026	0.00025	0.00025	0.00025	0.00025	0.0100
45	0.00028	0.00028	0.00027	0.00027	0.00026	0.00026	0.00026	0.00026	0.00025	0.0100
46	0.00029	0.00029	0.00029	0.00028	0.00028	0.00027	0.00027	0.00027	0.00026	0.0100
47	0.00033	0.00033	0.00032	0.00032	0.00031	0.00031	0.00031	0.00030	0.00030	0.0100
48	0.00040	0.00039	0.00039	0.00038	0.00038	0.00037	0.00037	0.00036	0.00036	0.0100
49	0.00048	0.00047	0.00046	0.00046	0.00045	0.00045	0.00044	0.00044	0.00043	0.0100
50	0.00055	0.00054	0.00054	0.00053	0.00052	0.00051	0.00051	0.00050	0.00050	0.0100
51	0.00062	0.00061	0.00060	0.00059	0.00059	0.00058	0.00057	0.00056	0.00056	0.0100
52	0.00070	0.00069	0.00068	0.00067	0.00066	0.00065	0.00064	0.00063	0.00063	0.0100
53	0.00079	0.00078	0.00076	0.00075	0.00074	0.00073	0.00072	0.00072	0.00071	0.0100
54	0.00089	0.00087	0.00086	0.00085	0.00083	0.00082	0.00081	0.00080	0.00080	0.0100
55	0.00098	0.00097	0.00095	0.00094	0.00092	0.00091	0.00090	0.00089	0.00088	0.0100
56	0.00107	0.00105	0.00103	0.00102	0.00101	0.00099	0.00098	0.00097	0.00096	0.0100
57	0.00116	0.00114	0.00113	0.00111	0.00109	0.00108	0.00107	0.00105	0.00104	0.0100
58	0.00128	0.00125	0.00123	0.00122	0.00120	0.00118	0.00117	0.00116	0.00114	0.0100
59	0.00139	0.00136	0.00134	0.00132	0.00130	0.00129	0.00127	0.00126	0.00124	0.0100
60	0.00149	0.00146	0.00144	0.00142	0.00140	0.00138	0.00136	0.00135	0.00133	0.0100
61	0.00157	0.00155	0.00152	0.00150	0.00148	0.00146	0.00144	0.00143	0.00141	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
62	0.00168	0.00165	0.00162	0.00160	0.00158	0.00155	0.00154	0.00152	0.00150	0.0100
63	0.00180	0.00177	0.00174	0.00172	0.00169	0.00167	0.00165	0.00163	0.00162	0.0100
64	0.00194	0.00191	0.00188	0.00185	0.00182	0.00180	0.00178	0.00176	0.00174	0.0100
65	0.00209	0.00205	0.00202	0.00199	0.00196	0.00194	0.00191	0.00189	0.00187	0.0100
66	0.00225	0.00221	0.00217	0.00214	0.00211	0.00208	0.00206	0.00204	0.00202	0.0100
67	0.00243	0.00238	0.00235	0.00231	0.00228	0.00225	0.00222	0.00220	0.00218	0.0100
68	0.00261	0.00257	0.00253	0.00249	0.00246	0.00242	0.00240	0.00237	0.00235	0.0100
69	0.00278	0.00274	0.00269	0.00265	0.00261	0.00258	0.00255	0.00252	0.00250	0.0100
70	0.00294	0.00289	0.00284	0.00280	0.00276	0.00272	0.00269	0.00266	0.00263	0.0100
71	0.00313	0.00308	0.00303	0.00298	0.00294	0.00290	0.00287	0.00284	0.00281	0.0100
72	0.00343	0.00337	0.00332	0.00327	0.00322	0.00318	0.00314	0.00311	0.00308	0.0100
73	0.00386	0.00380	0.00374	0.00368	0.00363	0.00358	0.00354	0.00350	0.00347	0.0100
74	0.00440	0.00432	0.00425	0.00419	0.00413	0.00408	0.00403	0.00399	0.00395	0.0100
75	0.00499	0.00491	0.00483	0.00476	0.00469	0.00463	0.00458	0.00452	0.00448	0.0100
76	0.00562	0.00553	0.00544	0.00536	0.00528	0.00521	0.00515	0.00510	0.00504	0.0100
77	0.00625	0.00614	0.00605	0.00596	0.00587	0.00580	0.00573	0.00566	0.00561	0.0100
78	0.00684	0.00673	0.00662	0.00652	0.00643	0.00635	0.00627	0.00620	0.00614	0.0100
79	0.00739	0.00726	0.00714	0.00704	0.00694	0.00685	0.00677	0.00669	0.00662	0.0100
80	0.00790	0.00777	0.00764	0.00753	0.00742	0.00733	0.00724	0.00716	0.00709	0.0100
81	0.00846	0.00832	0.00818	0.00806	0.00795	0.00784	0.00775	0.00767	0.00759	0.0100
82	0.00915	0.00900	0.00885	0.00872	0.00860	0.00849	0.00838	0.00829	0.00821	0.0100
83	0.01007	0.00990	0.00974	0.00960	0.00946	0.00934	0.00923	0.00913	0.00904	0.0100
84	0.01130	0.01111	0.01093	0.01077	0.01062	0.01048	0.01036	0.01024	0.01014	0.0100
85	0.01290	0.01268	0.01248	0.01229	0.01212	0.01196	0.01182	0.01169	0.01157	0.0100
86	0.01490	0.01465	0.01442	0.01420	0.01400	0.01382	0.01366	0.01351	0.01338	0.0099
87	0.01741	0.01712	0.01686	0.01662	0.01639	0.01619	0.01600	0.01583	0.01568	0.0097
88	0.02056	0.02026	0.01998	0.01971	0.01947	0.01924	0.01903	0.01883	0.01865	0.0096
89	0.02426	0.02395	0.02365	0.02337	0.02311	0.02285	0.02262	0.02239	0.02218	0.0094
90	0.02853	0.02822	0.02792	0.02762	0.02734	0.02707	0.02681	0.02655	0.02631	0.0093
91	0.03339	0.03310	0.03280	0.03251	0.03222	0.03193	0.03164	0.03135	0.03107	0.0091
92	0.03888	0.03862	0.03835	0.03807	0.03778	0.03748	0.03717	0.03685	0.03652	0.0089
93	0.04503	0.04484	0.04462	0.04437	0.04409	0.04379	0.04346	0.04310	0.04273	0.0088
94	0.05152	0.05138	0.05121	0.05098	0.05072	0.05041	0.05006	0.04967	0.04924	0.0086
95	0.05775	0.05760	0.05740	0.05716	0.05687	0.05653	0.05615	0.05572	0.05524	0.0085
96	0.06438	0.06422	0.06402	0.06376	0.06345	0.06309	0.06268	0.06222	0.06172	0.0081
97	0.07141	0.07124	0.07103	0.07075	0.07043	0.07005	0.06961	0.06913	0.06860	0.0077
98	0.07884	0.07866	0.07843	0.07815	0.07780	0.07741	0.07695	0.07645	0.07589	0.0073
99	0.08666	0.08648	0.08624	0.08594	0.08558	0.08517	0.08470	0.08417	0.08359	0.0069
100	0.09487	0.09468	0.09444	0.09413	0.09376	0.09334	0.09285	0.09231	0.09171	0.0065
101	0.10348	0.10329	0.10304	0.10272	0.10235	0.10191	0.10141	0.10086	0.10024	0.0061
102	0.11248	0.11229	0.11203	0.11171	0.11133	0.11089	0.11038	0.10982	0.10919	0.0057
103	0.12188	0.12169	0.12143	0.12111	0.12072	0.12027	0.11976	0.11919	0.11856	0.0053
104	0.13167	0.13148	0.13122	0.13090	0.13052	0.13007	0.12956	0.12899	0.12836	0.0049
105	0.13169	0.13151	0.13128	0.13098	0.13063	0.13021	0.12975	0.12922	0.12864	0.0045

## Non-Disability Annuitant Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00075	0.00074	0.00073	0.00072	0.00072	0.00071	0.00070	0.00069	0.00068	0.0100
18	0.00076	0.00075	0.00074	0.00073	0.00072	0.00071	0.00071	0.00070	0.00069	0.0100
19	0.00077	0.00076	0.00075	0.00074	0.00073	0.00072	0.00071	0.00071	0.00070	0.0100
20	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00072	0.00071	0.00070	0.0100
21	0.00079	0.00077	0.00076	0.00075	0.00074	0.00074	0.00073	0.00072	0.00071	0.0100
22	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00073	0.00072	0.0100
23	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00073	0.0100
24	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.0100
25	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.0100
26	0.00083	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.0100
27	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00076	0.0100
28	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.0100
29	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.0100
30	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.0100
31	0.00087	0.00086	0.00084	0.00083	0.00082	0.00081	0.00080	0.00080	0.00079	0.0100
32	0.00088	0.00087	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.0100
33	0.00089	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.0100
34	0.00090	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.0100
35	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.0100
36	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.0100
37	0.00092	0.00091	0.00090	0.00089	0.00087	0.00086	0.00085	0.00084	0.00084	0.0100
38	0.00093	0.00092	0.00091	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.0100
39	0.00094	0.00093	0.00092	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.0100
40	0.00095	0.00094	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.0100
41	0.00096	0.00095	0.00093	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	0.0100
42	0.00097	0.00096	0.00094	0.00093	0.00092	0.00091	0.00090	0.00089	0.00088	0.0100
43	0.00098	0.00097	0.00095	0.00094	0.00093	0.00092	0.00091	0.00090	0.00089	0.0100
44	0.00099	0.00098	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.00090	0.0100
45	0.00100	0.00099	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.0100
46	0.00101	0.00100	0.00098	0.00097	0.00096	0.00095	0.00094	0.00092	0.00092	0.0100
47	0.00102	0.00101	0.00099	0.00098	0.00097	0.00096	0.00094	0.00093	0.00092	0.0100
48	0.00144	0.00142	0.00140	0.00138	0.00136	0.00135	0.00133	0.00132	0.00130	0.0100
49	0.00180	0.00178	0.00175	0.00173	0.00171	0.00169	0.00167	0.00165	0.00163	0.0100
50	0.00211	0.00208	0.00205	0.00203	0.00200	0.00198	0.00196	0.00193	0.00191	0.0100
51	0.00237	0.00234	0.00231	0.00228	0.00225	0.00222	0.00220	0.00217	0.00215	0.0100
52	0.00259	0.00256	0.00252	0.00249	0.00246	0.00243	0.00240	0.00237	0.00235	0.0100
53	0.00279	0.00275	0.00271	0.00268	0.00264	0.00261	0.00258	0.00255	0.00253	0.0100
54	0.00298	0.00294	0.00290	0.00286	0.00283	0.00279	0.00276	0.00273	0.00270	0.0100
55	0.00322	0.00317	0.00313	0.00309	0.00305	0.00301	0.00298	0.00294	0.00291	0.0100
56	0.00351	0.00346	0.00342	0.00337	0.00333	0.00329	0.00325	0.00322	0.00318	0.0100
57	0.00388	0.00383	0.00378	0.00373	0.00368	0.00364	0.00360	0.00356	0.00352	0.0100
58	0.00432	0.00426	0.00420	0.00415	0.00410	0.00405	0.00400	0.00396	0.00391	0.0100
59	0.00483	0.00478	0.00472	0.00466	0.00460	0.00455	0.00450	0.00445	0.00440	0.0100
60	0.00538	0.00532	0.00527	0.00521	0.00515	0.00509	0.00504	0.00498	0.00493	0.0100
61	0.00591	0.00586	0.00580	0.00574	0.00568	0.00562	0.00556	0.00550	0.00545	0.0100
62	0.00645	0.00639	0.00634	0.00628	0.00621	0.00615	0.00608	0.00602	0.00596	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
63	0.00704	0.00697	0.00690	0.00683	0.00677	0.00670	0.00663	0.00656	0.00649	0.0100
64	0.00764	0.00756	0.00748	0.00740	0.00733	0.00725	0.00718	0.00710	0.00703	0.0100
65	0.00822	0.00812	0.00803	0.00794	0.00786	0.00778	0.00769	0.00761	0.00754	0.0100
66	0.00887	0.00876	0.00866	0.00856	0.00846	0.00837	0.00828	0.00820	0.00811	0.0100
67	0.00971	0.00960	0.00949	0.00938	0.00927	0.00917	0.00907	0.00898	0.00889	0.0100
68	0.01071	0.01059	0.01047	0.01035	0.01023	0.01012	0.01001	0.00991	0.00981	0.0100
69	0.01181	0.01169	0.01156	0.01143	0.01130	0.01118	0.01106	0.01094	0.01083	0.0100
70	0.01298	0.01286	0.01272	0.01258	0.01245	0.01231	0.01218	0.01205	0.01193	0.0100
71	0.01426	0.01413	0.01399	0.01384	0.01370	0.01355	0.01340	0.01326	0.01313	0.0100
72	0.01578	0.01563	0.01548	0.01533	0.01517	0.01501	0.01485	0.01470	0.01455	0.0100
73	0.01759	0.01742	0.01725	0.01708	0.01691	0.01674	0.01657	0.01639	0.01623	0.0100
74	0.01966	0.01945	0.01926	0.01907	0.01888	0.01870	0.01851	0.01832	0.01813	0.0100
75	0.02204	0.02178	0.02155	0.02134	0.02113	0.02092	0.02072	0.02051	0.02030	0.0100
76	0.02477	0.02446	0.02418	0.02393	0.02369	0.02346	0.02323	0.02300	0.02277	0.0100
77	0.02790	0.02752	0.02719	0.02688	0.02660	0.02634	0.02608	0.02582	0.02556	0.0100
78	0.03143	0.03099	0.03058	0.03022	0.02989	0.02958	0.02928	0.02899	0.02871	0.0100
79	0.03555	0.03506	0.03459	0.03416	0.03377	0.03341	0.03307	0.03274	0.03242	0.0100
80	0.04043	0.03990	0.03939	0.03890	0.03845	0.03803	0.03764	0.03726	0.03689	0.0100
81	0.04611	0.04553	0.04498	0.04444	0.04392	0.04344	0.04299	0.04256	0.04213	0.0100
82	0.05270	0.05206	0.05145	0.05086	0.05028	0.04973	0.04921	0.04871	0.04822	0.0100
83	0.06007	0.05937	0.05870	0.05804	0.05741	0.05679	0.05619	0.05561	0.05506	0.0100
84	0.06808	0.06732	0.06657	0.06585	0.06514	0.06445	0.06378	0.06312	0.06249	0.0100
85	0.07672	0.07589	0.07507	0.07427	0.07349	0.07272	0.07197	0.07124	0.07052	0.0100
86	0.08619	0.08528	0.08439	0.08352	0.08266	0.08181	0.08099	0.08018	0.07938	0.0099
87	0.09689	0.09590	0.09492	0.09396	0.09302	0.09209	0.09118	0.09028	0.08940	0.0097
88	0.10913	0.10804	0.10697	0.10592	0.10488	0.10386	0.10286	0.10186	0.10089	0.0096
89	0.12300	0.12182	0.12065	0.11950	0.11836	0.11724	0.11613	0.11503	0.11395	0.0094
90	0.13847	0.13719	0.13593	0.13467	0.13343	0.13220	0.13098	0.12977	0.12857	0.0093
91	0.15558	0.15421	0.15285	0.15150	0.15015	0.14881	0.14747	0.14614	0.14482	0.0091
92	0.17432	0.17287	0.17142	0.16997	0.16852	0.16706	0.16561	0.16415	0.16270	0.0089
93	0.19452	0.19300	0.19147	0.18993	0.18837	0.18681	0.18523	0.18365	0.18206	0.0088
94	0.21610	0.21452	0.21291	0.21129	0.20964	0.20796	0.20627	0.20456	0.20282	0.0086
95	0.23877	0.23715	0.23548	0.23377	0.23203	0.23025	0.22844	0.22660	0.22472	0.0085
96	0.26186	0.26021	0.25850	0.25675	0.25496	0.25312	0.25124	0.24931	0.24735	0.0081
97	0.28459	0.28291	0.28118	0.27939	0.27756	0.27567	0.27373	0.27175	0.26972	0.0077
98	0.30639	0.30470	0.30294	0.30113	0.29927	0.29735	0.29538	0.29335	0.29127	0.0073
99	0.32660	0.32485	0.32304	0.32118	0.31927	0.31731	0.31530	0.31325	0.31114	0.0069
100	0.34536	0.34357	0.34171	0.33979	0.33784	0.33585	0.33381	0.33174	0.32964	0.0065
101	0.36302	0.36114	0.35925	0.35731	0.35532	0.35331	0.35128	0.34921	0.34712	0.0061
102	0.37980	0.37785	0.37590	0.37394	0.37195	0.36994	0.36791	0.36586	0.36380	0.0057
103	0.39589	0.39389	0.39189	0.38989	0.38791	0.38591	0.38390	0.38189	0.37988	0.0053
104	0.41143	0.40938	0.40735	0.40533	0.40333	0.40136	0.39939	0.39742	0.39547	0.0049
105	0.42650	0.42441	0.42235	0.42033	0.41833	0.41637	0.41445	0.41255	0.41068	0.0045
106	0.44119	0.43907	0.43699	0.43496	0.43298	0.43105	0.42917	0.42735	0.42556	0.0041
107	0.45553	0.45337	0.45128	0.44926	0.44731	0.44542	0.44360	0.44184	0.44016	0.0037
108	0.46956	0.46737	0.46528	0.46327	0.46134	0.45951	0.45776	0.45609	0.45451	0.0033
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000

## Death Rate for Spouse Survivors of Males

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00073	0.00072	0.00071	0.00070	0.00069	0.00068	0.00067	0.00067	0.00066	0.0100
18	0.00071	0.00070	0.00069	0.00068	0.00067	0.00066	0.00066	0.00065	0.00064	0.0100
19	0.00069	0.00068	0.00067	0.00066	0.00065	0.00065	0.00064	0.00063	0.00062	0.0100
20	0.00067	0.00066	0.00065	0.00065	0.00064	0.00063	0.00062	0.00062	0.00061	0.0100
21	0.00066	0.00065	0.00064	0.00063	0.00062	0.00062	0.00061	0.00060	0.00060	0.0100
22	0.00064	0.00064	0.00063	0.00062	0.00061	0.00060	0.00060	0.00059	0.00058	0.0100
23	0.00063	0.00063	0.00062	0.00061	0.00060	0.00059	0.00059	0.00058	0.00057	0.0100
24	0.00063	0.00062	0.00061	0.00060	0.00059	0.00059	0.00058	0.00057	0.00057	0.0100
25	0.00062	0.00061	0.00060	0.00059	0.00059	0.00058	0.00057	0.00057	0.00056	0.0100
26	0.00062	0.00061	0.00060	0.00059	0.00058	0.00058	0.00057	0.00056	0.00056	0.0100
27	0.00061	0.00061	0.00060	0.00059	0.00058	0.00058	0.00057	0.00056	0.00056	0.0100
28	0.00062	0.00061	0.00060	0.00059	0.00059	0.00058	0.00057	0.00057	0.00056	0.0100
29	0.00062	0.00062	0.00061	0.00060	0.00059	0.00058	0.00058	0.00057	0.00057	0.0100
30	0.00064	0.00063	0.00062	0.00061	0.00060	0.00059	0.00059	0.00058	0.00058	0.0100
31	0.00065	0.00064	0.00063	0.00063	0.00062	0.00061	0.00060	0.00060	0.00059	0.0100
32	0.00068	0.00067	0.00066	0.00065	0.00064	0.00063	0.00063	0.00062	0.00061	0.0100
33	0.00071	0.00070	0.00069	0.00068	0.00067	0.00066	0.00066	0.00065	0.00064	0.0100
34	0.00075	0.00074	0.00073	0.00072	0.00071	0.00070	0.00069	0.00069	0.00068	0.0100
35	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.00074	0.00073	0.0100
36	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.0100
37	0.00096	0.00094	0.00093	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	0.0100
38	0.00106	0.00105	0.00103	0.00102	0.00101	0.00099	0.00098	0.00097	0.00096	0.0100
39	0.00119	0.00117	0.00116	0.00114	0.00113	0.00111	0.00110	0.00109	0.00108	0.0100
40	0.00134	0.00132	0.00130	0.00128	0.00127	0.00125	0.00124	0.00123	0.00121	0.0100
41	0.00151	0.00149	0.00147	0.00145	0.00143	0.00142	0.00140	0.00138	0.00137	0.0100
42	0.00171	0.00168	0.00166	0.00164	0.00162	0.00160	0.00158	0.00156	0.00155	0.0100
43	0.00192	0.00189	0.00187	0.00184	0.00182	0.00180	0.00178	0.00176	0.00174	0.0100
44	0.00215	0.00212	0.00209	0.00207	0.00204	0.00202	0.00199	0.00197	0.00195	0.0100
45	0.00240	0.00236	0.00233	0.00230	0.00227	0.00224	0.00222	0.00219	0.00217	0.0100
46	0.00265	0.00261	0.00258	0.00255	0.00251	0.00248	0.00246	0.00243	0.00240	0.0100
47	0.00292	0.00288	0.00284	0.00280	0.00277	0.00273	0.00270	0.00267	0.00264	0.0100
48	0.00319	0.00315	0.00311	0.00307	0.00303	0.00299	0.00296	0.00292	0.00289	0.0100
49	0.00345	0.00340	0.00336	0.00332	0.00328	0.00324	0.00320	0.00316	0.00313	0.0100
50	0.00366	0.00362	0.00357	0.00353	0.00349	0.00344	0.00340	0.00337	0.00333	0.0100
51	0.00381	0.00377	0.00372	0.00368	0.00363	0.00359	0.00355	0.00351	0.00347	0.0100
52	0.00389	0.00384	0.00380	0.00375	0.00371	0.00367	0.00363	0.00359	0.00355	0.0100
53	0.00393	0.00389	0.00384	0.00380	0.00375	0.00371	0.00367	0.00363	0.00359	0.0100
54	0.00400	0.00396	0.00391	0.00387	0.00383	0.00378	0.00374	0.00370	0.00366	0.0100
55	0.00416	0.00412	0.00407	0.00403	0.00398	0.00394	0.00390	0.00386	0.00382	0.0100
56	0.00442	0.00438	0.00433	0.00429	0.00424	0.00419	0.00415	0.00411	0.00406	0.0100
57	0.00477	0.00472	0.00468	0.00463	0.00458	0.00453	0.00448	0.00444	0.00439	0.0100
58	0.00516	0.00511	0.00506	0.00501	0.00496	0.00491	0.00486	0.00481	0.00476	0.0100
59	0.00557	0.00552	0.00547	0.00542	0.00536	0.00531	0.00525	0.00520	0.00515	0.0100
60	0.00600	0.00595	0.00590	0.00584	0.00579	0.00573	0.00567	0.00561	0.00556	0.0100
61	0.00648	0.00643	0.00637	0.00632	0.00626	0.00620	0.00613	0.00607	0.00601	0.0100
62	0.00706	0.00701	0.00695	0.00689	0.00683	0.00676	0.00670	0.00663	0.00656	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
63	0.00778	0.00772	0.00765	0.00759	0.00753	0.00746	0.00738	0.00731	0.00724	0.0100
64	0.00861	0.00854	0.00848	0.00841	0.00834	0.00826	0.00819	0.00811	0.00803	0.0100
65	0.00947	0.00940	0.00933	0.00925	0.00918	0.00910	0.00901	0.00893	0.00884	0.0100
66	0.01027	0.01019	0.01011	0.01003	0.00994	0.00985	0.00977	0.00967	0.00958	0.0100
67	0.01101	0.01093	0.01084	0.01075	0.01066	0.01056	0.01047	0.01037	0.01027	0.0100
68	0.01181	0.01171	0.01162	0.01152	0.01142	0.01132	0.01122	0.01111	0.01100	0.0100
69	0.01279	0.01268	0.01258	0.01247	0.01237	0.01225	0.01214	0.01203	0.01191	0.0100
70	0.01401	0.01390	0.01379	0.01367	0.01355	0.01343	0.01330	0.01318	0.01305	0.0100
71	0.01546	0.01534	0.01522	0.01509	0.01496	0.01482	0.01468	0.01454	0.01440	0.0100
72	0.01706	0.01693	0.01679	0.01665	0.01651	0.01636	0.01621	0.01606	0.01590	0.0100
73	0.01871	0.01857	0.01842	0.01827	0.01812	0.01796	0.01780	0.01763	0.01746	0.0100
74	0.02048	0.02034	0.02019	0.02003	0.01986	0.01969	0.01952	0.01934	0.01915	0.0100
75	0.02252	0.02237	0.02221	0.02204	0.02187	0.02169	0.02150	0.02130	0.02110	0.0100
76	0.02493	0.02478	0.02462	0.02445	0.02426	0.02407	0.02386	0.02365	0.02342	0.0100
77	0.02772	0.02757	0.02740	0.02722	0.02702	0.02681	0.02659	0.02635	0.02610	0.0100
78	0.03080	0.03064	0.03047	0.03027	0.03006	0.02984	0.02960	0.02934	0.02906	0.0100
79	0.03396	0.03380	0.03362	0.03342	0.03319	0.03295	0.03269	0.03240	0.03210	0.0100
80	0.03737	0.03713	0.03694	0.03673	0.03649	0.03622	0.03594	0.03563	0.03530	0.0100
81	0.04138	0.04104	0.04077	0.04054	0.04028	0.03999	0.03968	0.03934	0.03898	0.0100
82	0.04639	0.04595	0.04557	0.04525	0.04497	0.04466	0.04431	0.04394	0.04353	0.0100
83	0.05244	0.05190	0.05142	0.05099	0.05061	0.05027	0.04988	0.04946	0.04900	0.0100
84	0.05937	0.05875	0.05816	0.05762	0.05713	0.05669	0.05626	0.05579	0.05527	0.0100
85	0.06701	0.06633	0.06565	0.06500	0.06439	0.06384	0.06331	0.06278	0.06220	0.0100
86	0.07528	0.07456	0.07381	0.07308	0.07236	0.07169	0.07106	0.07044	0.06981	0.0099
87	0.08443	0.08368	0.08289	0.08208	0.08127	0.08050	0.07975	0.07903	0.07831	0.0097
88	0.09457	0.09381	0.09299	0.09212	0.09124	0.09036	0.08950	0.08868	0.08786	0.0096
89	0.10576	0.10501	0.10417	0.10326	0.10231	0.10134	0.10038	0.09945	0.09853	0.0094
90	0.11816	0.11742	0.11658	0.11564	0.11463	0.11359	0.11254	0.11149	0.11047	0.0093
91	0.13189	0.13115	0.13031	0.12935	0.12831	0.12720	0.12606	0.12491	0.12377	0.0091
92	0.14700	0.14624	0.14538	0.14442	0.14334	0.14218	0.14095	0.13970	0.13845	0.0089
93	0.16335	0.16253	0.16164	0.16065	0.15954	0.15833	0.15703	0.15569	0.15433	0.0088
94	0.18067	0.17978	0.17883	0.17779	0.17664	0.17539	0.17403	0.17259	0.17112	0.0086
95	0.19871	0.19776	0.19673	0.19562	0.19442	0.19312	0.19170	0.19018	0.18861	0.0085
96	0.21774	0.21679	0.21572	0.21455	0.21331	0.21197	0.21052	0.20897	0.20733	0.0081
97	0.23820	0.23725	0.23618	0.23498	0.23368	0.23230	0.23082	0.22923	0.22755	0.0077
98	0.26014	0.25915	0.25810	0.25691	0.25559	0.25416	0.25264	0.25102	0.24929	0.0073
99	0.28318	0.28214	0.28107	0.27991	0.27862	0.27718	0.27563	0.27397	0.27220	0.0069
100	0.30661	0.30554	0.30444	0.30330	0.30204	0.30065	0.29910	0.29742	0.29562	0.0065
101	0.32967	0.32860	0.32750	0.32637	0.32516	0.32382	0.32232	0.32066	0.31885	0.0061
102	0.35029	0.34915	0.34796	0.34674	0.34547	0.34412	0.34264	0.34100	0.33921	0.0057
103	0.36885	0.36771	0.36645	0.36514	0.36380	0.36241	0.36093	0.35933	0.35757	0.0053
104	0.38539	0.38435	0.38310	0.38175	0.38035	0.37892	0.37744	0.37586	0.37417	0.0049
105	0.39990	0.39899	0.39785	0.39653	0.39512	0.39366	0.39218	0.39065	0.38902	0.0045
106	0.41246	0.41168	0.41068	0.40947	0.40811	0.40668	0.40522	0.40372	0.40217	0.0041
107	0.42317	0.42251	0.42164	0.42059	0.41935	0.41800	0.41659	0.41515	0.41368	0.0037
108	0.43217	0.43160	0.43085	0.42994	0.42886	0.42764	0.42633	0.42498	0.42362	0.0033
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000



## Disability Annuitants

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur. 1	Dur. 2	Dur. 3+	2029+
17	0.00111	0.00109	0.00108	0.00106	0.00105	0.00104	0.00103	0.00101	0.00100	1.753	1.314	0.650	0.0100
18	0.00112	0.00110	0.00109	0.00107	0.00106	0.00105	0.00104	0.00102	0.00101	1.753	1.314	0.650	0.0100
19	0.00113	0.00111	0.00110	0.00109	0.00107	0.00106	0.00105	0.00103	0.00102	1.753	1.314	0.650	0.0100
20	0.00114	0.00113	0.00111	0.00110	0.00108	0.00107	0.00106	0.00105	0.00103	1.753	1.314	0.650	0.0100
21	0.00115	0.00114	0.00112	0.00111	0.00109	0.00108	0.00107	0.00106	0.00104	1.753	1.314	0.650	0.0100
22	0.00116	0.00115	0.00113	0.00112	0.00110	0.00109	0.00108	0.00107	0.00106	1.753	1.314	0.650	0.0100
23	0.00118	0.00116	0.00114	0.00113	0.00112	0.00110	0.00109	0.00108	0.00107	1.753	1.314	0.650	0.0100
24	0.00119	0.00117	0.00116	0.00114	0.00113	0.00111	0.00110	0.00109	0.00108	1.753	1.314	0.650	0.0100
25	0.00120	0.00118	0.00117	0.00115	0.00114	0.00112	0.00111	0.00110	0.00109	1.753	1.314	0.650	0.0100
26	0.00121	0.00120	0.00118	0.00116	0.00115	0.00114	0.00112	0.00111	0.00110	1.753	1.314	0.650	0.0100
27	0.00173	0.00171	0.00169	0.00166	0.00164	0.00162	0.00160	0.00159	0.00157	1.753	1.314	0.650	0.0100
28	0.00214	0.00211	0.00208	0.00205	0.00203	0.00200	0.00198	0.00196	0.00194	1.753	1.314	0.650	0.0100
29	0.00243	0.00240	0.00237	0.00234	0.00231	0.00228	0.00225	0.00223	0.00220	1.753	1.314	0.650	0.0100
30	0.00262	0.00259	0.00255	0.00252	0.00249	0.00246	0.00243	0.00240	0.00238	1.753	1.314	0.650	0.0100
31	0.00274	0.00271	0.00267	0.00263	0.00260	0.00257	0.00254	0.00251	0.00249	1.753	1.314	0.650	0.0100
32	0.00284	0.00280	0.00276	0.00272	0.00269	0.00266	0.00263	0.00260	0.00257	1.753	1.314	0.650	0.0100
33	0.00295	0.00291	0.00287	0.00283	0.00280	0.00276	0.00273	0.00270	0.00267	1.753	1.314	0.650	0.0100
34	0.00316	0.00311	0.00307	0.00303	0.00299	0.00296	0.00292	0.00289	0.00286	1.753	1.314	0.650	0.0100
35	0.00353	0.00348	0.00344	0.00339	0.00335	0.00331	0.00327	0.00323	0.00320	1.753	1.314	0.650	0.0100
36	0.00407	0.00401	0.00396	0.00391	0.00386	0.00381	0.00377	0.00373	0.00369	1.753	1.314	0.650	0.0100
37	0.00471	0.00465	0.00459	0.00453	0.00447	0.00442	0.00437	0.00432	0.00427	1.753	1.314	0.650	0.0100
38	0.00538	0.00531	0.00523	0.00517	0.00510	0.00504	0.00498	0.00493	0.00488	1.753	1.314	0.650	0.0100
39	0.00599	0.00591	0.00583	0.00575	0.00568	0.00561	0.00555	0.00548	0.00543	1.753	1.314	0.650	0.0100
40	0.00649	0.00640	0.00632	0.00624	0.00616	0.00608	0.00601	0.00595	0.00588	1.753	1.314	0.650	0.0100
41	0.00687	0.00678	0.00669	0.00660	0.00652	0.00644	0.00636	0.00629	0.00623	1.753	1.314	0.650	0.0100
42	0.00718	0.00708	0.00698	0.00689	0.00681	0.00673	0.00665	0.00657	0.00651	1.753	1.314	0.650	0.0100
43	0.00755	0.00744	0.00734	0.00725	0.00716	0.00707	0.00699	0.00691	0.00684	1.753	1.314	0.650	0.0100
44	0.00807	0.00796	0.00785	0.00775	0.00765	0.00756	0.00748	0.00739	0.00732	1.753	1.314	0.650	0.0100
45	0.00879	0.00866	0.00855	0.00843	0.00833	0.00823	0.00813	0.00804	0.00796	1.753	1.314	0.680	0.0100
46	0.00956	0.00942	0.00929	0.00917	0.00906	0.00895	0.00885	0.00875	0.00866	1.753	1.314	0.690	0.0100

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur. 1	Dur. 2	Dur. 3+	2029+
47	0.01025	0.01011	0.00998	0.00985	0.00972	0.00961	0.00950	0.00939	0.00929	1.753	1.314	0.717	0.0100
48	0.01086	0.01071	0.01056	0.01043	0.01030	0.01017	0.01006	0.00994	0.00984	1.753	1.314	0.742	0.0100
49	0.01140	0.01124	0.01109	0.01095	0.01081	0.01068	0.01056	0.01044	0.01033	1.753	1.314	0.768	0.0100
50	0.01203	0.01187	0.01171	0.01156	0.01142	0.01128	0.01115	0.01103	0.01091	1.753	1.314	0.780	0.0100
51	0.01279	0.01262	0.01245	0.01230	0.01214	0.01200	0.01186	0.01173	0.01161	1.753	1.314	0.796	0.0100
52	0.01374	0.01356	0.01339	0.01322	0.01305	0.01290	0.01275	0.01261	0.01248	1.753	1.314	0.817	0.0100
53	0.01490	0.01470	0.01452	0.01434	0.01416	0.01399	0.01383	0.01368	0.01354	1.753	1.314	0.824	0.0100
54	0.01625	0.01604	0.01584	0.01564	0.01545	0.01527	0.01510	0.01493	0.01478	1.753	1.314	0.836	0.0100
55	0.01773	0.01750	0.01728	0.01707	0.01687	0.01667	0.01648	0.01630	0.01613	1.753	1.314	0.854	0.0100
56	0.01928	0.01903	0.01880	0.01857	0.01835	0.01813	0.01793	0.01773	0.01755	1.753	1.314	0.887	0.0100
57	0.02095	0.02069	0.02043	0.02019	0.01995	0.01972	0.01950	0.01929	0.01909	1.753	1.314	0.911	0.0100
58	0.02266	0.02241	0.02215	0.02191	0.02166	0.02143	0.02120	0.02097	0.02076	1.753	1.314	0.922	0.0100
59	0.02404	0.02379	0.02355	0.02330	0.02306	0.02282	0.02258	0.02235	0.02212	1.753	1.314	0.933	0.0100
60	0.02510	0.02486	0.02463	0.02439	0.02415	0.02391	0.02367	0.02343	0.02320	1.753	1.314	0.954	0.0100
61	0.02601	0.02579	0.02557	0.02534	0.02511	0.02487	0.02463	0.02439	0.02415	1.753	1.314	0.974	0.0100
62	0.02688	0.02668	0.02647	0.02625	0.02602	0.02579	0.02555	0.02530	0.02506	1.753	1.314	0.989	0.0100
63	0.02770	0.02753	0.02734	0.02713	0.02690	0.02667	0.02643	0.02618	0.02593	1.753	1.314	0.997	0.0100
64	0.02860	0.02846	0.02829	0.02809	0.02787	0.02764	0.02740	0.02715	0.02688	1.753	1.314	1.000	0.0100
65	0.03000	0.02989	0.02974	0.02956	0.02934	0.02911	0.02886	0.02860	0.02832	1.702	1.301	1.000	0.0100
66	0.03211	0.03204	0.03192	0.03175	0.03154	0.03130	0.03104	0.03077	0.03048	1.652	1.288	1.000	0.0098
67	0.03463	0.03458	0.03448	0.03433	0.03412	0.03388	0.03362	0.03333	0.03303	1.601	1.276	1.000	0.0095
68	0.03729	0.03723	0.03714	0.03700	0.03681	0.03657	0.03630	0.03600	0.03568	1.551	1.263	1.000	0.0093
69	0.03984	0.03977	0.03967	0.03954	0.03935	0.03912	0.03884	0.03853	0.03820	1.500	1.250	1.000	0.0090
70	0.04213	0.04206	0.04194	0.04180	0.04161	0.04138	0.04111	0.04080	0.04046	1.500	1.250	1.000	0.0088
71	0.04423	0.04414	0.04402	0.04386	0.04366	0.04343	0.04316	0.04285	0.04251	1.500	1.250	1.000	0.0085
72	0.04621	0.04611	0.04598	0.04580	0.04560	0.04536	0.04509	0.04478	0.04444	1.500	1.250	1.000	0.0083
73	0.04824	0.04812	0.04798	0.04780	0.04759	0.04734	0.04706	0.04675	0.04641	1.500	1.250	1.000	0.0080
74	0.05051	0.05040	0.05025	0.05007	0.04985	0.04960	0.04932	0.04901	0.04866	1.500	1.250	1.000	0.0078
75	0.05351	0.05340	0.05325	0.05307	0.05286	0.05260	0.05232	0.05200	0.05164	1.500	1.250	1.000	0.0075
76	0.05773	0.05763	0.05750	0.05732	0.05711	0.05685	0.05656	0.05623	0.05586	1.500	1.250	1.000	0.0073
77	0.06320	0.06312	0.06300	0.06283	0.06262	0.06236	0.06206	0.06171	0.06132	1.500	1.250	1.000	0.0070
78	0.06933	0.06927	0.06915	0.06898	0.06877	0.06850	0.06819	0.06783	0.06742	1.500	1.250	1.000	0.0068
79	0.07566	0.07559	0.07547	0.07529	0.07507	0.07479	0.07446	0.07408	0.07365	1.500	1.250	1.000	0.0065

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur. 1	Dur. 2	Dur. 3+	2029+
80	0.08159	0.08150	0.08135	0.08116	0.08091	0.08061	0.08026	0.07986	0.07941	1.500	1.250	1.000	0.0063
81	0.08703	0.08690	0.08672	0.08649	0.08621	0.08589	0.08552	0.08510	0.08464	1.500	1.250	1.000	0.0060
82	0.09234	0.09216	0.09194	0.09167	0.09136	0.09101	0.09062	0.09018	0.08970	1.500	1.250	1.000	0.0058
83	0.09829	0.09807	0.09780	0.09750	0.09716	0.09679	0.09637	0.09592	0.09543	1.500	1.250	1.000	0.0055
84	0.10577	0.10551	0.10522	0.10489	0.10452	0.10412	0.10369	0.10321	0.10271	1.500	1.250	1.000	0.0053
85	0.11515	0.11487	0.11456	0.11421	0.11382	0.11340	0.11294	0.11245	0.11192	1.500	1.250	1.000	0.0050
86	0.12650	0.12621	0.12589	0.12552	0.12512	0.12468	0.12421	0.12369	0.12315	1.500	1.250	1.000	0.0048
87	0.13941	0.13913	0.13880	0.13843	0.13802	0.13757	0.13707	0.13654	0.13597	1.500	1.250	1.000	0.0045
88	0.15345	0.15317	0.15284	0.15247	0.15205	0.15159	0.15108	0.15053	0.14994	1.500	1.250	1.000	0.0043
89	0.16793	0.16765	0.16732	0.16695	0.16652	0.16605	0.16554	0.16497	0.16436	1.500	1.250	1.000	0.0040
90	0.18287	0.18259	0.18227	0.18190	0.18147	0.18100	0.18047	0.17990	0.17927	1.500	1.250	1.000	0.0037
91	0.19870	0.19845	0.19814	0.19778	0.19736	0.19689	0.19637	0.19579	0.19516	1.500	1.250	1.000	0.0035
92	0.21531	0.21498	0.21472	0.21439	0.21401	0.21356	0.21305	0.21248	0.21185	1.500	1.250	1.000	0.0032
93	0.23214	0.23174	0.23144	0.23119	0.23086	0.23047	0.22999	0.22945	0.22884	1.500	1.250	1.000	0.0030
94	0.24869	0.24825	0.24794	0.24771	0.24749	0.24718	0.24678	0.24629	0.24570	1.500	1.250	1.000	0.0027
95	0.26486	0.26444	0.26417	0.26400	0.26385	0.26368	0.26339	0.26298	0.26244	1.500	1.250	1.000	0.0025
96	0.27932	0.27874	0.27835	0.27810	0.27792	0.27774	0.27751	0.27715	0.27666	1.500	1.250	1.000	0.0022
97	0.29348	0.29263	0.29204	0.29163	0.29134	0.29109	0.29084	0.29052	0.29007	1.500	1.250	1.000	0.0020
98	0.30817	0.30706	0.30623	0.30564	0.30522	0.30490	0.30461	0.30429	0.30389	1.500	1.250	1.000	0.0017
99	0.32337	0.32199	0.32092	0.32013	0.31957	0.31915	0.31882	0.31849	0.31812	1.500	1.250	1.000	0.0015
100	0.33881	0.33721	0.33591	0.33492	0.33419	0.33367	0.33328	0.33294	0.33260	1.500	1.250	1.000	0.0012
101	0.35443	0.35266	0.35117	0.34999	0.34910	0.34846	0.34800	0.34765	0.34734	1.500	1.250	1.000	0.0010
102	0.37021	0.36835	0.36673	0.36539	0.36434	0.36358	0.36306	0.36269	0.36241	1.500	1.250	1.000	0.0007
103	0.38613	0.38427	0.38258	0.38113	0.37997	0.37910	0.37851	0.37812	0.37787	1.500	1.250	1.000	0.0005
104	0.40235	0.40061	0.39893	0.39744	0.39620	0.39525	0.39460	0.39419	0.39398	1.500	1.250	1.000	0.0002
105	0.41811	0.41662	0.41505	0.41359	0.41234	0.41135	0.41066	0.41025	0.41008	1.500	1.250	1.000	0.0000
106	0.43301	0.43189	0.43055	0.42916	0.42790	0.42686	0.42610	0.42562	0.42541	1.500	1.250	1.000	0.0000
107	0.44022	0.43961	0.43862	0.43744	0.43627	0.43525	0.43445	0.43393	0.43369	1.500	1.250	1.000	0.0000
108	0.44683	0.44679	0.44624	0.44538	0.44439	0.44343	0.44265	0.44211	0.44185	1.500	1.250	1.000	0.0000
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.500	1.250	1.000	0.0000

## Disability and Survivor Annuitants

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
17	0.00020	0.00197	0.00000	0.00000	0.00000	0.00000	0.01593
18	0.00016	0.00240	0.00000	0.00000	0.00000	0.00000	0.01715
19	0.00012	0.00274	0.00084	0.00000	0.00000	0.00000	0.01792
20	0.00010	0.00301	0.00240	0.00000	0.00000	0.00000	0.01824
21	0.00009	0.00320	0.00373	0.00000	0.00000	0.00000	0.01812
22	0.00010	0.00330	0.00481	0.00000	0.00000	0.00078	0.01759
23	0.00012	0.00333	0.00560	0.00000	0.00000	0.00318	0.01672
24	0.00015	0.00327	0.00608	0.00000	0.00000	0.00572	0.01565
25	0.00020	0.00314	0.00625	0.00000	0.00000	0.00833	0.01452
26	0.00027	0.00292	0.00615	0.00055	0.00000	0.01093	0.01348
27	0.00036	0.00264	0.00589	0.00422	0.00122	0.01340	0.01262
28	0.00045	0.00232	0.00564	0.00748	0.00357	0.01562	0.01201
29	0.00053	0.00204	0.00557	0.01032	0.00617	0.01747	0.01168
30	0.00060	0.00186	0.00580	0.01275	0.00877	0.01887	0.01162
31	0.00067	0.00181	0.00631	0.01477	0.01106	0.01977	0.01184
32	0.00075	0.00183	0.00699	0.01643	0.01264	0.02029	0.01232
33	0.00085	0.00185	0.00766	0.01777	0.01316	0.02055	0.01302
34	0.00097	0.00180	0.00815	0.01880	0.01244	0.02064	0.01386
35	0.00110	0.00180	0.00836	0.01951	0.01082	0.02051	0.01475
36	0.00122	0.00192	0.00833	0.01985	0.00879	0.02001	0.01559
37	0.00133	0.00213	0.00811	0.01980	0.00677	0.01911	0.01625
38	0.00143	0.00226	0.00767	0.01937	0.00510	0.01805	0.01662
39	0.00152	0.00216	0.00705	0.01863	0.00405	0.01698	0.01655
40	0.00161	0.00185	0.00630	0.01762	0.00369	0.01584	0.01607
41	0.00170	0.00155	0.00546	0.01645	0.00381	0.01442	0.01526
42	0.00180	0.00142	0.00459	0.01519	0.00409	0.01265	0.01435
43	0.00190	0.00153	0.00369	0.01391	0.00434	0.01070	0.01349
44	0.00200	0.00193	0.00294	0.01267	0.00445	0.00878	0.01265
45	0.00207	0.00259	0.00253	0.01155	0.00444	0.00724	0.01164
46	0.00210	0.00327	0.00268	0.01054	0.00424	0.00637	0.01048
47	0.00210	0.00365	0.00342	0.00961	0.00376	0.00613	0.00938
48	0.00211	0.00361	0.00449	0.00876	0.00319	0.00625	0.00839
49	0.00218	0.00307	0.00551	0.00806	0.00282	0.00646	0.00740
50	0.00226	0.00216	0.00617	0.00750	0.00268	0.00651	0.00632
51	0.00235	0.00120	0.00636	0.00702	0.00249	0.00590	0.00518
52	0.00246	0.00051	0.00606	0.00660	0.00207	0.00447	0.00408
53	0.00260	0.00021	0.00529	0.00618	0.00161	0.00256	0.00313
54	0.00280	0.00020	0.00416	0.00567	0.00117	0.00049	0.00242
55	0.00305	0.00031	0.00286	0.00504	0.00000	0.00000	0.00000
56	0.00334	0.00044	0.00178	0.00437	0.00000	0.00000	0.00000
57	0.00366	0.00054	0.00118	0.00377	0.00000	0.00000	0.00000
58	0.00389	0.00068	0.00122	0.00329	0.00000	0.00000	0.00000
59	0.00395	0.00093	0.00195	0.00291	0.00000	0.00000	0.00000
60	0.00380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
61	0.00338	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62	0.00279	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
63	0.00218	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
64	0.00167	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.00133	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
66	0.00119	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
67	0.00123	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
68	0.00142	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
69	0.00172	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.00208	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
71	0.00244	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
72	0.00272	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
73	0.00289	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
74	0.00290	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
75	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
76	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
77	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
78	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
79	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
80	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
81	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
82	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
83	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
84	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
85	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
86	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
87	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
88	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
89	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
90	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
91	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
92	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
93	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
94	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
95	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
96	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
97	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
98	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
99	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
101	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
102	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
103	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
104	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
105	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
106	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
107	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
108	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
109	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

## Disability and Survivor Assumptions

Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
17	0.69318	0.19191	1.00000	0	0.0000	0.0000
18	0.69318	0.19191	1.00000	1	0.0000	0.0000
19	0.69318	0.19191	1.00000	2	0.0000	0.0000
20	0.69318	0.19191	1.00000	3	0.0000	0.0008
21	0.69318	0.19191	1.00000	4	0.0000	0.0018
22	0.69318	0.19191	1.00000	5	0.0351	0.0027
23	0.69318	0.19191	1.00000	6	0.0451	0.0037
24	0.69318	0.19191	1.00000	7	0.0563	0.0046
25	0.69318	0.19191	1.00000	8	0.0686	0.0055
26	0.69318	0.19191	1.00000	9	0.0818	0.0065
27	0.69318	0.25155	1.00000	10	0.0955	0.0075
28	0.69318	0.30626	1.00000	11	0.1093	0.0085
29	0.69318	0.35598	1.00000	12	0.1225	0.0095
30	0.69318	0.40053	1.00000	13	0.1348	0.0106
31	0.69318	0.43940	1.00000	14	0.1461	0.0118
32	0.69318	0.47171	1.00000	15	0.1562	0.0132
33	0.69318	0.49641	1.00000	16	0.1653	0.0148
34	0.69318	0.51303	1.00000	17	0.1736	0.0166
35	0.69318	0.52188	1.00000	18	0.1817	0.0186
36	0.69318	0.52448	1.00000	19	0.1904	0.0206
37	0.69318	0.52316	1.00000	20	0.2004	0.0225
38	0.69318	0.52007	1.00000	21	0.2113	0.0244
39	0.69318	0.51739	1.00000	22	0.2207	0.0262
40	0.69318	0.51709	1.00000	23	0.2279	0.0276
41	0.69318	0.52114	1.00000	24	0.2341	0.0283
42	0.69318	0.53096	1.00000	25	0.2424	0.0288
43	0.69318	0.54620	1.00000	26	0.2567	0.0294
44	0.69318	0.56395	1.00000	27	0.2798	0.0313
45	0.69318	0.57965	1.00000	28	0.3145	0.0356
46	0.69318	0.58927	1.00000	29	0.3625	0.0434
47	0.69318	0.59060	1.00000	30	0.4218	0.0559
48	0.69318	0.58397	1.00000	31	0.4856	0.0738
49	0.69318	0.57223	1.00000	32	0.5436	0.0974
50	0.70629	0.55991	1.00000	33	0.5921	0.1000
51	0.71441	0.55113	1.00000	34	0.6319	0.1000
52	0.71801	0.54829	1.00000	35	0.6671	0.1000
53	0.71791	0.55148	1.00000	36	0.7023	0.1000
54	0.71497	0.55781	1.00000	37	0.7391	0.1000
55	0.70994	0.56286	1.00000	38	0.7762	0.1000
56	0.70364	0.56373	1.00000	39	0.8105	0.1000
57	0.69725	0.56075	1.00000	40	0.8452	0.1000
58	0.69183	0.55594	1.00000	41	0.8889	0.1000
59	0.68767	0.55162	1.00000	42	0.9433	0.1000
60	0.68453	0.54957	1.00000	43	1.0009	0.1000
61	0.68188	0.55011	1.00000	44	1.0444	0.1000
62	0.67946	0.55238	1.00000	45	1.0708	0.1000

Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
63	0.67816	0.55544	1.00000	46	1.0880	0.1000
64	0.67939	0.55864	1.00000	47	1.1024	0.1000
65	0.68368	0.56147	1.00000	48	1.1187	0.1000
66	0.69026	0.56363	1.00000	49	1.1388	0.1000
67	0.69739	0.56514	1.00000	50	1.1647	0.1000
68	0.70345	0.56605	1.00000	51	1.1978	0.1000
69	0.70808	0.56651	1.00000	52	1.2362	0.1000
70	0.71218	0.56665	1.00000	53	1.2753	0.1000
71	0.71681	0.56672	1.00000	54	1.3109	0.1000
72	0.72156	0.56708	1.00000	55	1.3394	0.1000
73	0.72550	0.56805	1.00000	56	1.3585	0.1000
74	0.72785	0.56981	1.00000	57	1.3683	0.1000
75	0.72877	0.57222	1.00000	58	1.3819	0.1000
76	0.72873	0.57469	0.99994	59	1.3958	0.1000
77	0.72778	0.57655	0.99870	60+	1.4097	0.1000
78	0.72565	0.57732	0.99707			
79	0.72199	0.57670	0.99496			
80	0.71667	0.57474	0.99263			
81	0.70993	0.57167	0.99060			
82	0.70221	0.56763	0.98912			
83	0.69364	0.56250	0.98780			
84	0.68396	0.55592	0.98605			
85	0.67225	0.54762	0.98288			
86	0.65717	0.53763	0.97756			
87	0.63849	0.52618	0.97158			
88	0.61701	0.51367	0.96637			
89	0.59391	0.50031	0.96256			
90	0.57023	0.48602	0.96012			
91	0.54666	0.47046	0.95867			
92	0.52341	0.45326	0.95746			
93	0.50027	0.43423	0.95580			
94	0.47691	0.41358	0.95330			
95	0.45297	0.39069	0.94981			
96	0.42822	0.36934	0.94536			
97	0.40266	0.34729	0.94030			
98	0.37649	0.32472	0.93501			
99	0.34998	0.30186	0.92960			
100	0.32338	0.27891	0.92400			
101	0.29684	0.25602	0.91793			
102	0.27044	0.23325	0.91104			
103	0.24419	0.21061	0.90295			
104	0.21811	0.18812	0.89320			
105	0.21811	0.18812	0.89320			
106	0.21811	0.18812	0.89320			
107	0.21811	0.18812	0.89320			
108	0.21811	0.18812	0.89320			
109	0.21811	0.18812	0.89320			

**Non-Postal, Female**

**Normal Retirement Rates-CSRS**

Age (ANB)	Years of Service						
	5 - 9	10-14	15-19	20	21-29	30	31+
55	0.0000	0.0000	0.0000	0.0000	0.0000	0.2697	0.3464
56 - 59	0.0000	0.0000	0.0000	0.0000	0.0000	0.2155	0.1730
60	0.0000	0.0000	0.0000	0.3311	0.2659	0.2463	0.2069
61	0.0000	0.0000	0.0000	0.2382	0.1362	0.1705	0.1937
62	0.2185	0.2684	0.3194	0.2837	0.1515	0.1899	0.2094
63	0.1169	0.1196	0.1489	0.2044	0.1485	0.1913	0.2019
64	0.1336	0.1368	0.1698	0.2170	0.1524	0.2076	0.2078
65	0.2311	0.2552	0.2180	0.2334	0.1848	0.2243	0.2250
66 - 69	0.1579	0.1721	0.1937	0.2095	0.1689	0.2170	0.2146
70-74	0.1403	0.1510	0.1849	0.2176	0.1823	0.2696	0.2117
75-84	0.1403	0.1510	0.1849	0.2176	0.1823	0.2696	0.2102

**Normal Retirement Rates-FERS**

Age (ANB)	Years of Service						
	5 - 9	10-14	15-19	20	21-29	30	31+
MRA	0.0000	0.0000	0.0000	0.0000	0.0000	0.2412	0.2706
58 - 59	0.0000	0.0000	0.0000	0.0000	0.0000	0.1911	0.1244
60	0.0000	0.0000	0.0000	0.2486	0.1996	0.2001	0.1288
61	0.0000	0.0000	0.0000	0.1572	0.1021	0.1326	0.1117
62	0.3018	0.2047	0.2073	0.2201	0.1807	0.2207	0.2202
63	0.0954	0.1003	0.1054	0.1951	0.1463	0.1637	0.1616
64	0.1128	0.1142	0.1166	0.1978	0.1568	0.1494	0.1611
65	0.1441	0.1628	0.1659	0.2504	0.1924	0.2118	0.1996
66 - 69	0.1692	0.1882	0.1873	0.2705	0.2275	0.2492	0.2206
70-74	0.1678	0.1951	0.1985	0.2671	0.2206	0.2455	0.2021
75-84	0.1897	0.1643	0.2020	0.2523	0.2276	0.2449	0.1857



### Involuntary Retirement

Age	CSRS	FERS
42	0.0036	0.0036
43	0.0033	0.0033
44	0.0038	0.0038
45	0.0042	0.0042
46	0.0042	0.0042
47	0.0046	0.0046
48	0.0052	0.0052
49	0.0058	0.0058
50	0.0064	0.0064
51	0.0074	0.0074
52	0.0081	0.0081
53	0.0103	0.0103
54	0.0124	0.0124
55	0.0118	0.0118
56	0.0134	0.0134
57	0.0130	0.0130
58	0.0133	0.0133
59+	0.0125	0.0125

### MRA+10 Retirement

Age	FERS
<=57	0.0185
58	0.0143
59	0.0157
60	0.0383
61	0.0407

### Merit/Longevity Salary Increases

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-44	45-54	55+
0	0.1188	0.0977	0.0703	0.0531	0.0442	0.0354
1	0.1228	0.1040	0.0784	0.0585	0.0474	0.0377
2	0.1108	0.0937	0.0696	0.0516	0.0415	0.0335
3	0.0913	0.0772	0.0585	0.0433	0.0338	0.0268
4	0.0814	0.0651	0.0520	0.0392	0.0303	0.0237
5	0.0735	0.0580	0.0465	0.0361	0.0283	0.0223
6	0.0748	0.0515	0.0430	0.0339	0.0269	0.0208
7	0.0730	0.0489	0.0395	0.0321	0.0249	0.0192
8	0.0000	0.0479	0.0372	0.0300	0.0231	0.0178
9	0.0000	0.0469	0.0350	0.0288	0.0221	0.0169
10	0.0000	0.0470	0.0334	0.0274	0.0208	0.0157
11	0.0000	0.0455	0.0329	0.0263	0.0205	0.0156
12	0.0000	0.0470	0.0326	0.0252	0.0197	0.0148
13	0.0000	0.0000	0.0335	0.0243	0.0192	0.0136
14	0.0000	0.0000	0.0339	0.0236	0.0187	0.0138
15	0.0000	0.0000	0.0346	0.0227	0.0179	0.0132
16	0.0000	0.0000	0.0324	0.0224	0.0176	0.0128
17	0.0000	0.0000	0.0335	0.0222	0.0173	0.0128
18	0.0000	0.0000	0.0000	0.0220	0.0168	0.0124
19	0.0000	0.0000	0.0000	0.0214	0.0165	0.0121
20-24	0.0000	0.0000	0.0000	0.0209	0.0152	0.0112
25-29	0.0000	0.0000	0.0000	0.0203	0.0131	0.0092
30+	0.0000	0.0000	0.0000	0.0000	0.0123	0.0077

### Assumed Distribution of New Entrants

Age (ANB)	Amount Prior Service (Years)				
	0-1	2-5	6-10	11-15	16-20
17-20	449	11	0	0	0
21-25	5,738	635	17	0	0
26-30	6,752	2,372	275	10	0
31-35	5,706	2,771	410	101	3
36-40	4,443	2,025	279	123	19
41-45	5,092	1,979	215	96	30
46-50	4,954	1,914	188	87	25
51-55	3,758	1,440	155	68	23
56-60	2,481	955	99	47	16
61-65	1,098	484	42	17	8
66-70	309	136	14	5	2
71-75	73	29	3	1	1

**Assumed New Entrants : Average Salary (as of FY 2020)**

<b>Age (ANB)</b>	<b>Amount Prior Service (Years)</b>				
	<b>0-1</b>	<b>2-5</b>	<b>6-10</b>	<b>11-15</b>	<b>16-20</b>
<b>17-20</b>	\$35,173	\$30,837	-	-	-
<b>21-25</b>	\$46,603	\$42,684	\$45,613	-	-
<b>26-30</b>	\$54,281	\$52,100	\$53,455	\$59,938	-
<b>31-35</b>	\$67,923	\$61,105	\$64,457	\$62,412	\$69,177
<b>36-40</b>	\$72,968	\$66,244	\$73,749	\$76,719	\$77,914
<b>41-45</b>	\$71,568	\$65,272	\$75,687	\$83,297	\$92,171
<b>46-50</b>	\$73,475	\$65,107	\$75,961	\$80,665	\$99,009
<b>51-55</b>	\$76,720	\$66,029	\$75,566	\$84,232	\$92,931
<b>56-60</b>	\$77,566	\$63,324	\$75,664	\$89,898	\$90,008
<b>61-65</b>	\$86,540	\$69,380	\$86,383	\$101,864	\$104,842
<b>66-70</b>	\$96,241	\$82,152	\$96,552	\$103,372	\$113,302
<b>71-75</b>	\$110,363	\$113,967	\$106,790	\$138,364	\$130,401

**Withdrawal Rates (Offset for Re-entry)**

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-39	40-44	45+
<b>0</b>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>1</b>	0.1415	0.1048	0.0903	0.0792	0.0719	0.0728
<b>2</b>	0.1040	0.0816	0.0733	0.0656	0.0539	0.0493
<b>3</b>	0.0835	0.0692	0.0611	0.0547	0.0439	0.0390
<b>4</b>	0.0756	0.0587	0.0491	0.0439	0.0353	0.0285
<b>5</b>	0.0677	0.0489	0.0417	0.0373	0.0312	0.0257
<b>6</b>	0.0672	0.0457	0.0377	0.0319	0.0272	0.0217
<b>7</b>	0.0201	0.0387	0.0338	0.0292	0.0252	0.0194
<b>8</b>	0.0000	0.0385	0.0288	0.0281	0.0238	0.0176
<b>9</b>	0.0000	0.0383	0.0256	0.0245	0.0213	0.0149
<b>10</b>	0.0000	0.0261	0.0242	0.0224	0.0213	0.0140
<b>11</b>	0.0000	0.0257	0.0213	0.0205	0.0172	0.0123
<b>12</b>	0.0000	0.0209	0.0207	0.0190	0.0154	0.0113
<b>13</b>	0.0000	0.0000	0.0194	0.0152	0.0127	0.0104
<b>14</b>	0.0000	0.0000	0.0167	0.0133	0.0119	0.0091
<b>15</b>	0.0000	0.0000	0.0121	0.0102	0.0109	0.0085
<b>16</b>	0.0000	0.0000	0.0049	0.0102	0.0113	0.0085
<b>17</b>	0.0000	0.0000	0.0052	0.0081	0.0086	0.0073
<b>18</b>	0.0000	0.0000	0.0000	0.0059	0.0064	0.0060
<b>19</b>	0.0000	0.0000	0.0000	0.0098	0.0062	0.0062
<b>20+</b>	0.0000	0.0000	0.0000	0.0058	0.0050	0.0030

### Fraction of Withdrawing Employees Electing Refunds

<b>Service</b>	<b>CSRS</b>	<b>FERS</b>	<b>FERS- RAE</b>	<b>FERS- FRAE</b>	<b>Fraction of Withdrawing Employees with Workers Compensation</b>
0	1.0000	1.0000	1.0000	1.0000	0.0000
1	0.9940	0.9940	0.9940	0.9940	0.0060
2	0.9920	0.9920	0.9920	0.9920	0.0080
3	0.9900	0.9900	0.9900	0.9900	0.0100
4	0.9880	0.9880	0.9880	0.9880	0.0120
5	0.9940	0.8900	0.9720	0.9800	0.0140
6	0.9680	0.8350	0.9220	0.9350	0.0170
7	0.9430	0.7810	0.8720	0.8910	0.0190
8	0.9170	0.7260	0.8220	0.8460	0.0220
9	0.8920	0.6720	0.7720	0.8010	0.0250
10	0.8660	0.6170	0.7220	0.7560	0.0280
11	0.8400	0.5630	0.6720	0.7120	0.0310
12	0.8150	0.5080	0.6220	0.6670	0.0350
13	0.7890	0.4540	0.5730	0.6220	0.0380
14	0.7640	0.3990	0.5230	0.5770	0.0410
15	0.7380	0.3450	0.4730	0.5330	0.0450
16	0.7120	0.2900	0.4230	0.4880	0.0530
17	0.6870	0.2360	0.3730	0.4430	0.0660
18	0.6610	0.1810	0.3230	0.3980	0.0900
19	0.6360	0.1270	0.2730	0.3540	0.1250
20+	0.6100	0.0720	0.2230	0.3090	0.1740

## Employee Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00040	0.00039	0.00039	0.00038	0.00037	0.00037	0.00036	0.00036	0.00036	0.0100
18	0.00032	0.00031	0.00031	0.00030	0.00030	0.00029	0.00029	0.00029	0.00028	0.0100
19	0.00025	0.00024	0.00024	0.00024	0.00023	0.00023	0.00023	0.00023	0.00022	0.0100
20	0.00019	0.00019	0.00019	0.00018	0.00018	0.00018	0.00018	0.00017	0.00017	0.0100
21	0.00015	0.00015	0.00014	0.00014	0.00014	0.00014	0.00014	0.00013	0.00013	0.0100
22	0.00012	0.00012	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.0100
23	0.00010	0.00010	0.00010	0.00010	0.00010	0.00009	0.00009	0.00009	0.00009	0.0100
24	0.00010	0.00010	0.00010	0.00010	0.00009	0.00009	0.00009	0.00009	0.00009	0.0100
25	0.00011	0.00011	0.00011	0.00011	0.00010	0.00010	0.00010	0.00010	0.00010	0.0100
26	0.00013	0.00013	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00011	0.0100
27	0.00014	0.00014	0.00014	0.00014	0.00013	0.00013	0.00013	0.00013	0.00013	0.0100
28	0.00015	0.00015	0.00015	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.0100
29	0.00016	0.00016	0.00015	0.00015	0.00015	0.00015	0.00015	0.00014	0.00014	0.0100
30	0.00017	0.00017	0.00016	0.00016	0.00016	0.00016	0.00016	0.00015	0.00015	0.0100
31	0.00019	0.00018	0.00018	0.00018	0.00018	0.00017	0.00017	0.00017	0.00017	0.0100
32	0.00021	0.00020	0.00020	0.00020	0.00020	0.00019	0.00019	0.00019	0.00019	0.0100
33	0.00023	0.00023	0.00022	0.00022	0.00022	0.00022	0.00021	0.00021	0.00021	0.0100
34	0.00026	0.00025	0.00025	0.00025	0.00024	0.00024	0.00024	0.00023	0.00023	0.0100
35	0.00028	0.00028	0.00027	0.00027	0.00027	0.00026	0.00026	0.00026	0.00025	0.0100
36	0.00030	0.00030	0.00029	0.00029	0.00028	0.00028	0.00028	0.00027	0.00027	0.0100
37	0.00032	0.00032	0.00031	0.00031	0.00030	0.00030	0.00029	0.00029	0.00029	0.0100
38	0.00035	0.00034	0.00034	0.00033	0.00033	0.00032	0.00032	0.00032	0.00031	0.0100
39	0.00039	0.00038	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.00035	0.0100
40	0.00043	0.00042	0.00041	0.00041	0.00040	0.00040	0.00039	0.00039	0.00038	0.0100
41	0.00047	0.00046	0.00045	0.00045	0.00044	0.00043	0.00043	0.00042	0.00042	0.0100
42	0.00051	0.00050	0.00049	0.00049	0.00048	0.00047	0.00047	0.00046	0.00046	0.0100
43	0.00055	0.00054	0.00053	0.00053	0.00052	0.00051	0.00051	0.00050	0.00050	0.0100
44	0.00059	0.00058	0.00057	0.00056	0.00055	0.00055	0.00054	0.00053	0.00053	0.0100
45	0.00063	0.00062	0.00061	0.00060	0.00059	0.00058	0.00057	0.00057	0.00056	0.0100
46	0.00067	0.00066	0.00065	0.00064	0.00063	0.00062	0.00061	0.00061	0.00060	0.0100
47	0.00074	0.00072	0.00071	0.00070	0.00069	0.00068	0.00067	0.00067	0.00066	0.0100
48	0.00084	0.00083	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.0100
49	0.00095	0.00094	0.00092	0.00091	0.00090	0.00088	0.00087	0.00086	0.00086	0.0100
50	0.00105	0.00103	0.00101	0.00100	0.00098	0.00097	0.00096	0.00095	0.00094	0.0100
51	0.00111	0.00109	0.00107	0.00106	0.00104	0.00103	0.00102	0.00101	0.00100	0.0100
52	0.00116	0.00114	0.00112	0.00111	0.00109	0.00108	0.00107	0.00105	0.00104	0.0100
53	0.00121	0.00119	0.00117	0.00116	0.00114	0.00113	0.00111	0.00110	0.00109	0.0100
54	0.00125	0.00123	0.00121	0.00120	0.00118	0.00117	0.00115	0.00114	0.00113	0.0100
55	0.00132	0.00130	0.00128	0.00126	0.00124	0.00123	0.00121	0.00120	0.00119	0.0100
56	0.00141	0.00139	0.00137	0.00135	0.00133	0.00132	0.00130	0.00129	0.00128	0.0100
57	0.00152	0.00150	0.00148	0.00146	0.00144	0.00142	0.00140	0.00139	0.00138	0.0100
58	0.00162	0.00160	0.00157	0.00155	0.00153	0.00151	0.00150	0.00148	0.00146	0.0100
59	0.00168	0.00166	0.00163	0.00161	0.00159	0.00157	0.00155	0.00154	0.00152	0.0100
60	0.00172	0.00170	0.00167	0.00165	0.00163	0.00161	0.00159	0.00158	0.00156	0.0100
61	0.00176	0.00173	0.00171	0.00168	0.00166	0.00164	0.00162	0.00160	0.00159	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
62	0.00180	0.00177	0.00175	0.00173	0.00170	0.00168	0.00166	0.00164	0.00163	0.0100
63	0.00190	0.00187	0.00184	0.00182	0.00179	0.00177	0.00175	0.00173	0.00171	0.0100
64	0.00206	0.00203	0.00200	0.00197	0.00195	0.00193	0.00190	0.00188	0.00186	0.0100
65	0.00229	0.00226	0.00223	0.00220	0.00217	0.00214	0.00212	0.00209	0.00207	0.0100
66	0.00258	0.00254	0.00250	0.00246	0.00243	0.00240	0.00237	0.00235	0.00232	0.0100
67	0.00287	0.00282	0.00278	0.00274	0.00270	0.00267	0.00264	0.00261	0.00259	0.0100
68	0.00313	0.00308	0.00304	0.00299	0.00295	0.00292	0.00288	0.00285	0.00282	0.0100
69	0.00337	0.00331	0.00326	0.00322	0.00317	0.00313	0.00310	0.00306	0.00303	0.0100
70	0.00361	0.00355	0.00350	0.00345	0.00340	0.00336	0.00332	0.00328	0.00325	0.0100
71	0.00389	0.00383	0.00377	0.00372	0.00367	0.00362	0.00358	0.00354	0.00350	0.0100
72	0.00425	0.00419	0.00412	0.00406	0.00401	0.00395	0.00391	0.00387	0.00383	0.0100
73	0.00470	0.00462	0.00455	0.00449	0.00443	0.00437	0.00432	0.00427	0.00423	0.0100
74	0.00522	0.00513	0.00505	0.00498	0.00491	0.00485	0.00479	0.00474	0.00469	0.0100
75	0.00577	0.00568	0.00559	0.00551	0.00544	0.00537	0.00531	0.00525	0.00520	0.0100
76	0.00638	0.00627	0.00618	0.00609	0.00601	0.00593	0.00587	0.00580	0.00574	0.0100
77	0.00704	0.00693	0.00682	0.00673	0.00664	0.00656	0.00648	0.00641	0.00635	0.0100
78	0.00779	0.00767	0.00756	0.00746	0.00736	0.00727	0.00719	0.00711	0.00704	0.0100
79	0.00869	0.00856	0.00844	0.00833	0.00822	0.00812	0.00803	0.00794	0.00787	0.0100
80	0.00978	0.00964	0.00951	0.00938	0.00927	0.00916	0.00906	0.00896	0.00887	0.0100
81	0.01110	0.01095	0.01081	0.01068	0.01055	0.01043	0.01031	0.01021	0.01010	0.0100
82	0.01272	0.01256	0.01240	0.01226	0.01212	0.01198	0.01185	0.01173	0.01161	0.0100
83	0.01465	0.01448	0.01431	0.01415	0.01400	0.01385	0.01370	0.01356	0.01343	0.0100
84	0.01692	0.01674	0.01657	0.01639	0.01622	0.01605	0.01589	0.01573	0.01557	0.0100
85	0.01956	0.01937	0.01919	0.01900	0.01881	0.01863	0.01845	0.01826	0.01808	0.0100
86	0.02258	0.02240	0.02221	0.02201	0.02182	0.02162	0.02141	0.02121	0.02100	0.0099
87	0.02602	0.02584	0.02566	0.02546	0.02525	0.02504	0.02482	0.02459	0.02435	0.0097
88	0.02990	0.02974	0.02957	0.02937	0.02916	0.02893	0.02869	0.02844	0.02816	0.0096
89	0.03426	0.03413	0.03397	0.03379	0.03358	0.03334	0.03308	0.03280	0.03249	0.0094
90	0.03886	0.03875	0.03861	0.03843	0.03821	0.03797	0.03769	0.03737	0.03703	0.0093
91	0.04351	0.04339	0.04324	0.04304	0.04281	0.04253	0.04222	0.04188	0.04150	0.0091
92	0.04851	0.04838	0.04821	0.04799	0.04774	0.04744	0.04710	0.04672	0.04630	0.0089
93	0.05386	0.05372	0.05353	0.05329	0.05301	0.05268	0.05231	0.05190	0.05144	0.0088
94	0.05955	0.05939	0.05919	0.05893	0.05863	0.05827	0.05787	0.05742	0.05692	0.0086
95	0.06558	0.06541	0.06519	0.06491	0.06458	0.06420	0.06376	0.06327	0.06273	0.0085
96	0.07196	0.07178	0.07155	0.07126	0.07092	0.07051	0.07006	0.06955	0.06898	0.0081
97	0.07868	0.07850	0.07826	0.07796	0.07760	0.07718	0.07670	0.07617	0.07559	0.0077
98	0.08575	0.08556	0.08531	0.08500	0.08463	0.08420	0.08370	0.08315	0.08255	0.0073
99	0.09316	0.09297	0.09271	0.09239	0.09201	0.09156	0.09106	0.09049	0.08987	0.0069
100	0.10091	0.10072	0.10045	0.10013	0.09974	0.09928	0.09877	0.09819	0.09755	0.0065
101	0.10901	0.10881	0.10854	0.10821	0.10782	0.10736	0.10683	0.10625	0.10560	0.0061
102	0.11745	0.11725	0.11698	0.11665	0.11625	0.11578	0.11526	0.11467	0.11401	0.0057
103	0.12623	0.12603	0.12576	0.12543	0.12503	0.12457	0.12404	0.12345	0.12279	0.0053
104	0.13536	0.13516	0.13489	0.13456	0.13417	0.13371	0.13318	0.13260	0.13195	0.0049
105	0.13537	0.13519	0.13495	0.13464	0.13428	0.13386	0.13338	0.13284	0.13224	0.0045

### Rate of Employee Death with Spouse Survivor

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
29	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
30	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
31	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.0100
32	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0100
33	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0100
34	0.00003	0.00003	0.00003	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0100
35	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.0100
36	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.0100
37	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00003	0.00003	0.00003	0.0100
38	0.00005	0.00005	0.00005	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.0100
39	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.0100
40	0.00009	0.00009	0.00009	0.00009	0.00008	0.00008	0.00008	0.00008	0.00008	0.0100
41	0.00012	0.00012	0.00012	0.00012	0.00012	0.00011	0.00011	0.00011	0.00011	0.0100
42	0.00016	0.00016	0.00015	0.00015	0.00015	0.00015	0.00015	0.00014	0.00014	0.0100
43	0.00019	0.00018	0.00018	0.00018	0.00018	0.00017	0.00017	0.00017	0.00017	0.0100
44	0.00020	0.00020	0.00019	0.00019	0.00019	0.00018	0.00018	0.00018	0.00018	0.0100
45	0.00021	0.00020	0.00020	0.00020	0.00019	0.00019	0.00019	0.00019	0.00018	0.0100
46	0.00022	0.00022	0.00021	0.00021	0.00021	0.00020	0.00020	0.00020	0.00020	0.0100
47	0.00025	0.00024	0.00024	0.00023	0.00023	0.00023	0.00023	0.00022	0.00022	0.0100
48	0.00029	0.00029	0.00028	0.00028	0.00027	0.00027	0.00027	0.00026	0.00026	0.0100
49	0.00034	0.00034	0.00033	0.00033	0.00032	0.00032	0.00031	0.00031	0.00031	0.0100
50	0.00039	0.00039	0.00038	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.0100
51	0.00043	0.00043	0.00042	0.00041	0.00041	0.00040	0.00040	0.00039	0.00039	0.0100
52	0.00047	0.00046	0.00045	0.00045	0.00044	0.00043	0.00043	0.00042	0.00042	0.0100
53	0.00048	0.00047	0.00047	0.00046	0.00045	0.00045	0.00044	0.00044	0.00043	0.0100
54	0.00048	0.00047	0.00047	0.00046	0.00045	0.00045	0.00044	0.00044	0.00043	0.0100
55	0.00048	0.00047	0.00047	0.00046	0.00045	0.00045	0.00044	0.00044	0.00043	0.0100
56	0.00050	0.00049	0.00049	0.00048	0.00047	0.00047	0.00046	0.00046	0.00045	0.0100
57	0.00054	0.00053	0.00053	0.00052	0.00051	0.00051	0.00050	0.00050	0.00049	0.0100
58	0.00058	0.00057	0.00057	0.00056	0.00055	0.00054	0.00054	0.00053	0.00053	0.0100
59	0.00060	0.00059	0.00059	0.00058	0.00057	0.00056	0.00056	0.00055	0.00055	0.0100
60	0.00061	0.00060	0.00059	0.00058	0.00057	0.00057	0.00056	0.00055	0.00055	0.0100
61	0.00060	0.00060	0.00059	0.00058	0.00057	0.00056	0.00056	0.00055	0.00055	0.0100
62	0.00060	0.00059	0.00058	0.00058	0.00057	0.00056	0.00055	0.00055	0.00054	0.0100



Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
63	0.00061	0.00060	0.00059	0.00058	0.00057	0.00056	0.00056	0.00055	0.00055	0.0100
64	0.00063	0.00062	0.00061	0.00060	0.00059	0.00059	0.00058	0.00057	0.00057	0.0100
65	0.00067	0.00066	0.00065	0.00064	0.00063	0.00063	0.00062	0.00061	0.00061	0.0100
66	0.00073	0.00072	0.00071	0.00070	0.00069	0.00068	0.00067	0.00066	0.00066	0.0100
67	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00072	0.00071	0.00070	0.0100
68	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.0100
69	0.00086	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.0100
70	0.00088	0.00087	0.00086	0.00084	0.00083	0.00082	0.00081	0.00080	0.00080	0.0100
71	0.00092	0.00091	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.0100
72	0.00097	0.00096	0.00094	0.00093	0.00091	0.00090	0.00089	0.00088	0.00087	0.0100
73	0.00104	0.00102	0.00101	0.00099	0.00098	0.00097	0.00095	0.00094	0.00093	0.0100
74	0.00111	0.00110	0.00108	0.00106	0.00105	0.00104	0.00102	0.00101	0.00100	0.0100
75	0.00119	0.00117	0.00115	0.00114	0.00112	0.00111	0.00109	0.00108	0.00107	0.0100
76	0.00127	0.00125	0.00123	0.00121	0.00119	0.00118	0.00117	0.00115	0.00114	0.0100
77	0.00135	0.00133	0.00131	0.00129	0.00127	0.00126	0.00124	0.00123	0.00122	0.0100
78	0.00145	0.00143	0.00141	0.00139	0.00137	0.00135	0.00134	0.00132	0.00131	0.0100
79	0.00157	0.00155	0.00153	0.00151	0.00149	0.00147	0.00145	0.00144	0.00142	0.0100
80	0.00174	0.00171	0.00169	0.00167	0.00165	0.00163	0.00161	0.00159	0.00158	0.0100
81	0.00195	0.00192	0.00190	0.00187	0.00185	0.00183	0.00181	0.00179	0.00177	0.0100
82	0.00222	0.00219	0.00216	0.00214	0.00211	0.00209	0.00207	0.00205	0.00202	0.0100
83	0.00255	0.00252	0.00249	0.00246	0.00244	0.00241	0.00239	0.00236	0.00234	0.0100
84	0.00295	0.00292	0.00289	0.00286	0.00283	0.00280	0.00277	0.00275	0.00272	0.0100
85	0.00343	0.00340	0.00337	0.00333	0.00330	0.00327	0.00324	0.00320	0.00317	0.0100
86	0.00399	0.00396	0.00393	0.00389	0.00386	0.00382	0.00379	0.00375	0.00371	0.0099
87	0.00465	0.00462	0.00458	0.00455	0.00451	0.00447	0.00443	0.00439	0.00435	0.0097
88	0.00540	0.00537	0.00534	0.00530	0.00527	0.00523	0.00518	0.00514	0.00509	0.0096
89	0.00626	0.00623	0.00620	0.00617	0.00613	0.00609	0.00604	0.00599	0.00593	0.0094
90	0.00718	0.00716	0.00713	0.00710	0.00706	0.00701	0.00696	0.00690	0.00684	0.0093
91	0.00813	0.00810	0.00807	0.00804	0.00799	0.00794	0.00788	0.00782	0.00775	0.0091
92	0.00915	0.00913	0.00910	0.00906	0.00901	0.00895	0.00889	0.00881	0.00874	0.0089
93	0.01026	0.01024	0.01020	0.01015	0.01010	0.01004	0.00997	0.00989	0.00980	0.0088
94	0.01145	0.01142	0.01138	0.01133	0.01127	0.01121	0.01113	0.01104	0.01095	0.0086
95	0.01272	0.01269	0.01264	0.01259	0.01253	0.01245	0.01237	0.01227	0.01217	0.0085
96	0.01407	0.01404	0.01399	0.01393	0.01387	0.01379	0.01370	0.01360	0.01349	0.0081
97	0.01550	0.01546	0.01542	0.01536	0.01528	0.01520	0.01511	0.01500	0.01489	0.0077
98	0.01701	0.01697	0.01692	0.01686	0.01679	0.01670	0.01660	0.01649	0.01637	0.0073
99	0.01860	0.01856	0.01851	0.01844	0.01837	0.01828	0.01818	0.01806	0.01794	0.0069
100	0.02027	0.02023	0.02017	0.02011	0.02003	0.01994	0.01983	0.01972	0.01959	0.0065
101	0.02201	0.02197	0.02192	0.02185	0.02177	0.02168	0.02157	0.02146	0.02132	0.0061
102	0.02384	0.02380	0.02375	0.02368	0.02360	0.02350	0.02340	0.02328	0.02314	0.0057
103	0.02575	0.02571	0.02565	0.02559	0.02550	0.02541	0.02530	0.02518	0.02505	0.0053
104	0.02774	0.02770	0.02764	0.02757	0.02749	0.02740	0.02729	0.02717	0.02704	0.0049
105	0.02774	0.02770	0.02765	0.02759	0.02752	0.02743	0.02733	0.02722	0.02710	0.0045

### Non-Disability Annuitant Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00067	0.00067	0.00066	0.00065	0.00064	0.00063	0.00062	0.00062	0.00061	0.0100
18	0.00068	0.00067	0.00066	0.00065	0.00065	0.00064	0.00063	0.00062	0.00062	0.0100
19	0.00069	0.00068	0.00067	0.00066	0.00065	0.00064	0.00064	0.00063	0.00062	0.0100
20	0.00070	0.00069	0.00068	0.00067	0.00066	0.00065	0.00064	0.00064	0.00063	0.0100
21	0.00070	0.00069	0.00068	0.00067	0.00067	0.00066	0.00065	0.00064	0.00064	0.0100
22	0.00071	0.00070	0.00069	0.00068	0.00067	0.00066	0.00066	0.00065	0.00064	0.0100
23	0.00072	0.00071	0.00070	0.00069	0.00068	0.00067	0.00066	0.00066	0.00065	0.0100
24	0.00072	0.00071	0.00070	0.00069	0.00069	0.00068	0.00067	0.00066	0.00066	0.0100
25	0.00073	0.00072	0.00071	0.00070	0.00069	0.00068	0.00068	0.00067	0.00066	0.0100
26	0.00074	0.00073	0.00072	0.00071	0.00070	0.00069	0.00068	0.00068	0.00067	0.0100
27	0.00075	0.00074	0.00073	0.00072	0.00071	0.00070	0.00069	0.00068	0.00068	0.0100
28	0.00075	0.00074	0.00073	0.00072	0.00071	0.00071	0.00070	0.00069	0.00068	0.0100
29	0.00076	0.00075	0.00074	0.00073	0.00072	0.00071	0.00070	0.00070	0.00069	0.0100
30	0.00077	0.00076	0.00075	0.00074	0.00073	0.00072	0.00071	0.00070	0.00070	0.0100
31	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00072	0.00071	0.00070	0.0100
32	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00073	0.00072	0.00071	0.0100
33	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00073	0.00072	0.0100
34	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.00073	0.0100
35	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.00073	0.0100
36	0.00082	0.00081	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.00074	0.0100
37	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.0100
38	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.0100
39	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.0100
40	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.0100
41	0.00086	0.00085	0.00084	0.00082	0.00081	0.00080	0.00080	0.00079	0.00078	0.0100
42	0.00087	0.00086	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00079	0.0100
43	0.00088	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.0100
44	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.0100
45	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.0100
46	0.00096	0.00095	0.00094	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	0.0100
47	0.00106	0.00105	0.00103	0.00102	0.00101	0.00100	0.00098	0.00097	0.00096	0.0100
48	0.00121	0.00119	0.00117	0.00116	0.00114	0.00113	0.00112	0.00111	0.00109	0.0100
49	0.00139	0.00137	0.00135	0.00134	0.00132	0.00130	0.00129	0.00127	0.00126	0.0100
50	0.00161	0.00159	0.00157	0.00155	0.00153	0.00151	0.00149	0.00148	0.00146	0.0100
51	0.00187	0.00184	0.00182	0.00180	0.00177	0.00175	0.00173	0.00171	0.00169	0.0100
52	0.00216	0.00213	0.00210	0.00207	0.00204	0.00202	0.00200	0.00197	0.00195	0.0100
53	0.00245	0.00241	0.00238	0.00235	0.00232	0.00229	0.00226	0.00224	0.00222	0.0100
54	0.00272	0.00268	0.00264	0.00261	0.00258	0.00255	0.00252	0.00249	0.00246	0.0100
55	0.00297	0.00293	0.00289	0.00285	0.00282	0.00278	0.00275	0.00272	0.00269	0.0100
56	0.00321	0.00317	0.00313	0.00308	0.00305	0.00301	0.00297	0.00294	0.00291	0.0100
57	0.00345	0.00340	0.00336	0.00331	0.00327	0.00323	0.00320	0.00316	0.00313	0.0100
58	0.00369	0.00364	0.00359	0.00354	0.00350	0.00346	0.00342	0.00338	0.00334	0.0100
59	0.00389	0.00385	0.00380	0.00375	0.00370	0.00366	0.00361	0.00357	0.00354	0.0100
60	0.00409	0.00405	0.00400	0.00395	0.00390	0.00385	0.00381	0.00377	0.00373	0.0100
61	0.00439	0.00434	0.00430	0.00424	0.00419	0.00414	0.00410	0.00405	0.00401	0.0100
62	0.00483	0.00478	0.00473	0.00468	0.00462	0.00457	0.00452	0.00447	0.00442	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
63	0.00539	0.00534	0.00529	0.00523	0.00517	0.00512	0.00506	0.00500	0.00495	0.0100
64	0.00598	0.00593	0.00587	0.00582	0.00575	0.00569	0.00563	0.00557	0.00551	0.0100
65	0.00656	0.00650	0.00644	0.00638	0.00631	0.00625	0.00618	0.00611	0.00605	0.0100
66	0.00712	0.00705	0.00698	0.00692	0.00685	0.00679	0.00672	0.00665	0.00658	0.0100
67	0.00772	0.00764	0.00757	0.00750	0.00742	0.00735	0.00728	0.00721	0.00713	0.0100
68	0.00842	0.00833	0.00825	0.00817	0.00809	0.00801	0.00794	0.00786	0.00778	0.0100
69	0.00934	0.00924	0.00915	0.00906	0.00897	0.00888	0.00880	0.00871	0.00862	0.0100
70	0.01048	0.01037	0.01026	0.01015	0.01005	0.00995	0.00986	0.00976	0.00966	0.0100
71	0.01180	0.01167	0.01154	0.01142	0.01131	0.01119	0.01108	0.01098	0.01087	0.0100
72	0.01321	0.01307	0.01293	0.01280	0.01267	0.01254	0.01242	0.01230	0.01217	0.0100
73	0.01472	0.01456	0.01441	0.01426	0.01411	0.01397	0.01384	0.01370	0.01357	0.0100
74	0.01640	0.01622	0.01605	0.01589	0.01573	0.01557	0.01542	0.01527	0.01512	0.0100
75	0.01841	0.01821	0.01802	0.01783	0.01766	0.01748	0.01731	0.01714	0.01697	0.0100
76	0.02085	0.02062	0.02040	0.02019	0.01999	0.01979	0.01960	0.01941	0.01922	0.0100
77	0.02369	0.02343	0.02319	0.02295	0.02272	0.02249	0.02227	0.02206	0.02184	0.0100
78	0.02685	0.02657	0.02629	0.02602	0.02576	0.02551	0.02526	0.02501	0.02476	0.0100
79	0.03032	0.03001	0.02970	0.02940	0.02910	0.02881	0.02852	0.02824	0.02797	0.0100
80	0.03414	0.03379	0.03345	0.03311	0.03278	0.03245	0.03213	0.03181	0.03150	0.0100
81	0.03839	0.03801	0.03763	0.03725	0.03688	0.03651	0.03615	0.03579	0.03544	0.0100
82	0.04329	0.04286	0.04243	0.04201	0.04160	0.04119	0.04078	0.04037	0.03997	0.0100
83	0.04894	0.04845	0.04797	0.04750	0.04704	0.04657	0.04611	0.04566	0.04520	0.0100
84	0.05536	0.05480	0.05426	0.05373	0.05320	0.05268	0.05217	0.05165	0.05114	0.0100
85	0.06249	0.06187	0.06125	0.06065	0.06006	0.05947	0.05889	0.05831	0.05773	0.0100
86	0.07047	0.06978	0.06910	0.06842	0.06775	0.06710	0.06645	0.06581	0.06517	0.0099
87	0.07959	0.07884	0.07808	0.07732	0.07658	0.07584	0.07512	0.07440	0.07368	0.0097
88	0.09002	0.08920	0.08836	0.08752	0.08669	0.08587	0.08505	0.08425	0.08345	0.0096
89	0.10181	0.10090	0.09999	0.09907	0.09814	0.09722	0.09631	0.09541	0.09452	0.0094
90	0.11499	0.11400	0.11300	0.11199	0.11097	0.10996	0.10894	0.10794	0.10694	0.0093
91	0.12943	0.12835	0.12726	0.12616	0.12505	0.12393	0.12281	0.12170	0.12059	0.0091
92	0.14488	0.14371	0.14252	0.14133	0.14012	0.13890	0.13768	0.13646	0.13524	0.0089
93	0.16122	0.15996	0.15868	0.15739	0.15608	0.15477	0.15344	0.15211	0.15078	0.0088
94	0.17851	0.17717	0.17580	0.17441	0.17301	0.17160	0.17017	0.16872	0.16728	0.0086
95	0.19681	0.19539	0.19394	0.19247	0.19097	0.18946	0.18792	0.18637	0.18481	0.0085
96	0.21621	0.21474	0.21324	0.21170	0.21014	0.20856	0.20696	0.20534	0.20370	0.0081
97	0.23665	0.23515	0.23361	0.23203	0.23042	0.22879	0.22713	0.22544	0.22373	0.0077
98	0.25789	0.25637	0.25481	0.25321	0.25158	0.24990	0.24819	0.24646	0.24469	0.0073
99	0.27956	0.27805	0.27650	0.27489	0.27325	0.27156	0.26982	0.26805	0.26625	0.0069
100	0.30146	0.29999	0.29846	0.29688	0.29524	0.29356	0.29182	0.29003	0.28820	0.0065
101	0.32353	0.32215	0.32068	0.31914	0.31754	0.31588	0.31415	0.31237	0.31053	0.0061
102	0.34583	0.34458	0.34322	0.34176	0.34021	0.33860	0.33691	0.33514	0.33331	0.0057
103	0.36771	0.36655	0.36525	0.36383	0.36232	0.36073	0.35906	0.35732	0.35551	0.0053
104	0.38927	0.38812	0.38684	0.38543	0.38392	0.38233	0.38067	0.37895	0.37716	0.0049
105	0.41137	0.41026	0.40900	0.40762	0.40613	0.40456	0.40292	0.40123	0.39948	0.0045
106	0.43415	0.43309	0.43187	0.43053	0.42908	0.42754	0.42594	0.42429	0.42259	0.0041
107	0.45769	0.45669	0.45553	0.45424	0.45284	0.45136	0.44981	0.44822	0.44659	0.0037
108	0.48200	0.48111	0.48003	0.47881	0.47748	0.47607	0.47459	0.47307	0.47153	0.0033
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000

### Death Rate for Spouse Survivors of Females

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00110	0.00109	0.00107	0.00106	0.00104	0.00103	0.00102	0.00101	0.00100	0.0100
18	0.00111	0.00110	0.00108	0.00107	0.00106	0.00104	0.00103	0.00102	0.00101	0.0100
19	0.00112	0.00111	0.00109	0.00108	0.00107	0.00105	0.00104	0.00103	0.00102	0.0100
20	0.00114	0.00112	0.00110	0.00109	0.00108	0.00106	0.00105	0.00104	0.00103	0.0100
21	0.00115	0.00113	0.00112	0.00110	0.00109	0.00107	0.00106	0.00105	0.00104	0.0100
22	0.00116	0.00114	0.00113	0.00111	0.00110	0.00109	0.00107	0.00106	0.00105	0.0100
23	0.00117	0.00115	0.00114	0.00112	0.00111	0.00110	0.00108	0.00107	0.00106	0.0100
24	0.00118	0.00117	0.00115	0.00114	0.00112	0.00111	0.00109	0.00108	0.00107	0.0100
25	0.00119	0.00118	0.00116	0.00115	0.00113	0.00112	0.00111	0.00109	0.00108	0.0100
26	0.00121	0.00119	0.00117	0.00116	0.00114	0.00113	0.00112	0.00110	0.00109	0.0100
27	0.00122	0.00120	0.00119	0.00117	0.00116	0.00114	0.00113	0.00112	0.00110	0.0100
28	0.00123	0.00121	0.00120	0.00118	0.00117	0.00115	0.00114	0.00113	0.00112	0.0100
29	0.00124	0.00123	0.00121	0.00119	0.00118	0.00116	0.00115	0.00114	0.00113	0.0100
30	0.00126	0.00124	0.00122	0.00121	0.00119	0.00118	0.00116	0.00115	0.00114	0.0100
31	0.00146	0.00144	0.00142	0.00140	0.00139	0.00137	0.00135	0.00134	0.00133	0.0100
32	0.00166	0.00164	0.00162	0.00160	0.00158	0.00156	0.00154	0.00152	0.00151	0.0100
33	0.00186	0.00183	0.00181	0.00179	0.00176	0.00174	0.00172	0.00170	0.00169	0.0100
34	0.00205	0.00202	0.00199	0.00197	0.00194	0.00192	0.00190	0.00188	0.00186	0.0100
35	0.00223	0.00220	0.00217	0.00214	0.00211	0.00209	0.00206	0.00204	0.00202	0.0100
36	0.00239	0.00236	0.00233	0.00230	0.00227	0.00224	0.00221	0.00219	0.00217	0.0100
37	0.00254	0.00250	0.00247	0.00244	0.00241	0.00238	0.00235	0.00233	0.00230	0.0100
38	0.00267	0.00263	0.00259	0.00256	0.00253	0.00250	0.00247	0.00244	0.00242	0.0100
39	0.00277	0.00273	0.00270	0.00266	0.00263	0.00260	0.00257	0.00254	0.00251	0.0100
40	0.00286	0.00282	0.00278	0.00275	0.00271	0.00268	0.00265	0.00262	0.00259	0.0100
41	0.00294	0.00290	0.00286	0.00282	0.00279	0.00275	0.00272	0.00269	0.00267	0.0100
42	0.00301	0.00297	0.00293	0.00289	0.00285	0.00282	0.00279	0.00276	0.00273	0.0100
43	0.00307	0.00302	0.00298	0.00294	0.00291	0.00287	0.00284	0.00281	0.00278	0.0100
44	0.00312	0.00308	0.00304	0.00300	0.00296	0.00292	0.00289	0.00286	0.00283	0.0100
45	0.00319	0.00315	0.00310	0.00306	0.00303	0.00299	0.00296	0.00292	0.00289	0.0100
46	0.00331	0.00326	0.00322	0.00318	0.00314	0.00310	0.00306	0.00303	0.00300	0.0100
47	0.00355	0.00350	0.00345	0.00341	0.00336	0.00332	0.00329	0.00325	0.00322	0.0100
48	0.00395	0.00389	0.00384	0.00379	0.00374	0.00370	0.00365	0.00361	0.00358	0.0100
49	0.00447	0.00441	0.00435	0.00429	0.00424	0.00419	0.00414	0.00409	0.00405	0.0100
50	0.00507	0.00499	0.00493	0.00486	0.00480	0.00474	0.00469	0.00464	0.00459	0.0100
51	0.00568	0.00560	0.00553	0.00545	0.00539	0.00532	0.00526	0.00520	0.00515	0.0100
52	0.00627	0.00618	0.00610	0.00602	0.00594	0.00587	0.00580	0.00574	0.00568	0.0100
53	0.00681	0.00672	0.00663	0.00654	0.00646	0.00638	0.00631	0.00624	0.00617	0.0100
54	0.00734	0.00724	0.00714	0.00705	0.00696	0.00687	0.00680	0.00672	0.00665	0.0100
55	0.00791	0.00780	0.00770	0.00760	0.00750	0.00741	0.00733	0.00725	0.00717	0.0100
56	0.00849	0.00838	0.00827	0.00817	0.00806	0.00797	0.00788	0.00779	0.00771	0.0100
57	0.00904	0.00893	0.00882	0.00871	0.00860	0.00850	0.00840	0.00831	0.00822	0.0100
58	0.00955	0.00944	0.00933	0.00922	0.00911	0.00900	0.00889	0.00880	0.00870	0.0100
59	0.01007	0.00996	0.00985	0.00974	0.00963	0.00952	0.00941	0.00930	0.00921	0.0100
60	0.01062	0.01052	0.01042	0.01031	0.01020	0.01009	0.00998	0.00987	0.00977	0.0100
61	0.01121	0.01111	0.01102	0.01091	0.01081	0.01070	0.01059	0.01048	0.01037	0.0100
62	0.01202	0.01193	0.01184	0.01174	0.01163	0.01152	0.01141	0.01130	0.01118	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
63	0.01327	0.01319	0.01310	0.01300	0.01290	0.01278	0.01266	0.01254	0.01242	0.0100
64	0.01495	0.01487	0.01478	0.01468	0.01457	0.01445	0.01433	0.01419	0.01406	0.0100
65	0.01678	0.01670	0.01660	0.01649	0.01637	0.01624	0.01610	0.01596	0.01580	0.0100
66	0.01867	0.01858	0.01847	0.01836	0.01822	0.01808	0.01793	0.01777	0.01760	0.0100
67	0.02010	0.02000	0.01989	0.01976	0.01963	0.01948	0.01931	0.01914	0.01896	0.0100
68	0.02090	0.02080	0.02068	0.02056	0.02042	0.02026	0.02009	0.01991	0.01973	0.0100
69	0.02178	0.02167	0.02155	0.02142	0.02128	0.02112	0.02094	0.02076	0.02056	0.0100
70	0.02363	0.02351	0.02338	0.02323	0.02308	0.02290	0.02272	0.02252	0.02231	0.0100
71	0.02648	0.02634	0.02620	0.02603	0.02586	0.02567	0.02546	0.02524	0.02500	0.0100
72	0.02976	0.02960	0.02943	0.02925	0.02905	0.02883	0.02860	0.02835	0.02809	0.0100
73	0.03292	0.03273	0.03253	0.03232	0.03210	0.03186	0.03160	0.03133	0.03104	0.0100
74	0.03569	0.03547	0.03524	0.03501	0.03477	0.03451	0.03423	0.03393	0.03361	0.0100
75	0.03891	0.03866	0.03841	0.03814	0.03787	0.03758	0.03728	0.03695	0.03661	0.0100
76	0.04285	0.04255	0.04225	0.04195	0.04165	0.04132	0.04099	0.04063	0.04025	0.0100
77	0.04687	0.04652	0.04618	0.04584	0.04549	0.04514	0.04476	0.04437	0.04395	0.0100
78	0.05100	0.05061	0.05022	0.04983	0.04944	0.04905	0.04863	0.04820	0.04775	0.0100
79	0.05533	0.05488	0.05444	0.05400	0.05356	0.05312	0.05267	0.05220	0.05171	0.0100
80	0.06015	0.05964	0.05915	0.05865	0.05816	0.05767	0.05717	0.05665	0.05612	0.0100
81	0.06584	0.06528	0.06472	0.06417	0.06361	0.06306	0.06250	0.06193	0.06134	0.0100
82	0.07250	0.07188	0.07125	0.07062	0.07000	0.06938	0.06875	0.06812	0.06747	0.0100
83	0.08066	0.07996	0.07926	0.07855	0.07785	0.07714	0.07643	0.07572	0.07499	0.0100
84	0.09045	0.08967	0.08888	0.08808	0.08728	0.08648	0.08568	0.08487	0.08405	0.0100
85	0.10083	0.09997	0.09909	0.09820	0.09731	0.09640	0.09550	0.09459	0.09367	0.0100
86	0.11088	0.10998	0.10905	0.10810	0.10714	0.10617	0.10518	0.10419	0.10320	0.0099
87	0.12086	0.11996	0.11901	0.11804	0.11703	0.11601	0.11497	0.11391	0.11283	0.0097
88	0.13185	0.13094	0.12999	0.12899	0.12794	0.12687	0.12576	0.12463	0.12348	0.0096
89	0.14495	0.14406	0.14309	0.14206	0.14097	0.13984	0.13866	0.13745	0.13620	0.0094
90	0.16110	0.16021	0.15923	0.15817	0.15703	0.15582	0.15456	0.15325	0.15189	0.0093
91	0.18005	0.17918	0.17819	0.17709	0.17589	0.17461	0.17325	0.17182	0.17033	0.0091
92	0.20074	0.19990	0.19892	0.19779	0.19655	0.19519	0.19373	0.19218	0.19055	0.0089
93	0.22205	0.22127	0.22031	0.21918	0.21790	0.21647	0.21492	0.21326	0.21150	0.0088
94	0.24306	0.24237	0.24146	0.24036	0.23906	0.23760	0.23597	0.23421	0.23232	0.0086
95	0.26247	0.26178	0.26086	0.25972	0.25838	0.25685	0.25514	0.25327	0.25127	0.0085
96	0.28043	0.27976	0.27885	0.27772	0.27637	0.27482	0.27309	0.27120	0.26915	0.0081
97	0.29659	0.29597	0.29509	0.29397	0.29264	0.29110	0.28937	0.28747	0.28541	0.0077
98	0.31198	0.31144	0.31061	0.30953	0.30822	0.30670	0.30498	0.30309	0.30103	0.0073
99	0.32789	0.32748	0.32673	0.32569	0.32441	0.32292	0.32122	0.31935	0.31731	0.0069
100	0.34490	0.34462	0.34398	0.34302	0.34179	0.34033	0.33866	0.33680	0.33478	0.0065
101	0.36275	0.36263	0.36212	0.36127	0.36011	0.35870	0.35706	0.35524	0.35324	0.0061
102	0.38074	0.38078	0.38043	0.37970	0.37864	0.37730	0.37572	0.37393	0.37197	0.0057
103	0.39809	0.39830	0.39810	0.39752	0.39659	0.39535	0.39385	0.39213	0.39022	0.0053
104	0.41412	0.41449	0.41446	0.41404	0.41325	0.41214	0.41074	0.40911	0.40728	0.0049
105	0.42822	0.42874	0.42887	0.42861	0.42798	0.42702	0.42575	0.42423	0.42250	0.0045
106	0.43982	0.44046	0.44073	0.44063	0.44017	0.43936	0.43824	0.43686	0.43525	0.0041
107	0.44853	0.44925	0.44965	0.44969	0.44939	0.44875	0.44780	0.44657	0.44511	0.0037
108	0.45414	0.45490	0.45539	0.45556	0.45541	0.45494	0.45416	0.45310	0.45181	0.0033
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000

## Disability Annuitants

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur.1	Dur. 2	Dur.3+	2029+
17	0.00111	0.00109	0.00108	0.00106	0.00105	0.00104	0.00103	0.00102	0.00101	1.726	1.546	0.700	0.0100
18	0.00112	0.00110	0.00109	0.00108	0.00106	0.00105	0.00104	0.00103	0.00102	1.726	1.546	0.700	0.0100
19	0.00113	0.00112	0.00110	0.00109	0.00107	0.00106	0.00105	0.00104	0.00103	1.726	1.546	0.700	0.0100
20	0.00114	0.00113	0.00111	0.00110	0.00108	0.00107	0.00106	0.00105	0.00104	1.726	1.546	0.700	0.0100
21	0.00115	0.00114	0.00112	0.00111	0.00109	0.00108	0.00107	0.00106	0.00105	1.726	1.546	0.700	0.0100
22	0.00117	0.00115	0.00113	0.00112	0.00111	0.00109	0.00108	0.00107	0.00106	1.726	1.546	0.700	0.0100
23	0.00118	0.00116	0.00115	0.00113	0.00112	0.00110	0.00109	0.00108	0.00107	1.726	1.546	0.700	0.0100
24	0.00119	0.00117	0.00116	0.00114	0.00113	0.00111	0.00110	0.00109	0.00108	1.726	1.546	0.700	0.0100
25	0.00120	0.00119	0.00117	0.00115	0.00114	0.00113	0.00111	0.00110	0.00109	1.726	1.546	0.700	0.0100
26	0.00121	0.00120	0.00118	0.00117	0.00115	0.00114	0.00112	0.00111	0.00110	1.726	1.546	0.700	0.0100
27	0.00209	0.00206	0.00203	0.00201	0.00198	0.00196	0.00194	0.00191	0.00189	1.726	1.546	0.700	0.0100
28	0.00285	0.00281	0.00277	0.00273	0.00270	0.00267	0.00264	0.00261	0.00258	1.726	1.546	0.700	0.0100
29	0.00349	0.00344	0.00339	0.00335	0.00330	0.00327	0.00323	0.00319	0.00316	1.726	1.546	0.700	0.0100
30	0.00401	0.00395	0.00390	0.00385	0.00380	0.00375	0.00371	0.00367	0.00363	1.726	1.546	0.700	0.0100
31	0.00443	0.00437	0.00431	0.00425	0.00420	0.00415	0.00410	0.00405	0.00401	1.726	1.546	0.700	0.0100
32	0.00479	0.00472	0.00466	0.00460	0.00454	0.00448	0.00443	0.00438	0.00434	1.726	1.546	0.700	0.0100
33	0.00514	0.00507	0.00500	0.00494	0.00488	0.00482	0.00476	0.00471	0.00466	1.726	1.546	0.700	0.0100
34	0.00553	0.00546	0.00538	0.00531	0.00525	0.00518	0.00512	0.00507	0.00501	1.726	1.546	0.700	0.0100
35	0.00595	0.00587	0.00579	0.00571	0.00564	0.00557	0.00551	0.00545	0.00539	1.726	1.546	0.700	0.0100
36	0.00639	0.00630	0.00621	0.00613	0.00605	0.00598	0.00591	0.00585	0.00579	1.726	1.546	0.700	0.0100
37	0.00683	0.00673	0.00664	0.00656	0.00648	0.00640	0.00632	0.00625	0.00619	1.726	1.546	0.700	0.0100
38	0.00727	0.00717	0.00707	0.00698	0.00689	0.00681	0.00673	0.00666	0.00659	1.726	1.546	0.700	0.0100
39	0.00772	0.00761	0.00751	0.00741	0.00732	0.00723	0.00714	0.00707	0.00699	1.726	1.546	0.700	0.0100
40	0.00818	0.00806	0.00796	0.00785	0.00775	0.00766	0.00757	0.00749	0.00741	1.726	1.546	0.700	0.0100
41	0.00865	0.00853	0.00841	0.00830	0.00820	0.00810	0.00801	0.00792	0.00784	1.726	1.546	0.700	0.0100
42	0.00911	0.00899	0.00886	0.00875	0.00864	0.00854	0.00844	0.00835	0.00826	1.726	1.546	0.700	0.0100
43	0.00953	0.00939	0.00927	0.00915	0.00903	0.00892	0.00882	0.00873	0.00863	1.726	1.546	0.700	0.0100
44	0.00982	0.00968	0.00955	0.00943	0.00931	0.00920	0.00909	0.00899	0.00890	1.726	1.546	0.650	0.0100
45	0.00998	0.00984	0.00971	0.00958	0.00946	0.00935	0.00924	0.00914	0.00904	1.726	1.546	0.690	0.0100
46	0.01008	0.00994	0.00981	0.00968	0.00956	0.00944	0.00934	0.00923	0.00914	1.726	1.546	0.709	0.0100

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur.1	Dur. 2	Dur.3+	2029+
47	0.01034	0.01020	0.01006	0.00993	0.00980	0.00969	0.00958	0.00947	0.00937	1.726	1.546	0.723	0.0100
48	0.01088	0.01073	0.01058	0.01045	0.01031	0.01019	0.01007	0.00996	0.00986	1.726	1.546	0.732	0.0100
49	0.01166	0.01149	0.01133	0.01119	0.01105	0.01091	0.01079	0.01067	0.01056	1.726	1.546	0.745	0.0100
50	0.01257	0.01239	0.01222	0.01206	0.01191	0.01177	0.01163	0.01150	0.01138	1.726	1.546	0.764	0.0100
51	0.01364	0.01344	0.01326	0.01308	0.01292	0.01276	0.01261	0.01247	0.01234	1.726	1.546	0.776	0.0100
52	0.01496	0.01474	0.01454	0.01434	0.01416	0.01399	0.01383	0.01368	0.01353	1.726	1.546	0.781	0.0100
53	0.01647	0.01623	0.01601	0.01579	0.01559	0.01540	0.01523	0.01506	0.01490	1.726	1.546	0.786	0.0100
54	0.01774	0.01748	0.01723	0.01700	0.01679	0.01658	0.01639	0.01621	0.01604	1.726	1.546	0.810	0.0100
55	0.01836	0.01809	0.01783	0.01759	0.01737	0.01715	0.01695	0.01677	0.01659	1.726	1.546	0.840	0.0100
56	0.01846	0.01818	0.01793	0.01768	0.01746	0.01724	0.01704	0.01685	0.01668	1.726	1.546	0.875	0.0100
57	0.01841	0.01813	0.01788	0.01763	0.01741	0.01719	0.01699	0.01680	0.01662	1.726	1.546	0.903	0.0100
58	0.01848	0.01820	0.01794	0.01770	0.01747	0.01725	0.01705	0.01686	0.01668	1.726	1.546	0.917	0.0100
59	0.01868	0.01839	0.01812	0.01786	0.01763	0.01740	0.01720	0.01700	0.01682	1.726	1.546	0.926	0.0100
60	0.01928	0.01899	0.01872	0.01847	0.01823	0.01801	0.01780	0.01760	0.01742	1.726	1.546	0.943	0.0100
61	0.02007	0.01980	0.01954	0.01930	0.01906	0.01884	0.01863	0.01843	0.01824	1.726	1.546	0.968	0.0100
62	0.02106	0.02081	0.02057	0.02034	0.02011	0.01989	0.01968	0.01948	0.01928	1.726	1.546	0.988	0.0100
63	0.02229	0.02208	0.02187	0.02165	0.02143	0.02122	0.02100	0.02080	0.02059	1.726	1.546	0.996	0.0100
64	0.02366	0.02348	0.02329	0.02309	0.02288	0.02267	0.02245	0.02224	0.02202	1.726	1.546	1.000	0.0100
65	0.02500	0.02486	0.02469	0.02450	0.02430	0.02409	0.02387	0.02365	0.02342	1.591	1.427	1.000	0.0100
66	0.02614	0.02599	0.02583	0.02565	0.02545	0.02523	0.02501	0.02478	0.02455	1.456	1.308	1.000	0.0098
67	0.02731	0.02716	0.02700	0.02681	0.02662	0.02640	0.02618	0.02595	0.02571	1.320	1.188	1.000	0.0095
68	0.02873	0.02858	0.02841	0.02823	0.02803	0.02782	0.02759	0.02735	0.02710	1.185	1.069	1.000	0.0093
69	0.03067	0.03052	0.03034	0.03016	0.02995	0.02973	0.02950	0.02925	0.02900	1.050	0.950	1.000	0.0090
70	0.03328	0.03312	0.03293	0.03273	0.03252	0.03229	0.03204	0.03179	0.03152	1.050	0.950	1.000	0.0088
71	0.03625	0.03609	0.03589	0.03568	0.03545	0.03521	0.03495	0.03468	0.03440	1.050	0.950	1.000	0.0085
72	0.03913	0.03898	0.03878	0.03856	0.03832	0.03807	0.03780	0.03752	0.03722	1.050	0.950	1.000	0.0083
73	0.04157	0.04144	0.04126	0.04104	0.04079	0.04053	0.04025	0.03996	0.03965	1.050	0.950	1.000	0.0080
74	0.04364	0.04355	0.04340	0.04319	0.04294	0.04267	0.04239	0.04209	0.04178	1.050	0.950	1.000	0.0078
75	0.04564	0.04560	0.04548	0.04530	0.04506	0.04479	0.04450	0.04420	0.04388	1.050	0.950	1.000	0.0075
76	0.04774	0.04774	0.04766	0.04751	0.04729	0.04703	0.04674	0.04643	0.04611	1.050	0.950	1.000	0.0073
77	0.05030	0.05033	0.05030	0.05018	0.04999	0.04974	0.04945	0.04914	0.04881	1.050	0.950	1.000	0.0070
78	0.05362	0.05365	0.05363	0.05354	0.05338	0.05315	0.05287	0.05255	0.05221	1.050	0.950	1.000	0.0068

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur.1	Dur. 2	Dur.3+	2029+
79	0.05751	0.05752	0.05748	0.05739	0.05724	0.05702	0.05674	0.05642	0.05607	1.050	0.950	1.000	0.0065
80	0.06175	0.06173	0.06166	0.06155	0.06139	0.06118	0.06090	0.06057	0.06021	1.050	0.950	1.000	0.0063
81	0.06627	0.06621	0.06611	0.06597	0.06578	0.06555	0.06527	0.06494	0.06457	1.050	0.950	1.000	0.0060
82	0.07130	0.07120	0.07105	0.07088	0.07066	0.07040	0.07011	0.06978	0.06940	1.050	0.950	1.000	0.0058
83	0.07730	0.07716	0.07698	0.07677	0.07653	0.07625	0.07593	0.07558	0.07520	1.050	0.950	1.000	0.0055
84	0.08447	0.08430	0.08410	0.08386	0.08359	0.08328	0.08295	0.08258	0.08218	1.050	0.950	1.000	0.0053
85	0.09269	0.09250	0.09227	0.09201	0.09172	0.09140	0.09104	0.09066	0.09024	1.050	0.950	1.000	0.0050
86	0.10197	0.10177	0.10153	0.10126	0.10095	0.10061	0.10024	0.09983	0.09939	1.050	0.950	1.000	0.0048
87	0.11229	0.11208	0.11183	0.11155	0.11123	0.11088	0.11049	0.11006	0.10960	1.050	0.950	1.000	0.0045
88	0.12338	0.12316	0.12290	0.12261	0.12228	0.12191	0.12151	0.12107	0.12059	1.050	0.950	1.000	0.0043
89	0.13518	0.13495	0.13468	0.13437	0.13403	0.13364	0.13322	0.13277	0.13227	1.050	0.950	1.000	0.0040
90	0.14776	0.14751	0.14722	0.14690	0.14654	0.14614	0.14570	0.14523	0.14473	1.050	0.950	1.000	0.0037
91	0.16144	0.16117	0.16087	0.16053	0.16015	0.15974	0.15929	0.15880	0.15829	1.050	0.950	1.000	0.0035
92	0.17662	0.17634	0.17603	0.17567	0.17529	0.17486	0.17440	0.17391	0.17338	1.050	0.950	1.000	0.0032
93	0.19364	0.19337	0.19305	0.19270	0.19231	0.19188	0.19142	0.19092	0.19039	1.050	0.950	1.000	0.0030
94	0.21279	0.21254	0.21225	0.21192	0.21155	0.21114	0.21068	0.21019	0.20965	1.050	0.950	1.000	0.0027
95	0.23389	0.23371	0.23349	0.23321	0.23288	0.23250	0.23207	0.23159	0.23106	1.050	0.950	1.000	0.0025
96	0.25634	0.25628	0.25616	0.25597	0.25572	0.25540	0.25502	0.25458	0.25407	1.050	0.950	1.000	0.0022
97	0.27915	0.27927	0.27931	0.27926	0.27913	0.27891	0.27861	0.27822	0.27775	1.050	0.950	1.000	0.0020
98	0.30140	0.30177	0.30203	0.30218	0.30221	0.30213	0.30194	0.30164	0.30122	1.050	0.950	1.000	0.0017
99	0.32097	0.32152	0.32194	0.32223	0.32239	0.32242	0.32232	0.32210	0.32174	1.050	0.950	1.000	0.0015
100	0.33687	0.33746	0.33793	0.33826	0.33848	0.33856	0.33852	0.33835	0.33805	1.050	0.950	1.000	0.0012
101	0.34978	0.35041	0.35092	0.35130	0.35157	0.35171	0.35172	0.35162	0.35139	1.050	0.950	1.000	0.0010
102	0.35946	0.36013	0.36068	0.36111	0.36143	0.36162	0.36171	0.36167	0.36152	1.050	0.950	1.000	0.0007
103	0.36252	0.36321	0.36379	0.36426	0.36463	0.36488	0.36503	0.36507	0.36499	1.050	0.950	1.000	0.0005
104	0.36560	0.36631	0.36692	0.36744	0.36785	0.36816	0.36837	0.36848	0.36849	1.050	0.950	1.000	0.0002
105	0.36877	0.36950	0.37015	0.37070	0.37117	0.37154	0.37182	0.37200	0.37210	1.050	0.950	1.000	0.0000
106	0.37223	0.37286	0.37351	0.37407	0.37454	0.37491	0.37519	0.37538	0.37547	1.050	0.950	1.000	0.0000
107	0.37607	0.37660	0.37716	0.37772	0.37819	0.37857	0.37885	0.37904	0.37914	1.050	0.950	1.000	0.0000
108	0.38038	0.38080	0.38127	0.38175	0.38223	0.38261	0.38290	0.38309	0.38318	1.050	0.950	1.000	0.0000
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.050	0.950	1.000	0.0000



## Disability and Survivor Assumptions

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
17	0.00013	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18	0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19	0.00007	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00006	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21	0.00007	0.00000	0.00000	0.00000	0.00000	0.00311	0.00000
22	0.00009	0.00000	0.00000	0.00000	0.00000	0.00633	0.00000
23	0.00012	0.00000	0.00000	0.00000	0.00000	0.00966	0.00000
24	0.00016	0.00000	0.00000	0.00000	0.00545	0.01310	0.00000
25	0.00022	0.00000	0.00000	0.00000	0.01192	0.01664	0.00000
26	0.00029	0.00000	0.00000	0.00000	0.01723	0.02027	0.00000
27	0.00036	0.00000	0.00000	0.00000	0.02139	0.02398	0.00000
28	0.00044	0.00000	0.00245	0.00024	0.02437	0.02775	0.00000
29	0.00052	0.00000	0.00494	0.00287	0.02616	0.03156	0.00000
30	0.00061	0.00043	0.00670	0.00508	0.02677	0.03537	0.00000
31	0.00068	0.00128	0.00768	0.00686	0.02619	0.03916	0.00619
32	0.00075	0.00218	0.00781	0.00820	0.02446	0.04290	0.03492
33	0.00081	0.00300	0.00708	0.00911	0.02169	0.04657	0.05792
34	0.00087	0.00358	0.00569	0.00960	0.01816	0.05019	0.07507
35	0.00095	0.00375	0.00400	0.00970	0.01451	0.05365	0.08623
36	0.00106	0.00340	0.00242	0.00946	0.01138	0.05672	0.09120
37	0.00119	0.00265	0.00126	0.00896	0.00921	0.05897	0.09005
38	0.00134	0.00178	0.00067	0.00829	0.00814	0.06010	0.08348
39	0.00149	0.00104	0.00066	0.00756	0.00810	0.05983	0.07281
40	0.00162	0.00059	0.00114	0.00689	0.00889	0.05841	0.06039
41	0.00175	0.00040	0.00193	0.00638	0.01018	0.05631	0.04892
42	0.00188	0.00039	0.00279	0.00605	0.01162	0.05350	0.04033
43	0.00200	0.00038	0.00344	0.00586	0.01280	0.04961	0.03508
44	0.00213	0.00030	0.00374	0.00572	0.01336	0.04471	0.03330
45	0.00226	0.00016	0.00373	0.00549	0.01348	0.03943	0.03397
46	0.00240	0.00007	0.00355	0.00517	0.01345	0.03506	0.03522
47	0.00255	0.00009	0.00326	0.00482	0.01314	0.03229	0.03538
48	0.00271	0.00027	0.00300	0.00450	0.01209	0.03074	0.03314
49	0.00288	0.00059	0.00277	0.00422	0.01037	0.02976	0.02872
50	0.00304	0.00092	0.00252	0.00391	0.00827	0.02880	0.02315
51	0.00320	0.00108	0.00222	0.00354	0.00599	0.02688	0.01768
52	0.00335	0.00094	0.00182	0.00318	0.00382	0.02271	0.01282
53	0.00350	0.00064	0.00140	0.00287	0.00182	0.01489	0.00945
54	0.00372	0.00031	0.00109	0.00257	0.00015	0.00315	0.00895
55	0.00405	0.00004	0.00101	0.00228	0.00000	0.00000	0.00000
56	0.00442	0.00000	0.00128	0.00203	0.00000	0.00000	0.00000
57	0.00473	0.00003	0.00197	0.00179	0.00000	0.00000	0.00000
58	0.00492	0.00046	0.00322	0.00154	0.00000	0.00000	0.00000
59	0.00494	0.00126	0.00505	0.00132	0.00000	0.00000	0.00000

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
60	0.00474	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
61	0.00432	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62	0.00380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
63	0.00326	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
64	0.00277	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.00237	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
66	0.00207	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
67	0.00189	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
68	0.00180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
69	0.00179	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.00185	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
71	0.00197	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
72	0.00210	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
73	0.00225	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
74	0.00239	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
75	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
76	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
77	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
78	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
79	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
80	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
81	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
82	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
83	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
84	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
85	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
86	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
87	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
88	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
89	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
90	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
91	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
92	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
93	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
94	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
95	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
96	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
97	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
98	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
99	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
101	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
102	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
103	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
104	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
105	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
106	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
107	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
108	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
109	0.00252	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

## Survivor and Sick Leave Assumptions

Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
17	0.29762	0.19755	1.00000	0	0.0000	0.0000
18	0.29762	0.19755	1.00000	1	0.0000	0.0000
19	0.29762	0.19755	1.00000	2	0.0000	0.0001
20	0.29762	0.19755	1.00000	3	0.0000	0.0004
21	0.29762	0.19755	1.00000	4	0.0000	0.0006
22	0.29762	0.19755	1.00000	5	0.0199	0.0008
23	0.29762	0.19755	1.00000	6	0.0275	0.0010
24	0.29762	0.19755	1.00000	7	0.0352	0.0011
25	0.29762	0.19755	1.00000	8	0.0428	0.0012
26	0.29762	0.19755	1.00000	9	0.0504	0.0014
27	0.29762	0.21340	1.00000	10	0.0580	0.0017
28	0.29762	0.22891	1.00000	11	0.0653	0.0022
29	0.29762	0.24403	1.00000	12	0.0725	0.0029
30	0.29762	0.25865	1.00000	13	0.0795	0.0039
31	0.29762	0.27264	1.00000	14	0.0862	0.0050
32	0.29762	0.28599	1.00000	15	0.0925	0.0060
33	0.29762	0.29878	1.00000	16	0.0982	0.0068
34	0.29762	0.31125	1.00000	17	0.1030	0.0073
35	0.29762	0.32353	1.00000	18	0.1071	0.0075
36	0.29762	0.33544	1.00000	19	0.1106	0.0072
37	0.29762	0.34624	1.00000	20	0.1142	0.0067
38	0.29762	0.35482	1.00000	21	0.1180	0.0063
39	0.29762	0.36023	1.00000	22	0.1220	0.0062
40	0.29762	0.36184	1.00000	23	0.1263	0.0062
41	0.29762	0.36004	1.00000	24	0.1315	0.0065
42	0.29762	0.35655	1.00000	25	0.1388	0.0070
43	0.29762	0.35392	1.00000	26	0.1494	0.0077
44	0.29762	0.35421	1.00000	27	0.1646	0.0088
45	0.29762	0.35757	1.00000	28	0.1851	0.0107
46	0.29762	0.36193	1.00000	29	0.2108	0.0137
47	0.29762	0.36448	1.00000	30	0.2401	0.0184
48	0.29762	0.36358	1.00000	31	0.2700	0.0257
49	0.29762	0.35915	1.00000	32	0.2960	0.0359
50	0.29577	0.35209	1.00000	33	0.3158	0.0482
51	0.29738	0.34404	1.00000	34	0.3294	0.0610
52	0.30354	0.33728	1.00000	35	0.3398	0.0724
53	0.31485	0.33319	1.00000	36	0.3523	0.0804
54	0.33078	0.33145	1.00000	37	0.3702	0.0847
55	0.34930	0.33073	1.00000	38	0.3934	0.0900
56	0.36738	0.33006	1.00000	39	0.4194	0.0950
57	0.38184	0.32818	1.00000	40	0.4471	0.1000
58	0.39125	0.32393	1.00000	41	0.4767	0.1000
59	0.39608	0.31781	1.00000	42	0.5049	0.1000
60	0.39767	0.31163	1.00000	43	0.5294	0.1000
61	0.39717	0.30708	1.00000	44	0.5467	0.1000

Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
62	0.39521	0.30387	1.00000	45	0.5587	0.1000
63	0.39228	0.30123	1.00000	46	0.5686	0.1000
64	0.38904	0.29825	1.00000	47	0.5787	0.1000
65	0.38554	0.29422	0.99099	48	0.5910	0.1000
66	0.38154	0.28980	0.98963	49	0.6071	0.1000
67	0.37638	0.28562	0.98648	50	0.6280	0.1000
68	0.36971	0.28140	0.98228	51	0.6545	0.1000
69	0.36190	0.27621	0.97887	52	0.6870	0.1000
70	0.35363	0.27054	0.97714	53	0.7258	0.1000
71	0.34537	0.26468	0.97664	54	0.7711	0.1000
72	0.33673	0.25815	0.97499	55	0.8228	0.1000
73	0.32683	0.25050	0.97060	56	0.8807	0.1000
74	0.31511	0.24190	0.96415	57	0.9443	0.1000
75	0.30158	0.23333	0.95705	58	1.0129	0.1000
76	0.28671	0.22553	0.95070	59	1.0863	0.1000
77	0.27118	0.21784	0.94581	60+	1.1644	0.1000
78	0.25534	0.20865	0.94160			
79	0.23927	0.19724	0.93709			
80	0.22301	0.18464	0.93204			
81	0.20665	0.17257	0.92664			
82	0.19034	0.16203	0.92104			
83	0.17432	0.15360	0.91584			
84	0.15886	0.14765	0.91133			
85	0.14426	0.12418	0.90813			
86	0.13077	0.11256	0.90644			
87	0.11851	0.10201	0.90624			
88	0.10757	0.09259	0.90768			
89	0.09799	0.08435	0.91098			
90	0.08976	0.07727	0.91601			
91	0.08276	0.07124	0.92199			
92	0.07675	0.06606	0.92736			
93	0.07143	0.06149	0.93071			
94	0.06653	0.05727	0.93147			
95	0.06191	0.05329	0.93055			
96	0.05754	0.04953	0.92944			
97	0.05350	0.04605	0.92976			
98	0.04992	0.04297	0.93303			
99	0.04694	0.04041	0.94038			
100	0.04472	0.03850	0.95274			
101	0.04338	0.03734	0.96989			
102	0.04297	0.03699	0.99070			
103	0.04355	0.03749	1.00000			
104	0.04511	0.03883	1.00000			
105	0.04511	0.03883	1.00000			
106	0.04511	0.03883	1.00000			
107	0.04511	0.03883	1.00000			
108	0.04511	0.03883	1.00000			
109	0.04511	0.03883	1.00000			

**Postal, Male**

**Normal Retirement Rates-CSRS**

<b>Age (ANB)</b>	<b>Years of Service</b>						
	<b>5 - 9</b>	<b>10-14</b>	<b>15-19</b>	<b>20</b>	<b>21-29</b>	<b>30</b>	<b>31+</b>
<b>55</b>	0.0000	0.0000	0.0000	0.0000	0.0000	0.1723	0.2503
<b>56 - 59</b>	0.0000	0.0000	0.0000	0.0000	0.0000	0.1302	0.1432
<b>60</b>	0.0000	0.0000	0.0000	0.4275	0.2773	0.1880	0.1780
<b>61</b>	0.0000	0.0000	0.0000	0.3122	0.1424	0.1414	0.1859
<b>62</b>	0.2897	0.3702	0.4186	0.3968	0.1834	0.1875	0.2026
<b>63</b>	0.1538	0.1641	0.1850	0.2280	0.1702	0.1842	0.2013
<b>64</b>	0.1756	0.1937	0.2017	0.2687	0.1745	0.2028	0.2114
<b>65</b>	0.3046	0.3649	0.3227	0.3630	0.2565	0.2744	0.2276
<b>66 - 69</b>	0.2104	0.2300	0.2148	0.2536	0.2092	0.2991	0.2048
<b>70-74</b>	0.1775	0.2006	0.1579	0.2166	0.1974	0.1927	0.1977
<b>75-84</b>	0.1775	0.2006	0.1579	0.2166	0.1974	0.1927	0.1859

**Normal Retirement Rates-FERS**

<b>Age (ANB)</b>	<b>Years of Service</b>						
	<b>5 - 9</b>	<b>10-14</b>	<b>15-19</b>	<b>20</b>	<b>21-29</b>	<b>30</b>	<b>31+</b>
<b>MRA</b>	0.0000	0.0000	0.0000	0.0000	0.0000	0.2176	0.3256
<b>58 - 59</b>	0.0000	0.0000	0.0000	0.0000	0.0000	0.1404	0.1469
<b>60</b>	0.0000	0.0000	0.0000	0.1924	0.1460	0.1718	0.1536
<b>61</b>	0.0000	0.0000	0.0000	0.1410	0.1091	0.1434	0.1555
<b>62</b>	0.2128	0.1633	0.1965	0.2358	0.1994	0.2568	0.2842
<b>63</b>	0.0893	0.0888	0.1120	0.1929	0.1515	0.1999	0.2117
<b>64</b>	0.0917	0.0990	0.1248	0.1784	0.1667	0.2214	0.2246
<b>65</b>	0.1356	0.1592	0.1755	0.2549	0.2396	0.2438	0.3005
<b>66 - 69</b>	0.1523	0.1718	0.1963	0.2687	0.2506	0.2885	0.3027
<b>70-74</b>	0.1817	0.1736	0.1823	0.2415	0.2222	0.2094	0.2532
<b>75-84</b>	0.2311	0.1688	0.1967	0.2666	0.2101	0.2686	0.2482

### Involuntary Retirement

<b>Age</b>	<b>CSRS</b>	<b>FERS</b>
<b>42</b>	0.0054	0.0054
<b>43</b>	0.0054	0.0054
<b>44</b>	0.0054	0.0054
<b>45</b>	0.0054	0.0054
<b>46</b>	0.0070	0.0070
<b>47</b>	0.0064	0.0064
<b>48</b>	0.0045	0.0045
<b>49</b>	0.0053	0.0053
<b>50</b>	0.0047	0.0047
<b>51</b>	0.0060	0.0060
<b>52</b>	0.0067	0.0067
<b>53</b>	0.0066	0.0066
<b>54</b>	0.0102	0.0102
<b>55</b>	0.0091	0.0091
<b>56</b>	0.0094	0.0094
<b>57</b>	0.0088	0.0088
<b>58</b>	0.0095	0.0095
<b>59+</b>	0.0092	0.0092

### MRA+10 Retirement

<b>Age</b>	<b>FERS</b>
<b>&lt;=57</b>	0.0190
<b>58</b>	0.0144
<b>59</b>	0.0151
<b>60</b>	0.0297
<b>61</b>	0.0356

### Merit/Longevity Salary Increases

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-44	45-54	55+
0	0.0517	0.0518	0.0472	0.0414	0.0331	0.0295
1	0.0590	0.0594	0.0610	0.0597	0.0562	0.0524
2	0.0425	0.0426	0.0428	0.0396	0.0372	0.0344
3	0.0433	0.0427	0.0435	0.0403	0.0377	0.0360
4	0.0399	0.0456	0.0490	0.0494	0.0477	0.0460
5	0.0241	0.0213	0.0206	0.0191	0.0178	0.0169
6	0.0214	0.0168	0.0162	0.0149	0.0143	0.0141
7	0.0561	0.0159	0.0147	0.0135	0.0130	0.0132
8	0.0000	0.0151	0.0138	0.0131	0.0122	0.0125
9	0.0000	0.0154	0.0147	0.0137	0.0123	0.0113
10	0.0000	0.0136	0.0136	0.0127	0.0112	0.0106
11	0.0000	0.0125	0.0111	0.0110	0.0096	0.0095
12	0.0000	0.0072	0.0086	0.0082	0.0066	0.0056
13	0.0000	0.0000	0.0044	0.0039	0.0024	0.0014
14	0.0000	0.0000	0.0045	0.0026	0.0012	0.0012
15	0.0000	0.0000	0.0057	0.0031	0.0019	0.0012
16	0.0000	0.0000	0.0055	0.0040	0.0025	0.0015
17	0.0000	0.0000	0.0000	0.0031	0.0021	0.0013
18	0.0000	0.0000	0.0000	0.0019	0.0010	0.0005
19	0.0000	0.0000	0.0000	0.0031	0.0019	0.0008
20-24	0.0000	0.0000	0.0000	0.0040	0.0023	0.0007
25-29	0.0000	0.0000	0.0000	0.0036	0.0017	0.0005
30+	0.0000	0.0000	0.0000	0.0000	0.0023	0.0006

### Assumed Distribution of New Entrants

Age (ANB)	Amount Prior Service (Years)				
	0-1	2-5	6-10	11-15	16-20
17-20	284	4	0	0	0
21-25	9,239	413	17	0	0
26-30	15,078	3,952	466	19	0
31-35	12,080	4,401	686	161	4
36-40	9,123	3,155	485	222	33
41-45	7,598	2,189	277	137	46
46-50	6,731	1,855	213	104	37
51-55	5,344	1,410	174	86	32
56-60	3,837	959	119	67	23
61-65	1,737	495	54	25	12
66-70	416	126	15	6	2
71-75	107	36	3	2	1



**Assumed New Entrants : Average Salary (as of FY 2020)**

Age (ANB)	Amount Prior Service (Years)				
	0-1	2-5	6-10	11-15	16-20
<b>17-20</b>	\$40,443	\$43,176	-	-	-
<b>21-25</b>	\$42,037	\$42,157	\$42,134	-	-
<b>26-30</b>	\$42,554	\$42,626	\$42,685	\$42,976	-
<b>31-35</b>	\$43,641	\$43,642	\$43,648	\$43,747	\$43,885
<b>36-40</b>	\$44,309	\$44,310	\$44,309	\$44,304	\$44,320
<b>41-45</b>	\$44,900	\$44,899	\$44,895	\$44,889	\$44,892
<b>46-50</b>	\$45,604	\$45,605	\$45,609	\$45,602	\$45,607
<b>51-55</b>	\$46,218	\$46,220	\$46,218	\$46,217	\$46,223
<b>56-60</b>	\$46,458	\$46,458	\$46,461	\$46,452	\$46,441
<b>61-65</b>	\$47,254	\$47,264	\$47,260	\$47,266	\$47,414
<b>66-70</b>	\$46,341	\$46,328	\$46,366	\$46,376	\$46,470
<b>71-75</b>	\$45,405	\$45,339	\$45,473	\$45,141	\$45,268

**Withdrawal Rates (Offset for Re-entry)**

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-39	40-44	45+
<b>0</b>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>1</b>	0.0888	0.0628	0.0439	0.0379	0.0322	0.0314
<b>2</b>	0.0802	0.0661	0.0422	0.0306	0.0262	0.0269
<b>3</b>	0.0484	0.0536	0.0371	0.0276	0.0234	0.0217
<b>4</b>	0.0357	0.0455	0.0291	0.0224	0.0192	0.0167
<b>5</b>	0.0745	0.0306	0.0237	0.0158	0.0159	0.0116
<b>6</b>	0.0000	0.0299	0.0211	0.0163	0.0153	0.0104
<b>7</b>	0.0000	0.0259	0.0209	0.0168	0.0149	0.0106
<b>8</b>	0.0000	0.0220	0.0205	0.0141	0.0118	0.0082
<b>9</b>	0.0000	0.0328	0.0216	0.0155	0.0118	0.0087
<b>10</b>	0.0000	0.0316	0.0165	0.0156	0.0110	0.0082
<b>11</b>	0.0000	0.0230	0.0200	0.0129	0.0119	0.0078
<b>12</b>	0.0000	0.0000	0.0149	0.0110	0.0102	0.0067
<b>13</b>	0.0000	0.0000	0.0167	0.0134	0.0104	0.0064
<b>14</b>	0.0000	0.0000	0.0170	0.0130	0.0110	0.0069
<b>15</b>	0.0000	0.0000	0.0085	0.0119	0.0085	0.0066
<b>16</b>	0.0000	0.0000	0.0234	0.0121	0.0102	0.0061
<b>17</b>	0.0000	0.0000	0.0000	0.0115	0.0081	0.0062
<b>18</b>	0.0000	0.0000	0.0000	0.0091	0.0090	0.0067
<b>19</b>	0.0000	0.0000	0.0000	0.0088	0.0093	0.0055
<b>20+</b>	0.0000	0.0000	0.0000	0.0136	0.0082	0.0044

### Fraction of Withdrawing Employees Electing Refunds

<b>Service</b>	<b>CSRS</b>	<b>FERS</b>	<b>FERS-RAE</b>	<b>FERS-FRAE</b>	<b>Fraction of Withdrawing Employees with Workers Compensation</b>
<b>0</b>	1.0000	1.0000	1.0000	1.0000	0.0000
<b>1</b>	0.9890	0.9890	0.9890	0.9890	0.0110
<b>2</b>	0.9870	0.9870	0.9870	0.9870	0.0130
<b>3</b>	0.9840	0.9840	0.9840	0.9840	0.0160
<b>4</b>	0.9820	0.9820	0.9820	0.9820	0.0180
<b>5</b>	0.9940	0.8350	0.9570	0.9700	0.0210
<b>6</b>	0.9680	0.7880	0.9120	0.9300	0.0230
<b>7</b>	0.9430	0.7420	0.8680	0.8910	0.0260
<b>8</b>	0.9170	0.6950	0.8230	0.8510	0.0280
<b>9</b>	0.8920	0.6490	0.7790	0.8110	0.0300
<b>10</b>	0.8660	0.6020	0.7340	0.7710	0.0320
<b>11</b>	0.8400	0.5560	0.6890	0.7320	0.0350
<b>12</b>	0.8150	0.5090	0.6450	0.6920	0.0370
<b>13</b>	0.7890	0.4630	0.6000	0.6520	0.0390
<b>14</b>	0.7640	0.4160	0.5560	0.6120	0.0410
<b>15</b>	0.7380	0.3700	0.5110	0.5730	0.0420
<b>16</b>	0.7120	0.3230	0.4660	0.5330	0.0440
<b>17</b>	0.6870	0.2770	0.4220	0.4930	0.0470
<b>18</b>	0.6610	0.2300	0.3770	0.4530	0.0540
<b>19</b>	0.6360	0.1840	0.3330	0.4140	0.0650
<b>20+</b>	0.6100	0.1370	0.2880	0.3740	0.0800

## Employee Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00162	0.00160	0.00159	0.00157	0.00156	0.00154	0.00152	0.00151	0.00149	0.0100
18	0.00132	0.00131	0.00129	0.00128	0.00127	0.00125	0.00124	0.00123	0.00122	0.0100
19	0.00106	0.00105	0.00104	0.00103	0.00102	0.00101	0.00100	0.00099	0.00098	0.0100
20	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00080	0.00079	0.00078	0.0100
21	0.00067	0.00067	0.00066	0.00065	0.00065	0.00064	0.00063	0.00063	0.00062	0.0100
22	0.00054	0.00054	0.00053	0.00053	0.00052	0.00052	0.00051	0.00051	0.00050	0.0100
23	0.00046	0.00045	0.00045	0.00044	0.00044	0.00043	0.00043	0.00042	0.00042	0.0100
24	0.00041	0.00041	0.00040	0.00040	0.00040	0.00039	0.00039	0.00038	0.00038	0.0100
25	0.00041	0.00040	0.00040	0.00040	0.00039	0.00039	0.00038	0.00038	0.00038	0.0100
26	0.00043	0.00043	0.00042	0.00042	0.00042	0.00041	0.00041	0.00040	0.00040	0.0100
27	0.00047	0.00047	0.00046	0.00046	0.00046	0.00045	0.00045	0.00044	0.00044	0.0100
28	0.00052	0.00051	0.00051	0.00050	0.00050	0.00049	0.00049	0.00048	0.00048	0.0100
29	0.00056	0.00055	0.00055	0.00054	0.00054	0.00053	0.00053	0.00052	0.00052	0.0100
30	0.00059	0.00059	0.00058	0.00058	0.00057	0.00056	0.00056	0.00055	0.00055	0.0100
31	0.00062	0.00061	0.00061	0.00060	0.00060	0.00059	0.00058	0.00058	0.00057	0.0100
32	0.00064	0.00063	0.00062	0.00062	0.00061	0.00061	0.00060	0.00059	0.00059	0.0100
33	0.00064	0.00063	0.00063	0.00062	0.00062	0.00061	0.00060	0.00060	0.00059	0.0100
34	0.00064	0.00063	0.00063	0.00062	0.00061	0.00061	0.00060	0.00060	0.00059	0.0100
35	0.00063	0.00063	0.00062	0.00062	0.00061	0.00060	0.00060	0.00059	0.00059	0.0100
36	0.00064	0.00063	0.00063	0.00062	0.00061	0.00061	0.00060	0.00060	0.00059	0.0100
37	0.00067	0.00066	0.00065	0.00065	0.00064	0.00063	0.00063	0.00062	0.00061	0.0100
38	0.00071	0.00070	0.00069	0.00068	0.00068	0.00067	0.00066	0.00066	0.00065	0.0100
39	0.00075	0.00074	0.00073	0.00073	0.00072	0.00071	0.00070	0.00070	0.00069	0.0100
40	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.00074	0.00073	0.00073	0.0100
41	0.00082	0.00081	0.00080	0.00079	0.00079	0.00078	0.00077	0.00076	0.00075	0.0100
42	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00079	0.00078	0.0100
43	0.00089	0.00088	0.00086	0.00085	0.00085	0.00084	0.00083	0.00082	0.00081	0.0100
44	0.00094	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.0100
45	0.00101	0.00100	0.00098	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.0100
46	0.00111	0.00109	0.00107	0.00106	0.00105	0.00103	0.00102	0.00101	0.00100	0.0100
47	0.00121	0.00119	0.00118	0.00116	0.00115	0.00113	0.00112	0.00111	0.00110	0.0100
48	0.00133	0.00131	0.00129	0.00127	0.00126	0.00124	0.00123	0.00121	0.00120	0.0100
49	0.00145	0.00143	0.00141	0.00139	0.00137	0.00135	0.00134	0.00132	0.00131	0.0100
50	0.00158	0.00156	0.00153	0.00151	0.00149	0.00147	0.00146	0.00144	0.00143	0.0100
51	0.00174	0.00171	0.00168	0.00166	0.00164	0.00162	0.00160	0.00158	0.00156	0.0100
52	0.00188	0.00185	0.00183	0.00180	0.00178	0.00175	0.00173	0.00171	0.00170	0.0100
53	0.00201	0.00197	0.00195	0.00192	0.00189	0.00187	0.00185	0.00183	0.00181	0.0100
54	0.00210	0.00207	0.00204	0.00201	0.00198	0.00196	0.00193	0.00191	0.00189	0.0100
55	0.00220	0.00216	0.00213	0.00210	0.00207	0.00205	0.00202	0.00200	0.00198	0.0100
56	0.00231	0.00227	0.00224	0.00221	0.00218	0.00215	0.00212	0.00210	0.00208	0.0100
57	0.00246	0.00242	0.00238	0.00235	0.00232	0.00229	0.00226	0.00224	0.00221	0.0100
58	0.00262	0.00258	0.00254	0.00250	0.00247	0.00244	0.00241	0.00239	0.00236	0.0100
59	0.00278	0.00274	0.00270	0.00266	0.00262	0.00259	0.00256	0.00253	0.00251	0.0100
60	0.00294	0.00289	0.00285	0.00280	0.00277	0.00273	0.00270	0.00267	0.00264	0.0100
61	0.00309	0.00304	0.00299	0.00295	0.00291	0.00287	0.00284	0.00280	0.00278	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
62	0.00324	0.00319	0.00314	0.00309	0.00305	0.00301	0.00297	0.00294	0.00291	0.0100
63	0.00339	0.00334	0.00328	0.00324	0.00319	0.00315	0.00311	0.00308	0.00305	0.0100
64	0.00359	0.00353	0.00347	0.00342	0.00337	0.00333	0.00329	0.00325	0.00322	0.0100
65	0.00386	0.00379	0.00373	0.00368	0.00363	0.00358	0.00354	0.00350	0.00346	0.0100
66	0.00422	0.00415	0.00408	0.00402	0.00396	0.00391	0.00387	0.00382	0.00378	0.0100
67	0.00468	0.00460	0.00453	0.00446	0.00440	0.00434	0.00429	0.00424	0.00420	0.0100
68	0.00527	0.00518	0.00510	0.00502	0.00495	0.00488	0.00483	0.00477	0.00472	0.0100
69	0.00595	0.00585	0.00575	0.00567	0.00559	0.00552	0.00545	0.00539	0.00534	0.0100
70	0.00667	0.00656	0.00645	0.00636	0.00627	0.00618	0.00611	0.00604	0.00598	0.0100
71	0.00737	0.00725	0.00713	0.00703	0.00693	0.00684	0.00675	0.00668	0.00661	0.0100
72	0.00805	0.00792	0.00779	0.00767	0.00756	0.00747	0.00738	0.00730	0.00722	0.0100
73	0.00872	0.00857	0.00843	0.00831	0.00819	0.00808	0.00799	0.00790	0.00782	0.0100
74	0.00940	0.00924	0.00909	0.00895	0.00883	0.00871	0.00861	0.00851	0.00843	0.0100
75	0.01011	0.00994	0.00978	0.00963	0.00950	0.00937	0.00926	0.00916	0.00907	0.0100
76	0.01092	0.01074	0.01057	0.01041	0.01026	0.01013	0.01001	0.00990	0.00980	0.0100
77	0.01191	0.01170	0.01152	0.01134	0.01118	0.01104	0.01091	0.01079	0.01068	0.0100
78	0.01311	0.01289	0.01268	0.01249	0.01232	0.01216	0.01201	0.01188	0.01176	0.0100
79	0.01458	0.01433	0.01410	0.01389	0.01369	0.01352	0.01335	0.01321	0.01308	0.0100
80	0.01634	0.01606	0.01580	0.01557	0.01535	0.01515	0.01497	0.01480	0.01465	0.0100
81	0.01842	0.01811	0.01782	0.01755	0.01731	0.01708	0.01688	0.01669	0.01652	0.0100
82	0.02085	0.02049	0.02017	0.01986	0.01958	0.01933	0.01910	0.01889	0.01870	0.0100
83	0.02362	0.02322	0.02285	0.02251	0.02219	0.02190	0.02164	0.02140	0.02119	0.0100
84	0.02688	0.02644	0.02602	0.02564	0.02529	0.02497	0.02467	0.02440	0.02416	0.0100
85	0.03065	0.03018	0.02973	0.02931	0.02893	0.02857	0.02824	0.02793	0.02765	0.0100
86	0.03491	0.03440	0.03392	0.03347	0.03305	0.03266	0.03230	0.03196	0.03164	0.0099
87	0.03966	0.03913	0.03863	0.03815	0.03770	0.03727	0.03687	0.03650	0.03614	0.0097
88	0.04494	0.04440	0.04387	0.04337	0.04289	0.04244	0.04200	0.04158	0.04119	0.0096
89	0.05078	0.05023	0.04970	0.04918	0.04868	0.04819	0.04772	0.04726	0.04682	0.0094
90	0.05720	0.05666	0.05614	0.05561	0.05510	0.05459	0.05408	0.05358	0.05308	0.0093
91	0.06423	0.06373	0.06323	0.06271	0.06219	0.06166	0.06112	0.06058	0.06003	0.0091
92	0.07192	0.07148	0.07101	0.07052	0.07001	0.06946	0.06890	0.06831	0.06770	0.0089
93	0.08030	0.07995	0.07955	0.07910	0.07860	0.07806	0.07747	0.07684	0.07616	0.0088
94	0.08933	0.08910	0.08879	0.08841	0.08795	0.08741	0.08681	0.08613	0.08539	0.0086
95	0.09754	0.09729	0.09696	0.09655	0.09606	0.09549	0.09484	0.09411	0.09331	0.0085
96	0.10618	0.10592	0.10558	0.10515	0.10464	0.10404	0.10337	0.10262	0.10178	0.0081
97	0.11522	0.11495	0.11460	0.11416	0.11363	0.11302	0.11232	0.11154	0.11069	0.0077
98	0.12467	0.12440	0.12404	0.12358	0.12304	0.12241	0.12170	0.12090	0.12002	0.0073
99	0.13454	0.13426	0.13389	0.13343	0.13287	0.13223	0.13150	0.13068	0.12978	0.0069
100	0.14481	0.14452	0.14415	0.14368	0.14312	0.14247	0.14173	0.14090	0.13998	0.0065
101	0.15549	0.15520	0.15482	0.15435	0.15379	0.15313	0.15238	0.15155	0.15062	0.0061
102	0.16657	0.16629	0.16591	0.16544	0.16487	0.16421	0.16346	0.16263	0.16170	0.0057
103	0.17807	0.17779	0.17741	0.17694	0.17638	0.17572	0.17498	0.17414	0.17322	0.0053
104	0.18997	0.18969	0.18932	0.18886	0.18830	0.18766	0.18692	0.18610	0.18519	0.0049
105	0.19000	0.18974	0.18940	0.18897	0.18846	0.18787	0.18719	0.18643	0.18560	0.0045

### Rate of Employee Death with Spouse Survivor

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
29	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0100
30	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.0100
31	0.00007	0.00007	0.00007	0.00007	0.00007	0.00006	0.00006	0.00006	0.00006	0.0100
32	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.0100
33	0.00012	0.00012	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.0100
34	0.00014	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.00013	0.0100
35	0.00015	0.00015	0.00015	0.00015	0.00015	0.00014	0.00014	0.00014	0.00014	0.0100
36	0.00017	0.00016	0.00016	0.00016	0.00016	0.00016	0.00016	0.00015	0.00015	0.0100
37	0.00018	0.00018	0.00018	0.00017	0.00017	0.00017	0.00017	0.00017	0.00017	0.0100
38	0.00020	0.00020	0.00019	0.00019	0.00019	0.00019	0.00019	0.00018	0.00018	0.0100
39	0.00022	0.00022	0.00022	0.00022	0.00021	0.00021	0.00021	0.00021	0.00020	0.0100
40	0.00025	0.00025	0.00025	0.00025	0.00024	0.00024	0.00024	0.00024	0.00024	0.0100
41	0.00029	0.00029	0.00029	0.00029	0.00028	0.00028	0.00028	0.00027	0.00027	0.0100
42	0.00034	0.00033	0.00033	0.00033	0.00032	0.00032	0.00032	0.00031	0.00031	0.0100
43	0.00038	0.00037	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.00035	0.0100
44	0.00042	0.00041	0.00041	0.00040	0.00040	0.00039	0.00039	0.00039	0.00038	0.0100
45	0.00046	0.00045	0.00045	0.00044	0.00044	0.00043	0.00043	0.00042	0.00042	0.0100
46	0.00050	0.00050	0.00049	0.00048	0.00048	0.00047	0.00047	0.00046	0.00046	0.0100
47	0.00055	0.00055	0.00054	0.00053	0.00052	0.00052	0.00051	0.00051	0.00050	0.0100
48	0.00061	0.00060	0.00059	0.00058	0.00057	0.00057	0.00056	0.00055	0.00055	0.0100
49	0.00067	0.00066	0.00065	0.00064	0.00063	0.00062	0.00062	0.00061	0.00060	0.0100
50	0.00075	0.00073	0.00072	0.00071	0.00070	0.00070	0.00069	0.00068	0.00067	0.0100
51	0.00084	0.00083	0.00082	0.00080	0.00079	0.00078	0.00077	0.00077	0.00076	0.0100
52	0.00094	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.0100
53	0.00103	0.00101	0.00100	0.00098	0.00097	0.00096	0.00095	0.00094	0.00093	0.0100
54	0.00110	0.00108	0.00106	0.00105	0.00103	0.00102	0.00101	0.00100	0.00099	0.0100
55	0.00117	0.00115	0.00113	0.00111	0.00110	0.00109	0.00107	0.00106	0.00105	0.0100
56	0.00125	0.00123	0.00121	0.00119	0.00118	0.00116	0.00115	0.00114	0.00113	0.0100
57	0.00135	0.00133	0.00131	0.00129	0.00127	0.00126	0.00124	0.00123	0.00122	0.0100
58	0.00147	0.00145	0.00143	0.00141	0.00139	0.00137	0.00135	0.00134	0.00133	0.0100
59	0.00160	0.00158	0.00155	0.00153	0.00151	0.00149	0.00147	0.00146	0.00144	0.0100
60	0.00172	0.00170	0.00167	0.00165	0.00162	0.00160	0.00158	0.00157	0.00155	0.0100
61	0.00183	0.00180	0.00177	0.00175	0.00172	0.00170	0.00168	0.00166	0.00164	0.0100
62	0.00191	0.00188	0.00185	0.00183	0.00180	0.00178	0.00176	0.00174	0.00172	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
63	0.00198	0.00195	0.00192	0.00189	0.00186	0.00184	0.00182	0.00180	0.00178	0.0100
64	0.00208	0.00204	0.00201	0.00198	0.00195	0.00193	0.00190	0.00188	0.00186	0.0100
65	0.00223	0.00220	0.00216	0.00213	0.00210	0.00207	0.00205	0.00202	0.00200	0.0100
66	0.00247	0.00243	0.00239	0.00236	0.00232	0.00229	0.00226	0.00224	0.00222	0.0100
67	0.00279	0.00275	0.00270	0.00266	0.00263	0.00259	0.00256	0.00253	0.00251	0.0100
68	0.00319	0.00313	0.00308	0.00304	0.00299	0.00295	0.00292	0.00289	0.00286	0.0100
69	0.00361	0.00355	0.00350	0.00344	0.00340	0.00335	0.00331	0.00328	0.00324	0.0100
70	0.00403	0.00396	0.00390	0.00384	0.00379	0.00374	0.00369	0.00365	0.00362	0.0100
71	0.00440	0.00433	0.00426	0.00419	0.00413	0.00408	0.00403	0.00399	0.00395	0.0100
72	0.00472	0.00464	0.00456	0.00450	0.00443	0.00437	0.00432	0.00427	0.00423	0.0100
73	0.00499	0.00491	0.00483	0.00476	0.00469	0.00463	0.00457	0.00452	0.00448	0.0100
74	0.00524	0.00515	0.00507	0.00499	0.00492	0.00486	0.00480	0.00475	0.00470	0.0100
75	0.00548	0.00539	0.00530	0.00522	0.00515	0.00508	0.00502	0.00497	0.00492	0.0100
76	0.00576	0.00566	0.00557	0.00549	0.00541	0.00534	0.00528	0.00522	0.00517	0.0100
77	0.00611	0.00601	0.00591	0.00582	0.00574	0.00567	0.00560	0.00554	0.00548	0.0100
78	0.00658	0.00646	0.00636	0.00626	0.00618	0.00610	0.00602	0.00596	0.00590	0.0100
79	0.00718	0.00706	0.00695	0.00685	0.00675	0.00666	0.00658	0.00651	0.00644	0.0100
80	0.00796	0.00783	0.00770	0.00759	0.00748	0.00738	0.00729	0.00721	0.00714	0.0100
81	0.00893	0.00878	0.00864	0.00851	0.00839	0.00828	0.00818	0.00809	0.00801	0.0100
82	0.01010	0.00993	0.00977	0.00962	0.00949	0.00936	0.00925	0.00915	0.00906	0.0100
83	0.01147	0.01128	0.01110	0.01093	0.01078	0.01064	0.01051	0.01040	0.01029	0.0100
84	0.01313	0.01291	0.01271	0.01252	0.01235	0.01219	0.01205	0.01192	0.01180	0.0100
85	0.01508	0.01484	0.01462	0.01442	0.01423	0.01405	0.01389	0.01374	0.01360	0.0100
86	0.01731	0.01706	0.01682	0.01660	0.01639	0.01619	0.01601	0.01585	0.01569	0.0099
87	0.01983	0.01957	0.01931	0.01908	0.01885	0.01864	0.01844	0.01825	0.01807	0.0097
88	0.02267	0.02239	0.02213	0.02188	0.02163	0.02140	0.02118	0.02097	0.02077	0.0096
89	0.02583	0.02555	0.02528	0.02501	0.02476	0.02451	0.02427	0.02404	0.02381	0.0094
90	0.02933	0.02905	0.02878	0.02852	0.02825	0.02799	0.02773	0.02747	0.02722	0.0093
91	0.03319	0.03293	0.03267	0.03241	0.03214	0.03186	0.03158	0.03130	0.03102	0.0091
92	0.03744	0.03721	0.03697	0.03671	0.03644	0.03616	0.03587	0.03556	0.03524	0.0089
93	0.04210	0.04191	0.04170	0.04147	0.04121	0.04092	0.04062	0.04028	0.03993	0.0088
94	0.04714	0.04702	0.04686	0.04666	0.04641	0.04613	0.04581	0.04546	0.04506	0.0086
95	0.05180	0.05167	0.05149	0.05128	0.05101	0.05071	0.05037	0.04998	0.04956	0.0085
96	0.05672	0.05658	0.05640	0.05617	0.05590	0.05558	0.05522	0.05482	0.05438	0.0081
97	0.06190	0.06176	0.06157	0.06133	0.06105	0.06072	0.06034	0.05992	0.05946	0.0077
98	0.06733	0.06719	0.06699	0.06675	0.06645	0.06611	0.06573	0.06530	0.06482	0.0073
99	0.07302	0.07287	0.07267	0.07242	0.07212	0.07177	0.07138	0.07093	0.07044	0.0069
100	0.07897	0.07882	0.07861	0.07836	0.07805	0.07770	0.07729	0.07684	0.07634	0.0065
101	0.08518	0.08502	0.08481	0.08455	0.08424	0.08389	0.08348	0.08302	0.08251	0.0061
102	0.09164	0.09148	0.09127	0.09101	0.09070	0.09034	0.08993	0.08947	0.08896	0.0057
103	0.09836	0.09820	0.09799	0.09773	0.09742	0.09706	0.09665	0.09619	0.09568	0.0053
104	0.10533	0.10517	0.10497	0.10471	0.10440	0.10405	0.10364	0.10318	0.10268	0.0049
105	0.10534	0.10520	0.10501	0.10477	0.10449	0.10416	0.10379	0.10337	0.10290	0.0045

### Non-Disability Annuitant Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00135	0.00134	0.00133	0.00131	0.00130	0.00129	0.00128	0.00126	0.00125	0.0100
18	0.00137	0.00135	0.00134	0.00133	0.00131	0.00130	0.00129	0.00128	0.00126	0.0100
19	0.00138	0.00137	0.00135	0.00134	0.00133	0.00131	0.00130	0.00129	0.00128	0.0100
20	0.00140	0.00138	0.00137	0.00135	0.00134	0.00133	0.00131	0.00130	0.00129	0.0100
21	0.00141	0.00140	0.00138	0.00137	0.00135	0.00134	0.00133	0.00131	0.00130	0.0100
22	0.00142	0.00141	0.00140	0.00138	0.00137	0.00135	0.00134	0.00133	0.00131	0.0100
23	0.00144	0.00142	0.00141	0.00140	0.00138	0.00137	0.00135	0.00134	0.00133	0.0100
24	0.00145	0.00144	0.00142	0.00141	0.00140	0.00138	0.00137	0.00135	0.00134	0.0100
25	0.00147	0.00145	0.00144	0.00142	0.00141	0.00140	0.00138	0.00137	0.00135	0.0100
26	0.00148	0.00147	0.00145	0.00144	0.00142	0.00141	0.00140	0.00138	0.00137	0.0100
27	0.00150	0.00148	0.00147	0.00145	0.00144	0.00142	0.00141	0.00140	0.00138	0.0100
28	0.00151	0.00150	0.00148	0.00147	0.00145	0.00144	0.00142	0.00141	0.00140	0.0100
29	0.00153	0.00151	0.00150	0.00148	0.00147	0.00145	0.00144	0.00142	0.00141	0.0100
30	0.00154	0.00153	0.00151	0.00150	0.00148	0.00147	0.00145	0.00144	0.00142	0.0100
31	0.00156	0.00154	0.00153	0.00151	0.00150	0.00148	0.00147	0.00145	0.00144	0.0100
32	0.00157	0.00156	0.00154	0.00153	0.00151	0.00150	0.00148	0.00147	0.00145	0.0100
33	0.00159	0.00157	0.00156	0.00154	0.00153	0.00151	0.00150	0.00148	0.00147	0.0100
34	0.00161	0.00159	0.00157	0.00156	0.00154	0.00153	0.00151	0.00150	0.00148	0.0100
35	0.00162	0.00161	0.00159	0.00157	0.00156	0.00154	0.00153	0.00151	0.00150	0.0100
36	0.00164	0.00162	0.00161	0.00159	0.00157	0.00156	0.00154	0.00153	0.00151	0.0100
37	0.00166	0.00164	0.00162	0.00161	0.00159	0.00157	0.00156	0.00154	0.00153	0.0100
38	0.00167	0.00166	0.00164	0.00162	0.00161	0.00159	0.00157	0.00156	0.00154	0.0100
39	0.00169	0.00167	0.00166	0.00164	0.00162	0.00161	0.00159	0.00157	0.00156	0.0100
40	0.00171	0.00169	0.00167	0.00166	0.00164	0.00162	0.00161	0.00159	0.00157	0.0100
41	0.00172	0.00171	0.00169	0.00167	0.00166	0.00164	0.00162	0.00161	0.00159	0.0100
42	0.00174	0.00172	0.00171	0.00169	0.00167	0.00166	0.00164	0.00162	0.00161	0.0100
43	0.00176	0.00174	0.00172	0.00171	0.00169	0.00167	0.00166	0.00164	0.00162	0.0100
44	0.00178	0.00176	0.00174	0.00172	0.00171	0.00169	0.00167	0.00166	0.00164	0.0100
45	0.00179	0.00178	0.00176	0.00174	0.00172	0.00171	0.00169	0.00167	0.00166	0.0100
46	0.00181	0.00180	0.00178	0.00176	0.00174	0.00173	0.00171	0.00169	0.00167	0.0100
47	0.00190	0.00188	0.00186	0.00184	0.00182	0.00180	0.00179	0.00177	0.00175	0.0100
48	0.00204	0.00202	0.00200	0.00198	0.00196	0.00194	0.00192	0.00190	0.00188	0.0100
49	0.00225	0.00223	0.00221	0.00218	0.00216	0.00214	0.00212	0.00210	0.00208	0.0100
50	0.00253	0.00250	0.00247	0.00245	0.00243	0.00240	0.00238	0.00235	0.00233	0.0100
51	0.00286	0.00284	0.00281	0.00278	0.00275	0.00272	0.00269	0.00267	0.00264	0.0100
52	0.00326	0.00323	0.00319	0.00316	0.00313	0.00310	0.00306	0.00303	0.00300	0.0100
53	0.00369	0.00366	0.00362	0.00358	0.00354	0.00351	0.00347	0.00344	0.00340	0.0100
54	0.00416	0.00412	0.00407	0.00403	0.00399	0.00395	0.00391	0.00387	0.00383	0.0100
55	0.00465	0.00460	0.00455	0.00450	0.00445	0.00441	0.00436	0.00432	0.00427	0.0100
56	0.00517	0.00511	0.00505	0.00500	0.00494	0.00489	0.00484	0.00479	0.00474	0.0100
57	0.00568	0.00561	0.00555	0.00549	0.00543	0.00537	0.00531	0.00525	0.00520	0.0100
58	0.00615	0.00608	0.00601	0.00594	0.00587	0.00580	0.00574	0.00568	0.00562	0.0100
59	0.00653	0.00645	0.00637	0.00629	0.00622	0.00614	0.00608	0.00601	0.00595	0.0100
60	0.00683	0.00674	0.00665	0.00657	0.00649	0.00642	0.00634	0.00627	0.00621	0.0100
61	0.00715	0.00706	0.00698	0.00690	0.00682	0.00674	0.00667	0.00660	0.00653	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
62	0.00765	0.00756	0.00748	0.00739	0.00731	0.00723	0.00715	0.00708	0.00701	0.0100
63	0.00839	0.00831	0.00822	0.00813	0.00805	0.00796	0.00788	0.00780	0.00772	0.0100
64	0.00933	0.00925	0.00917	0.00908	0.00899	0.00890	0.00881	0.00872	0.00863	0.0100
65	0.01032	0.01024	0.01015	0.01006	0.00996	0.00986	0.00976	0.00966	0.00957	0.0100
66	0.01131	0.01124	0.01115	0.01105	0.01094	0.01083	0.01073	0.01062	0.01051	0.0100
67	0.01238	0.01230	0.01221	0.01211	0.01200	0.01189	0.01177	0.01165	0.01154	0.0100
68	0.01362	0.01354	0.01345	0.01335	0.01324	0.01311	0.01299	0.01286	0.01273	0.0100
69	0.01509	0.01499	0.01490	0.01480	0.01468	0.01455	0.01441	0.01427	0.01413	0.0100
70	0.01676	0.01663	0.01652	0.01641	0.01628	0.01615	0.01600	0.01585	0.01569	0.0100
71	0.01873	0.01857	0.01843	0.01829	0.01816	0.01802	0.01786	0.01769	0.01752	0.0100
72	0.02100	0.02082	0.02065	0.02049	0.02032	0.02016	0.01999	0.01981	0.01962	0.0100
73	0.02357	0.02336	0.02316	0.02296	0.02277	0.02258	0.02239	0.02219	0.02197	0.0100
74	0.02631	0.02608	0.02584	0.02561	0.02538	0.02516	0.02495	0.02472	0.02449	0.0100
75	0.02917	0.02892	0.02865	0.02839	0.02813	0.02788	0.02763	0.02738	0.02712	0.0100
76	0.03223	0.03195	0.03166	0.03137	0.03108	0.03079	0.03050	0.03022	0.02993	0.0100
77	0.03583	0.03551	0.03520	0.03487	0.03455	0.03422	0.03390	0.03358	0.03325	0.0100
78	0.04020	0.03985	0.03950	0.03914	0.03877	0.03841	0.03804	0.03767	0.03730	0.0100
79	0.04527	0.04487	0.04447	0.04407	0.04366	0.04325	0.04283	0.04242	0.04200	0.0100
80	0.05077	0.05032	0.04987	0.04942	0.04896	0.04850	0.04804	0.04757	0.04710	0.0100
81	0.05662	0.05610	0.05560	0.05509	0.05458	0.05407	0.05355	0.05303	0.05251	0.0100
82	0.06289	0.06229	0.06172	0.06115	0.06058	0.06002	0.05944	0.05887	0.05829	0.0100
83	0.06975	0.06906	0.06840	0.06776	0.06713	0.06650	0.06586	0.06522	0.06458	0.0100
84	0.07743	0.07666	0.07591	0.07519	0.07448	0.07378	0.07308	0.07238	0.07166	0.0100
85	0.08630	0.08548	0.08466	0.08385	0.08306	0.08228	0.08151	0.08073	0.07994	0.0100
86	0.09672	0.09583	0.09494	0.09406	0.09318	0.09232	0.09146	0.09060	0.08973	0.0099
87	0.10882	0.10787	0.10691	0.10595	0.10499	0.10403	0.10307	0.10212	0.10116	0.0097
88	0.12282	0.12180	0.12076	0.11972	0.11866	0.11760	0.11653	0.11547	0.11440	0.0096
89	0.13844	0.13734	0.13622	0.13509	0.13393	0.13277	0.13159	0.13041	0.12921	0.0094
90	0.15509	0.15396	0.15275	0.15152	0.15027	0.14900	0.14771	0.14640	0.14508	0.0093
91	0.17225	0.17104	0.16979	0.16847	0.16712	0.16574	0.16434	0.16292	0.16147	0.0091
92	0.18990	0.18854	0.18721	0.18584	0.18439	0.18291	0.18139	0.17985	0.17828	0.0089
93	0.20840	0.20696	0.20548	0.20401	0.20250	0.20091	0.19928	0.19762	0.19593	0.0088
94	0.22823	0.22669	0.22511	0.22348	0.22187	0.22020	0.21845	0.21667	0.21485	0.0086
95	0.24958	0.24794	0.24626	0.24452	0.24274	0.24095	0.23911	0.23720	0.23524	0.0085
96	0.27221	0.27048	0.26871	0.26689	0.26502	0.26311	0.26118	0.25921	0.25717	0.0081
97	0.29573	0.29394	0.29209	0.29019	0.28824	0.28626	0.28422	0.28217	0.28007	0.0077
98	0.31963	0.31789	0.31599	0.31402	0.31201	0.30996	0.30786	0.30572	0.30356	0.0073
99	0.34326	0.34162	0.33977	0.33777	0.33572	0.33362	0.33148	0.32930	0.32708	0.0069
100	0.36592	0.36447	0.36274	0.36081	0.35874	0.35662	0.35446	0.35226	0.35002	0.0065
101	0.38650	0.38522	0.38363	0.38178	0.37976	0.37762	0.37544	0.37324	0.37100	0.0061
102	0.40505	0.40394	0.40251	0.40079	0.39886	0.39678	0.39461	0.39242	0.39021	0.0057
103	0.42167	0.42064	0.41937	0.41783	0.41603	0.41405	0.41196	0.40980	0.40764	0.0053
104	0.43653	0.43547	0.43430	0.43292	0.43130	0.42946	0.42748	0.42542	0.42333	0.0049
105	0.44976	0.44861	0.44743	0.44616	0.44471	0.44304	0.44121	0.43927	0.43730	0.0045
106	0.46136	0.46009	0.45885	0.45760	0.45627	0.45478	0.45312	0.45133	0.44949	0.0041
107	0.47118	0.46981	0.46849	0.46722	0.46593	0.46457	0.46309	0.46148	0.45979	0.0037
108	0.47891	0.47755	0.47617	0.47485	0.47357	0.47229	0.47095	0.46952	0.46800	0.0033
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000



## Death Rate for Spouse Survivors of Males

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00074	0.0100
18	0.00083	0.00082	0.00080	0.00079	0.00078	0.00077	0.00077	0.00076	0.00075	0.0100
19	0.00084	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.00076	0.0100
20	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.00076	0.0100
21	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.00077	0.0100
22	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00078	0.0100
23	0.00087	0.00086	0.00085	0.00083	0.00082	0.00081	0.00081	0.00080	0.00079	0.0100
24	0.00088	0.00087	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	0.00080	0.0100
25	0.00105	0.00104	0.00103	0.00101	0.00100	0.00099	0.00098	0.00097	0.00096	0.0100
26	0.00122	0.00121	0.00119	0.00117	0.00116	0.00115	0.00113	0.00112	0.00111	0.0100
27	0.00138	0.00136	0.00134	0.00133	0.00131	0.00129	0.00128	0.00127	0.00125	0.0100
28	0.00153	0.00151	0.00149	0.00147	0.00145	0.00143	0.00142	0.00140	0.00139	0.0100
29	0.00166	0.00164	0.00162	0.00160	0.00158	0.00156	0.00154	0.00152	0.00151	0.0100
30	0.00178	0.00176	0.00174	0.00171	0.00169	0.00167	0.00165	0.00163	0.00162	0.0100
31	0.00189	0.00186	0.00183	0.00181	0.00179	0.00177	0.00175	0.00173	0.00171	0.0100
32	0.00196	0.00194	0.00191	0.00189	0.00186	0.00184	0.00182	0.00180	0.00178	0.0100
33	0.00202	0.00199	0.00196	0.00194	0.00191	0.00189	0.00187	0.00185	0.00183	0.0100
34	0.00204	0.00201	0.00199	0.00196	0.00194	0.00191	0.00189	0.00187	0.00185	0.0100
35	0.00204	0.00201	0.00198	0.00195	0.00193	0.00191	0.00188	0.00186	0.00184	0.0100
36	0.00199	0.00197	0.00194	0.00191	0.00189	0.00187	0.00185	0.00183	0.00181	0.0100
37	0.00192	0.00189	0.00187	0.00184	0.00182	0.00180	0.00178	0.00176	0.00174	0.0100
38	0.00181	0.00179	0.00176	0.00174	0.00172	0.00170	0.00168	0.00166	0.00164	0.0100
39	0.00169	0.00166	0.00164	0.00162	0.00160	0.00158	0.00156	0.00155	0.00153	0.0100
40	0.00156	0.00154	0.00152	0.00150	0.00148	0.00146	0.00144	0.00143	0.00141	0.0100
41	0.00144	0.00142	0.00140	0.00139	0.00137	0.00135	0.00134	0.00132	0.00131	0.0100
42	0.00137	0.00135	0.00133	0.00132	0.00130	0.00128	0.00127	0.00126	0.00124	0.0100
43	0.00136	0.00134	0.00132	0.00130	0.00129	0.00127	0.00126	0.00124	0.00123	0.0100
44	0.00142	0.00140	0.00139	0.00137	0.00135	0.00133	0.00132	0.00130	0.00129	0.0100
45	0.00158	0.00156	0.00154	0.00152	0.00150	0.00148	0.00146	0.00145	0.00143	0.0100
46	0.00183	0.00181	0.00178	0.00176	0.00174	0.00172	0.00170	0.00168	0.00166	0.0100
47	0.00218	0.00215	0.00212	0.00209	0.00207	0.00204	0.00202	0.00200	0.00198	0.0100
48	0.00261	0.00257	0.00254	0.00251	0.00248	0.00245	0.00242	0.00239	0.00237	0.0100
49	0.00309	0.00305	0.00301	0.00298	0.00294	0.00290	0.00287	0.00284	0.00281	0.0100
50	0.00359	0.00355	0.00350	0.00346	0.00342	0.00338	0.00334	0.00330	0.00327	0.0100
51	0.00405	0.00400	0.00396	0.00391	0.00386	0.00381	0.00377	0.00373	0.00369	0.0100
52	0.00443	0.00438	0.00432	0.00427	0.00422	0.00417	0.00413	0.00408	0.00404	0.0100
53	0.00469	0.00464	0.00458	0.00453	0.00448	0.00443	0.00438	0.00433	0.00429	0.0100
54	0.00485	0.00480	0.00475	0.00469	0.00464	0.00459	0.00454	0.00449	0.00444	0.0100
55	0.00497	0.00492	0.00487	0.00482	0.00476	0.00471	0.00466	0.00461	0.00456	0.0100
56	0.00513	0.00508	0.00503	0.00498	0.00493	0.00488	0.00482	0.00477	0.00472	0.0100
57	0.00535	0.00530	0.00525	0.00520	0.00515	0.00510	0.00505	0.00499	0.00494	0.0100
58	0.00563	0.00558	0.00554	0.00549	0.00543	0.00538	0.00533	0.00527	0.00522	0.0100
59	0.00600	0.00596	0.00591	0.00586	0.00580	0.00575	0.00569	0.00563	0.00558	0.0100
60	0.00653	0.00649	0.00643	0.00638	0.00632	0.00626	0.00620	0.00614	0.00608	0.0100
61	0.00726	0.00721	0.00715	0.00709	0.00703	0.00696	0.00690	0.00683	0.00676	0.0100
62	0.00815	0.00809	0.00803	0.00796	0.00789	0.00782	0.00774	0.00766	0.00759	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
63	0.00911	0.00904	0.00897	0.00890	0.00882	0.00874	0.00866	0.00857	0.00849	0.0100
64	0.01003	0.00995	0.00987	0.00979	0.00971	0.00962	0.00953	0.00944	0.00935	0.0100
65	0.01080	0.01072	0.01064	0.01055	0.01047	0.01038	0.01028	0.01018	0.01008	0.0100
66	0.01150	0.01142	0.01133	0.01124	0.01115	0.01105	0.01095	0.01085	0.01075	0.0100
67	0.01232	0.01224	0.01215	0.01206	0.01196	0.01186	0.01176	0.01165	0.01154	0.0100
68	0.01350	0.01341	0.01332	0.01323	0.01312	0.01302	0.01290	0.01279	0.01267	0.0100
69	0.01511	0.01502	0.01492	0.01482	0.01471	0.01460	0.01448	0.01435	0.01421	0.0100
70	0.01703	0.01695	0.01685	0.01674	0.01662	0.01650	0.01636	0.01622	0.01607	0.0100
71	0.01903	0.01895	0.01885	0.01874	0.01861	0.01848	0.01833	0.01817	0.01800	0.0100
72	0.02100	0.02091	0.02081	0.02070	0.02057	0.02043	0.02027	0.02010	0.01991	0.0100
73	0.02293	0.02285	0.02275	0.02264	0.02250	0.02235	0.02218	0.02200	0.02179	0.0100
74	0.02488	0.02481	0.02471	0.02459	0.02445	0.02430	0.02412	0.02392	0.02370	0.0100
75	0.02706	0.02698	0.02689	0.02677	0.02662	0.02646	0.02626	0.02605	0.02581	0.0100
76	0.02969	0.02962	0.02952	0.02939	0.02924	0.02906	0.02885	0.02862	0.02836	0.0100
77	0.03284	0.03277	0.03266	0.03253	0.03236	0.03217	0.03194	0.03168	0.03140	0.0100
78	0.03631	0.03623	0.03612	0.03598	0.03579	0.03558	0.03533	0.03504	0.03473	0.0100
79	0.04007	0.03998	0.03986	0.03970	0.03950	0.03926	0.03899	0.03867	0.03832	0.0100
80	0.04412	0.04402	0.04388	0.04370	0.04348	0.04321	0.04291	0.04256	0.04218	0.0100
81	0.04840	0.04828	0.04812	0.04792	0.04767	0.04738	0.04704	0.04666	0.04624	0.0100
82	0.05296	0.05283	0.05264	0.05241	0.05213	0.05181	0.05143	0.05101	0.05055	0.0100
83	0.05819	0.05803	0.05782	0.05756	0.05725	0.05689	0.05647	0.05601	0.05550	0.0100
84	0.06444	0.06426	0.06402	0.06372	0.06337	0.06297	0.06251	0.06200	0.06143	0.0100
85	0.07156	0.07136	0.07109	0.07076	0.07037	0.06992	0.06941	0.06884	0.06821	0.0100
86	0.07959	0.07937	0.07908	0.07872	0.07829	0.07780	0.07724	0.07661	0.07593	0.0099
87	0.08884	0.08861	0.08829	0.08790	0.08744	0.08690	0.08629	0.08560	0.08485	0.0097
88	0.09932	0.09901	0.09868	0.09826	0.09776	0.09717	0.09650	0.09575	0.09492	0.0096
89	0.11099	0.11056	0.11015	0.10970	0.10917	0.10853	0.10780	0.10698	0.10608	0.0094
90	0.12408	0.12356	0.12302	0.12249	0.12192	0.12124	0.12045	0.11955	0.11856	0.0093
91	0.13858	0.13800	0.13737	0.13671	0.13604	0.13531	0.13445	0.13348	0.13239	0.0091
92	0.15464	0.15403	0.15333	0.15256	0.15176	0.15092	0.14999	0.14893	0.14774	0.0089
93	0.17208	0.17148	0.17074	0.16989	0.16896	0.16797	0.16693	0.16578	0.16448	0.0088
94	0.19059	0.19003	0.18928	0.18837	0.18734	0.18623	0.18504	0.18375	0.18234	0.0086
95	0.20985	0.20935	0.20861	0.20768	0.20658	0.20535	0.20402	0.20259	0.20104	0.0085
96	0.22966	0.22923	0.22855	0.22763	0.22651	0.22523	0.22382	0.22229	0.22065	0.0081
97	0.24958	0.24919	0.24856	0.24768	0.24658	0.24527	0.24381	0.24221	0.24049	0.0077
98	0.26902	0.26862	0.26803	0.26720	0.26613	0.26483	0.26334	0.26170	0.25993	0.0073
99	0.28761	0.28717	0.28657	0.28577	0.28474	0.28348	0.28201	0.28035	0.27856	0.0069
100	0.30526	0.30477	0.30413	0.30333	0.30233	0.30111	0.29967	0.29804	0.29624	0.0065
101	0.32181	0.32129	0.32060	0.31977	0.31878	0.31760	0.31621	0.31461	0.31285	0.0061
102	0.33691	0.33639	0.33568	0.33482	0.33382	0.33266	0.33132	0.32978	0.32806	0.0057
103	0.35020	0.34967	0.34898	0.34812	0.34711	0.34596	0.34466	0.34319	0.34154	0.0053
104	0.36132	0.36078	0.36011	0.35928	0.35829	0.35716	0.35590	0.35449	0.35292	0.0049
105	0.37007	0.36950	0.36883	0.36804	0.36711	0.36603	0.36482	0.36348	0.36200	0.0045
106	0.37625	0.37567	0.37500	0.37424	0.37337	0.37236	0.37123	0.36997	0.36859	0.0041
107	0.37969	0.37910	0.37845	0.37771	0.37689	0.37597	0.37494	0.37379	0.37252	0.0037
108	0.38022	0.37964	0.37901	0.37832	0.37755	0.37672	0.37579	0.37476	0.37363	0.0033
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000

## Disability Annuitants

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur. 1	Dur.2	Dur.3+	2029+
17	0.00111	0.00109	0.00107	0.00106	0.00105	0.00104	0.00102	0.00101	0.00100	1.309	1.583	0.800	0.0100
18	0.00112	0.00110	0.00109	0.00107	0.00106	0.00105	0.00103	0.00102	0.00101	1.309	1.583	0.800	0.0100
19	0.00113	0.00111	0.00110	0.00108	0.00107	0.00106	0.00104	0.00103	0.00102	1.309	1.583	0.800	0.0100
20	0.00114	0.00112	0.00111	0.00109	0.00108	0.00107	0.00105	0.00104	0.00103	1.309	1.583	0.800	0.0100
21	0.00115	0.00113	0.00112	0.00110	0.00109	0.00108	0.00107	0.00105	0.00104	1.309	1.583	0.800	0.0100
22	0.00116	0.00115	0.00113	0.00112	0.00110	0.00109	0.00108	0.00106	0.00105	1.309	1.583	0.800	0.0100
23	0.00117	0.00116	0.00114	0.00113	0.00111	0.00110	0.00109	0.00107	0.00106	1.309	1.583	0.800	0.0100
24	0.00119	0.00117	0.00115	0.00114	0.00112	0.00111	0.00110	0.00109	0.00107	1.309	1.583	0.800	0.0100
25	0.00120	0.00118	0.00116	0.00115	0.00114	0.00112	0.00111	0.00110	0.00109	1.309	1.583	0.800	0.0100
26	0.00121	0.00119	0.00118	0.00116	0.00115	0.00113	0.00112	0.00111	0.00110	1.309	1.583	0.800	0.0100
27	0.00122	0.00120	0.00119	0.00117	0.00116	0.00114	0.00113	0.00112	0.00111	1.309	1.583	0.800	0.0100
28	0.00123	0.00122	0.00120	0.00119	0.00117	0.00116	0.00114	0.00113	0.00112	1.309	1.583	0.800	0.0100
29	0.00125	0.00123	0.00121	0.00120	0.00118	0.00117	0.00115	0.00114	0.00113	1.309	1.583	0.800	0.0100
30	0.00126	0.00124	0.00123	0.00121	0.00119	0.00118	0.00117	0.00115	0.00114	1.309	1.583	0.800	0.0100
31	0.00127	0.00125	0.00124	0.00122	0.00121	0.00119	0.00118	0.00116	0.00115	1.309	1.583	0.800	0.0100
32	0.00128	0.00127	0.00125	0.00123	0.00122	0.00120	0.00119	0.00118	0.00116	1.309	1.583	0.800	0.0100
33	0.00130	0.00128	0.00126	0.00125	0.00123	0.00122	0.00120	0.00119	0.00118	1.309	1.583	0.800	0.0100
34	0.00131	0.00129	0.00128	0.00126	0.00124	0.00123	0.00121	0.00120	0.00119	1.309	1.583	0.800	0.0100
35	0.00214	0.00211	0.00208	0.00205	0.00203	0.00200	0.00198	0.00196	0.00194	1.309	1.583	0.800	0.0100
36	0.00301	0.00297	0.00293	0.00289	0.00286	0.00282	0.00279	0.00276	0.00273	1.309	1.583	0.800	0.0100
37	0.00389	0.00384	0.00379	0.00374	0.00369	0.00365	0.00360	0.00356	0.00353	1.309	1.583	0.800	0.0100
38	0.00469	0.00463	0.00456	0.00451	0.00445	0.00440	0.00435	0.00430	0.00425	1.309	1.583	0.800	0.0100
39	0.00533	0.00526	0.00519	0.00512	0.00505	0.00499	0.00494	0.00488	0.00483	1.309	1.583	0.800	0.0100
40	0.00574	0.00566	0.00558	0.00551	0.00544	0.00537	0.00531	0.00525	0.00520	1.309	1.583	0.800	0.0100
41	0.00588	0.00580	0.00572	0.00565	0.00558	0.00551	0.00545	0.00539	0.00533	1.309	1.583	0.800	0.0100
42	0.00581	0.00573	0.00565	0.00558	0.00551	0.00544	0.00538	0.00532	0.00527	1.309	1.583	0.800	0.0100
43	0.00567	0.00559	0.00551	0.00544	0.00537	0.00531	0.00525	0.00519	0.00514	1.309	1.583	0.800	0.0100
44	0.00566	0.00558	0.00550	0.00543	0.00536	0.00530	0.00524	0.00518	0.00513	1.309	1.583	0.800	0.0100
45	0.00593	0.00585	0.00577	0.00569	0.00562	0.00555	0.00549	0.00543	0.00537	1.309	1.583	0.824	0.0100
46	0.00653	0.00644	0.00635	0.00627	0.00619	0.00612	0.00605	0.00598	0.00592	1.309	1.583	0.836	0.0100
47	0.00739	0.00729	0.00719	0.00710	0.00701	0.00692	0.00684	0.00677	0.00670	1.309	1.583	0.843	0.0100

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur. 1	Dur.2	Dur.3+	2029+
48	0.00841	0.00829	0.00818	0.00807	0.00797	0.00788	0.00779	0.00770	0.00762	1.309	1.583	0.851	0.0100
49	0.00950	0.00936	0.00924	0.00912	0.00900	0.00889	0.00879	0.00869	0.00860	1.309	1.583	0.859	0.0100
50	0.01059	0.01044	0.01030	0.01016	0.01004	0.00992	0.00980	0.00969	0.00959	1.309	1.583	0.864	0.0100
51	0.01165	0.01149	0.01133	0.01118	0.01104	0.01091	0.01079	0.01067	0.01056	1.309	1.583	0.878	0.0100
52	0.01272	0.01254	0.01237	0.01221	0.01206	0.01191	0.01178	0.01165	0.01152	1.309	1.583	0.875	0.0100
53	0.01388	0.01369	0.01350	0.01333	0.01316	0.01300	0.01285	0.01271	0.01258	1.309	1.583	0.881	0.0100
54	0.01504	0.01483	0.01463	0.01444	0.01426	0.01408	0.01392	0.01377	0.01362	1.309	1.583	0.890	0.0100
55	0.01592	0.01569	0.01548	0.01528	0.01509	0.01491	0.01474	0.01458	0.01442	1.309	1.583	0.904	0.0100
56	0.01636	0.01613	0.01591	0.01570	0.01550	0.01532	0.01514	0.01498	0.01482	1.309	1.583	0.925	0.0100
57	0.01669	0.01646	0.01624	0.01603	0.01583	0.01564	0.01546	0.01529	0.01512	1.309	1.583	0.947	0.0100
58	0.01722	0.01698	0.01675	0.01653	0.01632	0.01613	0.01594	0.01577	0.01560	1.309	1.583	0.957	0.0100
59	0.01812	0.01786	0.01762	0.01739	0.01717	0.01697	0.01677	0.01659	0.01641	1.309	1.583	0.964	0.0100
60	0.01951	0.01923	0.01897	0.01873	0.01849	0.01827	0.01806	0.01786	0.01767	1.309	1.583	0.973	0.0100
61	0.02125	0.02095	0.02067	0.02040	0.02014	0.01990	0.01967	0.01946	0.01925	1.309	1.583	0.984	0.0100
62	0.02309	0.02276	0.02246	0.02216	0.02189	0.02162	0.02137	0.02114	0.02092	1.309	1.583	0.994	0.0100
63	0.02477	0.02443	0.02410	0.02379	0.02349	0.02321	0.02294	0.02269	0.02245	1.309	1.583	0.998	0.0100
64	0.02663	0.02630	0.02597	0.02565	0.02535	0.02506	0.02478	0.02451	0.02426	1.309	1.583	1.000	0.0100
65	0.02864	0.02833	0.02800	0.02768	0.02736	0.02706	0.02677	0.02649	0.02621	1.347	1.516	1.000	0.0100
66	0.03073	0.03044	0.03013	0.02981	0.02949	0.02918	0.02887	0.02858	0.02830	1.385	1.450	1.000	0.0098
67	0.03321	0.03295	0.03265	0.03234	0.03202	0.03169	0.03138	0.03107	0.03077	1.423	1.383	1.000	0.0095
68	0.03590	0.03566	0.03539	0.03509	0.03477	0.03444	0.03411	0.03378	0.03347	1.462	1.317	1.000	0.0093
69	0.03864	0.03842	0.03817	0.03789	0.03757	0.03724	0.03691	0.03657	0.03623	1.500	1.250	1.000	0.0090
70	0.04153	0.04133	0.04110	0.04083	0.04053	0.04020	0.03986	0.03951	0.03916	1.500	1.250	1.000	0.0088
71	0.04495	0.04475	0.04453	0.04427	0.04398	0.04365	0.04331	0.04294	0.04258	1.500	1.250	1.000	0.0085
72	0.04890	0.04869	0.04846	0.04821	0.04792	0.04760	0.04725	0.04687	0.04649	1.500	1.250	1.000	0.0083
73	0.05321	0.05297	0.05273	0.05247	0.05218	0.05186	0.05150	0.05111	0.05071	1.500	1.250	1.000	0.0080
74	0.05752	0.05726	0.05698	0.05670	0.05641	0.05608	0.05572	0.05533	0.05491	1.500	1.250	1.000	0.0078
75	0.06167	0.06137	0.06107	0.06076	0.06044	0.06010	0.05973	0.05933	0.05891	1.500	1.250	1.000	0.0075
76	0.06585	0.06553	0.06519	0.06485	0.06450	0.06414	0.06376	0.06335	0.06291	1.500	1.250	1.000	0.0073
77	0.07023	0.06991	0.06954	0.06916	0.06877	0.06838	0.06798	0.06755	0.06711	1.500	1.250	1.000	0.0070
78	0.07452	0.07422	0.07385	0.07344	0.07302	0.07259	0.07216	0.07172	0.07126	1.500	1.250	1.000	0.0068
79	0.07875	0.07850	0.07815	0.07774	0.07729	0.07683	0.07637	0.07590	0.07543	1.500	1.250	1.000	0.0065

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur. 1	Dur.2	Dur.3+	2029+
80	0.08328	0.08303	0.08273	0.08233	0.08188	0.08140	0.08091	0.08043	0.07994	1.500	1.250	1.000	0.0063
81	0.08845	0.08818	0.08788	0.08753	0.08710	0.08662	0.08612	0.08562	0.08511	1.500	1.250	1.000	0.0060
82	0.09464	0.09437	0.09407	0.09374	0.09336	0.09290	0.09240	0.09188	0.09136	1.500	1.250	1.000	0.0058
83	0.10233	0.10208	0.10180	0.10148	0.10111	0.10070	0.10022	0.09969	0.09915	1.500	1.250	1.000	0.0055
84	0.11179	0.11158	0.11133	0.11103	0.11068	0.11029	0.10984	0.10932	0.10877	1.500	1.250	1.000	0.0053
85	0.12321	0.12305	0.12284	0.12257	0.12224	0.12186	0.12142	0.12092	0.12035	1.500	1.250	1.000	0.0050
86	0.13724	0.13715	0.13698	0.13675	0.13645	0.13607	0.13563	0.13513	0.13455	1.500	1.250	1.000	0.0048
87	0.15376	0.15373	0.15361	0.15342	0.15314	0.15278	0.15233	0.15181	0.15121	1.500	1.250	1.000	0.0045
88	0.17169	0.17172	0.17166	0.17150	0.17125	0.17090	0.17046	0.16992	0.16929	1.500	1.250	1.000	0.0043
89	0.18948	0.18958	0.18958	0.18947	0.18925	0.18892	0.18849	0.18795	0.18730	1.500	1.250	1.000	0.0040
90	0.20629	0.20649	0.20658	0.20654	0.20637	0.20609	0.20568	0.20515	0.20451	1.500	1.250	1.000	0.0037
91	0.22188	0.22217	0.22233	0.22235	0.22224	0.22199	0.22161	0.22111	0.22046	1.500	1.250	1.000	0.0035
92	0.23665	0.23697	0.23715	0.23720	0.23711	0.23689	0.23653	0.23603	0.23540	1.500	1.250	1.000	0.0032
93	0.25181	0.25216	0.25237	0.25245	0.25239	0.25218	0.25184	0.25136	0.25075	1.500	1.250	1.000	0.0030
94	0.26827	0.26847	0.26872	0.26882	0.26879	0.26862	0.26830	0.26784	0.26725	1.500	1.250	1.000	0.0027
95	0.28693	0.28696	0.28707	0.28721	0.28721	0.28707	0.28678	0.28635	0.28578	1.500	1.250	1.000	0.0025
96	0.30828	0.30818	0.30815	0.30816	0.30820	0.30809	0.30784	0.30744	0.30689	1.500	1.250	1.000	0.0022
97	0.33259	0.33238	0.33221	0.33210	0.33204	0.33197	0.33176	0.33139	0.33088	1.500	1.250	1.000	0.0020
98	0.35969	0.35938	0.35911	0.35889	0.35872	0.35857	0.35840	0.35808	0.35760	1.500	1.250	1.000	0.0017
99	0.38912	0.38874	0.38838	0.38808	0.38782	0.38759	0.38737	0.38710	0.38667	1.500	1.250	1.000	0.0015
100	0.42040	0.41998	0.41957	0.41920	0.41887	0.41858	0.41831	0.41803	0.41766	1.500	1.250	1.000	0.0012
101	0.42597	0.42558	0.42517	0.42478	0.42443	0.42413	0.42385	0.42358	0.42326	1.500	1.250	1.000	0.0010
102	0.43193	0.43162	0.43125	0.43088	0.43053	0.43023	0.42996	0.42972	0.42946	1.500	1.250	1.000	0.0007
103	0.43845	0.43825	0.43797	0.43765	0.43733	0.43705	0.43681	0.43661	0.43642	1.500	1.250	1.000	0.0005
104	0.44506	0.44502	0.44485	0.44461	0.44436	0.44413	0.44393	0.44379	0.44367	1.500	1.250	1.000	0.0002
105	0.45152	0.45169	0.45168	0.45156	0.45140	0.45124	0.45111	0.45103	0.45100	1.500	1.250	1.000	0.0000
106	0.45775	0.45817	0.45833	0.45832	0.45822	0.45809	0.45796	0.45788	0.45784	1.500	1.250	1.000	0.0000
107	0.46371	0.46442	0.46480	0.46493	0.46492	0.46484	0.46474	0.46466	0.46461	1.500	1.250	1.000	0.0000
108	0.46934	0.47039	0.47102	0.47134	0.47145	0.47145	0.47139	0.47132	0.47128	1.500	1.250	1.000	0.0000
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.500	1.250	1.000	0.0000

## Disability and Survivor Assumptions

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
17	0.00294	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18	0.00241	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19	0.00194	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00155	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21	0.00122	0.00000	0.00000	0.00055	0.00000	0.00000	0.00000
22	0.00095	0.00000	0.00000	0.00127	0.00729	0.00000	0.00000
23	0.00076	0.00000	0.00000	0.00192	0.02783	0.00000	0.00000
24	0.00063	0.00000	0.00000	0.00248	0.04626	0.00000	0.00000
25	0.00057	0.00000	0.00000	0.00297	0.06206	0.00000	0.00000
26	0.00057	0.00000	0.00000	0.00338	0.07453	0.00000	0.00311
27	0.00062	0.00004	0.00000	0.00371	0.08285	0.00000	0.00676
28	0.00071	0.00014	0.00000	0.00397	0.08629	0.00000	0.01047
29	0.00083	0.00021	0.00203	0.00415	0.08455	0.00091	0.01407
30	0.00096	0.00024	0.00383	0.00425	0.07775	0.00318	0.01736
31	0.00108	0.00026	0.00522	0.00429	0.06658	0.00584	0.02012
32	0.00119	0.00023	0.00619	0.00426	0.05269	0.00875	0.02213
33	0.00130	0.00018	0.00673	0.00418	0.03822	0.01171	0.02326
34	0.00143	0.00010	0.00682	0.00409	0.02524	0.01447	0.02350
35	0.00159	0.00000	0.00646	0.00402	0.01520	0.01672	0.02296
36	0.00179	0.00000	0.00570	0.00397	0.00875	0.01821	0.02182
37	0.00200	0.00000	0.00467	0.00392	0.00576	0.01882	0.02032
38	0.00221	0.00000	0.00353	0.00384	0.00543	0.01865	0.01867
39	0.00241	0.00000	0.00243	0.00374	0.00659	0.01797	0.01698
40	0.00261	0.00000	0.00147	0.00362	0.00806	0.01694	0.01533
41	0.00283	0.00000	0.00075	0.00354	0.00910	0.01555	0.01377
42	0.00307	0.00011	0.00031	0.00350	0.00915	0.01370	0.01235
43	0.00333	0.00071	0.00018	0.00352	0.00795	0.01156	0.01116
44	0.00359	0.00151	0.00034	0.00359	0.00590	0.00962	0.01025
45	0.00380	0.00241	0.00075	0.00371	0.00376	0.00830	0.00954
46	0.00397	0.00321	0.00134	0.00378	0.00212	0.00764	0.00896
47	0.00414	0.00372	0.00200	0.00377	0.00119	0.00732	0.00836
48	0.00434	0.00380	0.00262	0.00365	0.00096	0.00691	0.00769
49	0.00455	0.00343	0.00307	0.00354	0.00116	0.00634	0.00687
50	0.00476	0.00282	0.00324	0.00351	0.00137	0.00560	0.00596
51	0.00495	0.00223	0.00314	0.00354	0.00133	0.00477	0.00510
52	0.00510	0.00188	0.00287	0.00351	0.00097	0.00374	0.00427
53	0.00525	0.00180	0.00249	0.00330	0.00046	0.00234	0.00331
54	0.00548	0.00187	0.00203	0.00283	0.00000	0.00041	0.00219
55	0.00583	0.00195	0.00156	0.00225	0.00000	0.00000	0.00000
56	0.00626	0.00200	0.00116	0.00178	0.00000	0.00000	0.00000
57	0.00664	0.00198	0.00097	0.00148	0.00000	0.00000	0.00000
58	0.00686	0.00187	0.00112	0.00137	0.00000	0.00000	0.00000
59	0.00693	0.00164	0.00169	0.00141	0.00000	0.00000	0.00000
60	0.00683	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
61	0.00654	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
62	0.00608	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
63	0.00550	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
64	0.00486	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.00420	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
66	0.00358	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
67	0.00302	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
68	0.00253	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
69	0.00211	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.00176	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
71	0.00148	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
72	0.00126	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
73	0.00110	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
74	0.00099	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
75	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
76	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
77	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
78	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
79	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
80	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
81	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
82	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
83	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
84	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
85	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
86	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
87	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
88	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
89	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
90	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
91	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
92	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
93	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
94	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
95	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
96	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
97	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
98	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
99	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
101	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
102	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
103	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
104	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
105	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
106	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
107	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
108	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
109	0.00093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

## Survivor and Sick Leave Assumptions

Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
17	0.57342	0.19490	1.00000	0	0.0000	0.0000
18	0.57342	0.19490	1.00000	1	0.0000	0.0000
19	0.57342	0.19490	1.00000	2	0.0000	0.0003
20	0.57342	0.19490	1.00000	3	0.0000	0.0008
21	0.57342	0.19490	1.00000	4	0.0000	0.0012
22	0.57342	0.19490	1.00000	5	0.0419	0.0017
23	0.57342	0.19490	1.00000	6	0.0462	0.0021
24	0.57342	0.19490	1.00000	7	0.0509	0.0025
25	0.57342	0.19490	1.00000	8	0.0560	0.0029
26	0.57342	0.19490	1.00000	9	0.0614	0.0032
27	0.57342	0.19490	1.00000	10	0.0674	0.0034
28	0.57342	0.19490	1.00000	11	0.0739	0.0035
29	0.57342	0.19490	1.00000	12	0.0812	0.0036
30	0.57342	0.25312	1.00000	13	0.0895	0.0036
31	0.57342	0.30291	1.00000	14	0.0989	0.0036
32	0.57342	0.34414	1.00000	15	0.1096	0.0038
33	0.57342	0.37678	1.00000	16	0.1218	0.0042
34	0.57342	0.40118	1.00000	17	0.1352	0.0050
35	0.57342	0.41877	1.00000	18	0.1498	0.0058
36	0.57342	0.43197	1.00000	19	0.1649	0.0067
37	0.57342	0.44310	1.00000	20	0.1793	0.0071
38	0.57342	0.45382	1.00000	21	0.1915	0.0069
39	0.57342	0.46524	1.00000	22	0.2005	0.0061
40	0.57342	0.47795	1.00000	23	0.2064	0.0051
41	0.57342	0.49237	1.00000	24	0.2109	0.0044
42	0.57342	0.50865	1.00000	25	0.2168	0.0050
43	0.57342	0.52619	1.00000	26	0.2274	0.0078
44	0.57342	0.54329	1.00000	27	0.2456	0.0133
45	0.57342	0.55729	1.00000	28	0.2731	0.0211
46	0.57342	0.56538	1.00000	29	0.3096	0.0302
47	0.57342	0.56596	1.00000	30	0.3528	0.0387
48	0.57342	0.56039	1.00000	31	0.3984	0.0442
49	0.57342	0.55254	1.00000	32	0.4415	0.0500
50	0.55618	0.54653	1.00000	33	0.4796	0.0550
51	0.54334	0.54412	1.00000	34	0.5122	0.0600
52	0.53576	0.54436	1.00000	35	0.5407	0.0650
53	0.53426	0.54470	1.00000	36	0.5670	0.0700
54	0.53889	0.54310	1.00000	37	0.5925	0.0750
55	0.54873	0.53952	1.00000	38	0.6179	0.0800
56	0.56177	0.53584	1.00000	39	0.6445	0.0850
57	0.57559	0.53409	1.00000	40	0.6740	0.0900
58	0.58853	0.53537	1.00000	41	0.7066	0.0950
59	0.60004	0.53904	1.00000	42	0.7406	0.1000
60	0.61023	0.54335	1.00000	43	0.7725	0.1000
61	0.61906	0.54851	1.00000	44	0.7987	0.1000
62	0.62638	0.55473	1.00000	45	0.8191	0.1000



Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
63	0.63221	0.56121	1.00000	46	0.8353	0.1000
64	0.63716	0.56667	1.00000	47	0.8485	0.1000
65	0.64206	0.57038	1.00000	48	0.8600	0.1000
66	0.64771	0.57270	1.00000	49	0.8709	0.1000
67	0.65425	0.57501	1.00000	50	0.8828	0.1000
68	0.66045	0.57866	1.00000	51	0.8966	0.1000
69	0.66486	0.58339	1.00000	52	0.9126	0.1000
70	0.66673	0.58738	1.00000	53	0.9296	0.1000
71	0.66618	0.58854	1.00000	54	0.9460	0.1000
72	0.66391	0.58625	1.00000	55	0.9599	0.1000
73	0.66156	0.58265	1.00000	56	0.9699	0.1000
74	0.66011	0.58055	1.00000	57	0.9748	0.1000
75	0.66024	0.58149	1.00000	58	0.9845	0.1000
76	0.66168	0.58478	1.00000	59	0.9944	0.1000
77	0.66311	0.58824	1.00000	60+	1.0043	0.1000
78	0.66349	0.58933	1.00000			
79	0.66218	0.58699	0.99803			
80	0.65907	0.58128	0.99530			
81	0.65444	0.57289	0.99299			
82	0.64822	0.56324	0.99049			
83	0.64011	0.55384	0.98749			
84	0.62939	0.54589	0.98326			
85	0.61558	0.53934	0.97805			
86	0.59844	0.53305	0.97217			
87	0.57803	0.52531	0.96589			
88	0.55491	0.51486	0.96000			
89	0.52988	0.50138	0.95488			
90	0.50412	0.48568	0.95140			
91	0.47890	0.46869	0.94996			
92	0.45503	0.45091	0.95016			
93	0.43260	0.43261	0.95071			
94	0.41120	0.41384	0.95053			
95	0.39026	0.39450	0.94908			
96	0.36927	0.37460	0.94622			
97	0.34777	0.35415	0.94178			
98	0.32542	0.33318	0.93573			
99	0.30199	0.31170	0.92801			
100	0.27734	0.28964	0.91836			
101	0.25139	0.26690	0.90644			
102	0.22414	0.24340	0.89161			
103	0.19560	0.21910	0.87263			
104	0.16575	0.19398	0.84740			
105	0.16575	0.19398	0.84740			
106	0.16575	0.19398	0.84740			
107	0.16575	0.19398	0.84740			
108	0.16575	0.19398	0.84740			
109	0.16575	0.19398	0.84740			

**Postal, Female**

**Normal Retirement Rates-CSRS**

Age (ANB)	Years of Service						
	5 - 9	10-14	15-19	20	21-29	30	31+
55	0.0000	0.0000	0.0000	0.0000	0.0000	0.2062	0.3184
56 - 59	0.0000	0.0000	0.0000	0.0000	0.0000	0.1928	0.1734
60	0.0000	0.0000	0.0000	0.3891	0.3759	0.2224	0.1932
61	0.0000	0.0000	0.0000	0.2447	0.1689	0.1946	0.1805
62	0.2185	0.2684	0.3523	0.3433	0.1849	0.1851	0.1993
63	0.1169	0.1196	0.1335	0.1778	0.1580	0.1783	0.1850
64	0.1336	0.1368	0.1445	0.2041	0.1602	0.2083	0.2053
65	0.2311	0.2552	0.2293	0.2527	0.2119	0.2427	0.2192
66 - 69	0.1579	0.1721	0.1359	0.2040	0.1677	0.2244	0.1970
70-74	0.1403	0.1510	0.1158	0.1861	0.1686	0.2472	0.2070
75-84	0.1403	0.1510	0.1158	0.1861	0.1686	0.2472	0.2160

**Normal Retirement Rates-FERS**

Age (ANB)	Years of Service						
	5 - 9	10-14	15-19	20	21-29	30	31+
MRA	0.0000	0.0000	0.0000	0.0000	0.0000	0.3066	0.3755
58 - 59	0.0000	0.0000	0.0000	0.0000	0.0000	0.2217	0.1741
60	0.0000	0.0000	0.0000	0.2688	0.2270	0.2383	0.1866
61	0.0000	0.0000	0.0000	0.1681	0.1404	0.1964	0.1657
62	0.3169	0.2234	0.2419	0.3097	0.2458	0.2852	0.3043
63	0.1131	0.1329	0.1310	0.2187	0.1843	0.2191	0.2246
64	0.1301	0.1406	0.1339	0.2427	0.1888	0.2554	0.2334
65	0.1892	0.1971	0.2069	0.3035	0.2584	0.2792	0.3052
66 - 69	0.2180	0.1982	0.2137	0.2861	0.2699	0.2832	0.2915
70-74	0.2470	0.2155	0.2081	0.2561	0.2243	0.2077	0.2328
75-84	0.2143	0.2736	0.1723	0.2333	0.2280	0.2627	0.1729

### Involuntary Retirement

Age	CSRS	FERS
42	0.0082	0.0082
43	0.0082	0.0082
44	0.0082	0.0082
45	0.0082	0.0082
46	0.0106	0.0106
47	0.0086	0.0086
48	0.0100	0.0100
49	0.0107	0.0107
50	0.0092	0.0092
51	0.0113	0.0113
52	0.0128	0.0128
53	0.0148	0.0148
54	0.0185	0.0185
55	0.0182	0.0182
56	0.0208	0.0208
57	0.0226	0.0226
58	0.0219	0.0219
59+	0.0208	0.0208

### MRA+10 Retirement

Age	FERS
<=57	0.0249
58	0.0178
59	0.0197
60	0.0449
61	0.0482

### Merit/Longevity Salary Increases

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-44	45-54	55+
0	0.0517	0.0518	0.0472	0.0414	0.0331	0.0295
1	0.0590	0.0594	0.0610	0.0597	0.0562	0.0524
2	0.0425	0.0426	0.0428	0.0396	0.0372	0.0344
3	0.0433	0.0427	0.0435	0.0403	0.0377	0.0360
4	0.0399	0.0456	0.0490	0.0494	0.0477	0.0460
5	0.0241	0.0213	0.0206	0.0191	0.0178	0.0169
6	0.0214	0.0168	0.0162	0.0149	0.0143	0.0141
7	0.0561	0.0159	0.0147	0.0135	0.0130	0.0132
8	0.0000	0.0151	0.0138	0.0131	0.0122	0.0125
9	0.0000	0.0154	0.0147	0.0137	0.0123	0.0113
10	0.0000	0.0136	0.0136	0.0127	0.0112	0.0106
11	0.0000	0.0125	0.0111	0.0110	0.0096	0.0095
12	0.0000	0.0072	0.0086	0.0082	0.0066	0.0056
13	0.0000	0.0000	0.0044	0.0039	0.0024	0.0014
14	0.0000	0.0000	0.0045	0.0026	0.0012	0.0012
15	0.0000	0.0000	0.0057	0.0031	0.0019	0.0012
16	0.0000	0.0000	0.0055	0.0040	0.0025	0.0015
17	0.0000	0.0000	0.0000	0.0031	0.0021	0.0013
18	0.0000	0.0000	0.0000	0.0019	0.0010	0.0005
19	0.0000	0.0000	0.0000	0.0031	0.0019	0.0008
20-24	0.0000	0.0000	0.0000	0.0040	0.0023	0.0007
25-29	0.0000	0.0000	0.0000	0.0036	0.0017	0.0005
30+	0.0000	0.0000	0.0000	0.0000	0.0023	0.0006

### Assumed Distribution of New Entrants

Age (ANB)	Amount Prior Service (Years)				
	0-1	2-5	6-10	11-15	16-20
17-20	163	2	0	0	0
21-25	7,468	7	0	0	0
26-30	14,721	825	95	4	0
31-35	12,378	1,119	202	41	2
36-40	10,489	924	179	82	13
41-45	9,158	667	126	58	21
46-50	8,207	555	101	49	20
51-55	6,786	370	77	34	16
56-60	4,327	168	37	17	7
61-65	1,649	62	17	6	3
66-70	309	15	6	2	2
71-75	73	4	2	0	0

**Assumed New Entrants : Average Salary (as of FY 2020)**

Age (ANB)	Amount Prior Service (Years)				
	0-1	2-5	6-10	11-15	16-20
17-20	\$40,104	\$41,520	-	-	-
21-25	\$42,079	\$42,144	\$42,144	-	-
26-30	\$42,549	\$42,678	\$42,752	\$42,963	-
31-35	\$44,053	\$44,054	\$44,091	\$44,206	\$44,513
36-40	\$45,256	\$45,250	\$45,243	\$45,295	\$45,370
41-45	\$46,374	\$46,362	\$46,355	\$46,383	\$46,389
46-50	\$46,866	\$46,863	\$46,866	\$46,854	\$46,884
51-55	\$47,158	\$47,163	\$47,166	\$47,175	\$47,176
56-60	\$47,359	\$47,377	\$47,360	\$47,323	\$47,366
61-65	\$47,560	\$47,611	\$47,638	\$47,484	\$47,575
66-70	\$47,249	\$47,025	\$46,985	\$46,853	\$46,811
71-75	\$45,077	\$45,320	\$45,248	-	-

**Withdrawal Rates (Offset for Re-entry)**

Service	Age Nearest Birthday					
	17-24	25-29	30-34	35-39	40-44	45+
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.1126	0.0842	0.0549	0.0404	0.0253	0.0271
2	0.1168	0.0778	0.0580	0.0386	0.0273	0.0253
3	0.0717	0.0710	0.0469	0.0334	0.0260	0.0250
4	0.0644	0.0542	0.0368	0.0263	0.0231	0.0189
5	0.0647	0.0401	0.0285	0.0235	0.0166	0.0145
6	0.1626	0.0327	0.0321	0.0238	0.0170	0.0152
7	0.0000	0.0359	0.0292	0.0211	0.0162	0.0133
8	0.0000	0.0446	0.0279	0.0194	0.0153	0.0141
9	0.0000	0.0143	0.0258	0.0165	0.0146	0.0120
10	0.0000	0.0139	0.0227	0.0191	0.0143	0.0116
11	0.0000	0.0280	0.0284	0.0203	0.0169	0.0113
12	0.0000	0.0000	0.0201	0.0170	0.0169	0.0106
13	0.0000	0.0000	0.0242	0.0160	0.0142	0.0104
14	0.0000	0.0000	0.0140	0.0188	0.0137	0.0106
15	0.0000	0.0000	0.0200	0.0157	0.0135	0.0084
16	0.0000	0.0000	0.0180	0.0172	0.0108	0.0087
17	0.0000	0.0000	0.0000	0.0125	0.0115	0.0090
18	0.0000	0.0000	0.0000	0.0171	0.0118	0.0075
19	0.0000	0.0000	0.0000	0.0156	0.0103	0.0077
20+	0.0000	0.0000	0.0000	0.0169	0.0119	0.0062

**Fraction of Withdrawing Employees Electing Refunds**

<b>Service</b>	<b>CSRS</b>	<b>FERS</b>	<b>FERS-RAE</b>	<b>FERS-FRAE</b>	<b>Fraction of Withdrawing Employees with Workers Compensation</b>
<b>0</b>	1.0000	1.0000	1.0000	1.0000	0.0000
<b>1</b>	0.9890	0.9890	0.9890	0.9890	0.0110
<b>2</b>	0.9870	0.9870	0.9870	0.9870	0.0130
<b>3</b>	0.9840	0.9840	0.9840	0.9840	0.0160
<b>4</b>	0.9820	0.9820	0.9820	0.9820	0.0180
<b>5</b>	0.9940	0.8350	0.9570	0.9700	0.0210
<b>6</b>	0.9680	0.7880	0.9120	0.9300	0.0230
<b>7</b>	0.9430	0.7420	0.8680	0.8910	0.0260
<b>8</b>	0.9170	0.6950	0.8230	0.8510	0.0280
<b>9</b>	0.8920	0.6490	0.7790	0.8110	0.0300
<b>10</b>	0.8660	0.6020	0.7340	0.7710	0.0320
<b>11</b>	0.8400	0.5560	0.6890	0.7320	0.0350
<b>12</b>	0.8150	0.5090	0.6450	0.6920	0.0370
<b>13</b>	0.7890	0.4630	0.6000	0.6520	0.0390
<b>14</b>	0.7640	0.4160	0.5560	0.6120	0.0410
<b>15</b>	0.7380	0.3700	0.5110	0.5730	0.0420
<b>16</b>	0.7120	0.3230	0.4660	0.5330	0.0440
<b>17</b>	0.6870	0.2770	0.4220	0.4930	0.0470
<b>18</b>	0.6610	0.2300	0.3770	0.4530	0.0540
<b>19</b>	0.6360	0.1840	0.3330	0.4140	0.0650
<b>20+</b>	0.6100	0.1370	0.2880	0.3740	0.0800

## Employee Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
20	0.00006	0.00006	0.00006	0.00006	0.00005	0.00005	0.00005	0.00005	0.00005	0.0100
21	0.00015	0.00014	0.00014	0.00014	0.00014	0.00014	0.00013	0.00013	0.00013	0.0100
22	0.00022	0.00022	0.00021	0.00021	0.00021	0.00020	0.00020	0.00020	0.00020	0.0100
23	0.00028	0.00027	0.00027	0.00026	0.00026	0.00026	0.00025	0.00025	0.00025	0.0100
24	0.00032	0.00031	0.00031	0.00030	0.00030	0.00030	0.00029	0.00029	0.00029	0.0100
25	0.00035	0.00034	0.00034	0.00033	0.00033	0.00032	0.00032	0.00032	0.00031	0.0100
26	0.00037	0.00036	0.00036	0.00035	0.00035	0.00034	0.00034	0.00033	0.00033	0.0100
27	0.00038	0.00037	0.00036	0.00036	0.00035	0.00035	0.00035	0.00034	0.00034	0.0100
28	0.00038	0.00038	0.00037	0.00036	0.00036	0.00035	0.00035	0.00035	0.00034	0.0100
29	0.00039	0.00038	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.00035	0.0100
30	0.00039	0.00039	0.00038	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.0100
31	0.00039	0.00039	0.00038	0.00037	0.00037	0.00036	0.00036	0.00036	0.00035	0.0100
32	0.00038	0.00038	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.00035	0.0100
33	0.00037	0.00037	0.00036	0.00035	0.00035	0.00035	0.00034	0.00034	0.00033	0.0100
34	0.00036	0.00035	0.00035	0.00034	0.00034	0.00033	0.00033	0.00033	0.00032	0.0100
35	0.00036	0.00035	0.00035	0.00034	0.00034	0.00033	0.00033	0.00033	0.00032	0.0100
36	0.00038	0.00037	0.00037	0.00036	0.00036	0.00035	0.00035	0.00034	0.00034	0.0100
37	0.00042	0.00041	0.00041	0.00040	0.00039	0.00039	0.00039	0.00038	0.00038	0.0100
38	0.00046	0.00046	0.00045	0.00045	0.00044	0.00043	0.00043	0.00042	0.00042	0.0100
39	0.00051	0.00050	0.00050	0.00049	0.00048	0.00048	0.00047	0.00047	0.00046	0.0100
40	0.00056	0.00055	0.00054	0.00054	0.00053	0.00052	0.00052	0.00051	0.00051	0.0100
41	0.00061	0.00060	0.00060	0.00059	0.00058	0.00058	0.00057	0.00057	0.00056	0.0100
42	0.00066	0.00066	0.00065	0.00064	0.00064	0.00063	0.00063	0.00062	0.00061	0.0100
43	0.00072	0.00071	0.00071	0.00070	0.00069	0.00069	0.00068	0.00067	0.00067	0.0100
44	0.00078	0.00077	0.00077	0.00076	0.00075	0.00075	0.00074	0.00073	0.00073	0.0100
45	0.00085	0.00085	0.00084	0.00083	0.00083	0.00082	0.00081	0.00080	0.00080	0.0100
46	0.00094	0.00093	0.00093	0.00092	0.00091	0.00090	0.00089	0.00089	0.00088	0.0100
47	0.00102	0.00101	0.00101	0.00100	0.00099	0.00098	0.00097	0.00096	0.00095	0.0100
48	0.00110	0.00109	0.00108	0.00107	0.00106	0.00105	0.00104	0.00103	0.00102	0.0100
49	0.00115	0.00115	0.00114	0.00113	0.00112	0.00111	0.00110	0.00109	0.00108	0.0100
50	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112	0.00111	0.0100
51	0.00123	0.00122	0.00121	0.00120	0.00119	0.00118	0.00117	0.00115	0.00114	0.0100
52	0.00129	0.00128	0.00127	0.00125	0.00124	0.00123	0.00122	0.00121	0.00119	0.0100
53	0.00138	0.00137	0.00135	0.00134	0.00133	0.00132	0.00130	0.00129	0.00128	0.0100
54	0.00149	0.00147	0.00146	0.00144	0.00143	0.00141	0.00140	0.00139	0.00137	0.0100
55	0.00158	0.00157	0.00155	0.00153	0.00152	0.00150	0.00149	0.00147	0.00146	0.0100
56	0.00166	0.00164	0.00162	0.00161	0.00159	0.00157	0.00155	0.00154	0.00152	0.0100
57	0.00172	0.00169	0.00168	0.00166	0.00164	0.00162	0.00160	0.00159	0.00157	0.0100
58	0.00177	0.00175	0.00172	0.00170	0.00169	0.00167	0.00165	0.00163	0.00162	0.0100
59	0.00182	0.00179	0.00177	0.00175	0.00173	0.00171	0.00169	0.00167	0.00166	0.0100
60	0.00187	0.00185	0.00183	0.00180	0.00178	0.00176	0.00174	0.00173	0.00171	0.0100
61	0.00196	0.00194	0.00191	0.00189	0.00187	0.00184	0.00182	0.00181	0.00179	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
62	0.00208	0.00205	0.00202	0.00200	0.00197	0.00195	0.00193	0.00191	0.00189	0.0100
63	0.00221	0.00218	0.00215	0.00213	0.00210	0.00208	0.00206	0.00204	0.00201	0.0100
64	0.00238	0.00235	0.00232	0.00229	0.00227	0.00224	0.00222	0.00219	0.00217	0.0100
65	0.00262	0.00259	0.00256	0.00253	0.00251	0.00248	0.00245	0.00243	0.00240	0.0100
66	0.00299	0.00296	0.00293	0.00290	0.00287	0.00284	0.00281	0.00278	0.00275	0.0100
67	0.00351	0.00347	0.00344	0.00341	0.00337	0.00334	0.00330	0.00327	0.00324	0.0100
68	0.00417	0.00413	0.00410	0.00406	0.00402	0.00398	0.00394	0.00391	0.00387	0.0100
69	0.00494	0.00491	0.00487	0.00483	0.00479	0.00474	0.00470	0.00465	0.00461	0.0100
70	0.00576	0.00572	0.00569	0.00564	0.00560	0.00555	0.00551	0.00545	0.00540	0.0100
71	0.00656	0.00653	0.00649	0.00645	0.00641	0.00636	0.00631	0.00625	0.00619	0.0100
72	0.00728	0.00726	0.00723	0.00719	0.00715	0.00710	0.00704	0.00698	0.00691	0.0100
73	0.00784	0.00781	0.00778	0.00774	0.00770	0.00764	0.00758	0.00751	0.00744	0.0100
74	0.00834	0.00831	0.00828	0.00824	0.00819	0.00813	0.00807	0.00799	0.00791	0.0100
75	0.00885	0.00882	0.00878	0.00874	0.00869	0.00863	0.00856	0.00848	0.00840	0.0100
76	0.00943	0.00941	0.00937	0.00932	0.00927	0.00920	0.00913	0.00904	0.00895	0.0100
77	0.01017	0.01014	0.01010	0.01005	0.00998	0.00992	0.00984	0.00975	0.00965	0.0100
78	0.01108	0.01105	0.01101	0.01095	0.01089	0.01081	0.01072	0.01063	0.01052	0.0100
79	0.01222	0.01218	0.01213	0.01207	0.01200	0.01191	0.01182	0.01171	0.01159	0.0100
80	0.01358	0.01354	0.01349	0.01342	0.01334	0.01324	0.01314	0.01302	0.01289	0.0100
81	0.01520	0.01515	0.01509	0.01502	0.01493	0.01482	0.01471	0.01457	0.01443	0.0100
82	0.01710	0.01705	0.01698	0.01690	0.01679	0.01668	0.01654	0.01639	0.01623	0.0100
83	0.01930	0.01925	0.01917	0.01907	0.01896	0.01883	0.01868	0.01851	0.01832	0.0100
84	0.02183	0.02177	0.02168	0.02157	0.02144	0.02129	0.02112	0.02093	0.02072	0.0100
85	0.02470	0.02463	0.02453	0.02441	0.02426	0.02409	0.02390	0.02368	0.02345	0.0100
86	0.02793	0.02785	0.02774	0.02760	0.02744	0.02725	0.02704	0.02680	0.02653	0.0099
87	0.03153	0.03144	0.03132	0.03117	0.03098	0.03077	0.03054	0.03027	0.02997	0.0097
88	0.03551	0.03541	0.03527	0.03510	0.03490	0.03467	0.03441	0.03411	0.03378	0.0096
89	0.03988	0.03976	0.03961	0.03943	0.03921	0.03895	0.03866	0.03833	0.03797	0.0094
90	0.04464	0.04451	0.04435	0.04414	0.04390	0.04361	0.04329	0.04293	0.04253	0.0093
91	0.04980	0.04966	0.04948	0.04925	0.04898	0.04867	0.04832	0.04792	0.04749	0.0091
92	0.05536	0.05521	0.05501	0.05476	0.05447	0.05413	0.05374	0.05331	0.05283	0.0089
93	0.06132	0.06116	0.06094	0.06068	0.06036	0.05998	0.05956	0.05909	0.05857	0.0088
94	0.06769	0.06752	0.06728	0.06699	0.06664	0.06624	0.06578	0.06527	0.06471	0.0086
95	0.07447	0.07428	0.07403	0.07371	0.07334	0.07290	0.07241	0.07185	0.07124	0.0085
96	0.08166	0.08147	0.08120	0.08087	0.08048	0.08002	0.07950	0.07893	0.07829	0.0081
97	0.08927	0.08906	0.08879	0.08845	0.08804	0.08756	0.08702	0.08642	0.08575	0.0077
98	0.09728	0.09707	0.09678	0.09643	0.09601	0.09552	0.09496	0.09434	0.09365	0.0073
99	0.10571	0.10549	0.10520	0.10483	0.10440	0.10389	0.10332	0.10268	0.10197	0.0069
100	0.11454	0.11432	0.11402	0.11365	0.11321	0.11269	0.11211	0.11145	0.11073	0.0065
101	0.12379	0.12356	0.12326	0.12289	0.12244	0.12191	0.12132	0.12065	0.11992	0.0061
102	0.13345	0.13322	0.13292	0.13254	0.13208	0.13156	0.13096	0.13028	0.12954	0.0057
103	0.14352	0.14329	0.14299	0.14261	0.14215	0.14163	0.14103	0.14035	0.13961	0.0053
104	0.15400	0.15377	0.15347	0.15310	0.15265	0.15212	0.15153	0.15086	0.15012	0.0049
105	0.15402	0.15381	0.15353	0.15319	0.15277	0.15229	0.15174	0.15113	0.15045	0.0045



### Rate of Employee Death with Spouse Survivor

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
29	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
30	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.0100
31	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.0100
32	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.0100
33	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0100
34	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.0100
35	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00004	0.00004	0.00004	0.0100
36	0.00007	0.00007	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.0100
37	0.00009	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.00008	0.0100
38	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00009	0.00009	0.00009	0.0100
39	0.00012	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.00011	0.0100
40	0.00013	0.00013	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.0100
41	0.00014	0.00014	0.00014	0.00014	0.00014	0.00013	0.00013	0.00013	0.00013	0.0100
42	0.00016	0.00016	0.00016	0.00016	0.00015	0.00015	0.00015	0.00015	0.00015	0.0100
43	0.00018	0.00018	0.00018	0.00018	0.00018	0.00018	0.00017	0.00017	0.00017	0.0100
44	0.00022	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00020	0.00020	0.0100
45	0.00025	0.00025	0.00025	0.00025	0.00024	0.00024	0.00024	0.00024	0.00023	0.0100
46	0.00029	0.00028	0.00028	0.00028	0.00028	0.00028	0.00027	0.00027	0.00027	0.0100
47	0.00032	0.00032	0.00032	0.00031	0.00031	0.00031	0.00030	0.00030	0.00030	0.0100
48	0.00035	0.00035	0.00035	0.00035	0.00034	0.00034	0.00034	0.00033	0.00033	0.0100
49	0.00038	0.00038	0.00038	0.00037	0.00037	0.00037	0.00036	0.00036	0.00036	0.0100
50	0.00041	0.00040	0.00040	0.00040	0.00039	0.00039	0.00039	0.00038	0.00038	0.0100
51	0.00043	0.00043	0.00042	0.00042	0.00042	0.00041	0.00041	0.00040	0.00040	0.0100
52	0.00045	0.00045	0.00045	0.00044	0.00044	0.00043	0.00043	0.00043	0.00042	0.0100
53	0.00048	0.00048	0.00048	0.00047	0.00047	0.00046	0.00046	0.00045	0.00045	0.0100
54	0.00052	0.00052	0.00051	0.00051	0.00050	0.00050	0.00049	0.00049	0.00048	0.0100
55	0.00056	0.00056	0.00055	0.00054	0.00054	0.00053	0.00053	0.00052	0.00052	0.0100
56	0.00059	0.00059	0.00058	0.00058	0.00057	0.00056	0.00056	0.00055	0.00055	0.0100
57	0.00062	0.00061	0.00060	0.00060	0.00059	0.00058	0.00058	0.00057	0.00057	0.0100
58	0.00063	0.00062	0.00062	0.00061	0.00060	0.00060	0.00059	0.00058	0.00058	0.0100
59	0.00063	0.00063	0.00062	0.00061	0.00060	0.00060	0.00059	0.00059	0.00058	0.0100
60	0.00064	0.00063	0.00062	0.00061	0.00061	0.00060	0.00059	0.00059	0.00058	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
61	0.00065	0.00064	0.00063	0.00062	0.00062	0.00061	0.00060	0.00060	0.00059	0.0100
62	0.00067	0.00066	0.00065	0.00065	0.00064	0.00063	0.00063	0.00062	0.00061	0.0100
63	0.00071	0.00070	0.00069	0.00068	0.00067	0.00066	0.00066	0.00065	0.00064	0.0100
64	0.00075	0.00074	0.00073	0.00073	0.00072	0.00071	0.00070	0.00070	0.00069	0.0100
65	0.00081	0.00080	0.00080	0.00079	0.00078	0.00077	0.00076	0.00075	0.00075	0.0100
66	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00084	0.00083	0.00082	0.0100
67	0.00099	0.00098	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.0100
68	0.00110	0.00109	0.00108	0.00107	0.00106	0.00105	0.00104	0.00103	0.00102	0.0100
69	0.00123	0.00122	0.00121	0.00120	0.00119	0.00118	0.00116	0.00115	0.00114	0.0100
70	0.00136	0.00135	0.00134	0.00134	0.00132	0.00131	0.00130	0.00129	0.00128	0.0100
71	0.00151	0.00150	0.00149	0.00148	0.00147	0.00146	0.00145	0.00144	0.00142	0.0100
72	0.00166	0.00165	0.00165	0.00164	0.00163	0.00162	0.00161	0.00159	0.00157	0.0100
73	0.00180	0.00180	0.00179	0.00178	0.00177	0.00176	0.00174	0.00173	0.00171	0.0100
74	0.00196	0.00195	0.00194	0.00193	0.00192	0.00191	0.00189	0.00188	0.00186	0.0100
75	0.00212	0.00212	0.00211	0.00210	0.00209	0.00207	0.00205	0.00204	0.00202	0.0100
76	0.00230	0.00230	0.00229	0.00228	0.00226	0.00225	0.00223	0.00221	0.00219	0.0100
77	0.00250	0.00249	0.00248	0.00247	0.00246	0.00244	0.00242	0.00240	0.00237	0.0100
78	0.00272	0.00271	0.00270	0.00268	0.00267	0.00265	0.00263	0.00260	0.00258	0.0100
79	0.00295	0.00294	0.00293	0.00292	0.00290	0.00288	0.00286	0.00283	0.00280	0.0100
80	0.00322	0.00321	0.00320	0.00318	0.00316	0.00314	0.00311	0.00309	0.00306	0.0100
81	0.00353	0.00352	0.00350	0.00348	0.00346	0.00344	0.00341	0.00338	0.00335	0.0100
82	0.00389	0.00388	0.00386	0.00384	0.00382	0.00379	0.00376	0.00373	0.00369	0.0100
83	0.00431	0.00430	0.00428	0.00426	0.00424	0.00421	0.00417	0.00413	0.00409	0.0100
84	0.00481	0.00480	0.00478	0.00475	0.00473	0.00469	0.00466	0.00461	0.00457	0.0100
85	0.00539	0.00538	0.00536	0.00533	0.00530	0.00526	0.00522	0.00517	0.00512	0.0100
86	0.00607	0.00605	0.00603	0.00600	0.00596	0.00592	0.00587	0.00582	0.00576	0.0099
87	0.00684	0.00682	0.00679	0.00676	0.00672	0.00667	0.00662	0.00656	0.00650	0.0097
88	0.00771	0.00769	0.00766	0.00762	0.00758	0.00753	0.00747	0.00740	0.00733	0.0096
89	0.00868	0.00866	0.00863	0.00859	0.00854	0.00848	0.00842	0.00835	0.00827	0.0094
90	0.00977	0.00974	0.00970	0.00966	0.00961	0.00954	0.00947	0.00939	0.00931	0.0093
91	0.01096	0.01093	0.01089	0.01084	0.01078	0.01071	0.01063	0.01055	0.01045	0.0091
92	0.01226	0.01223	0.01219	0.01213	0.01207	0.01199	0.01191	0.01181	0.01170	0.0089
93	0.01368	0.01364	0.01360	0.01354	0.01346	0.01338	0.01329	0.01318	0.01307	0.0088
94	0.01521	0.01517	0.01512	0.01505	0.01497	0.01488	0.01478	0.01467	0.01454	0.0086
95	0.01685	0.01681	0.01675	0.01668	0.01660	0.01650	0.01639	0.01626	0.01612	0.0085
96	0.01861	0.01857	0.01851	0.01843	0.01835	0.01824	0.01812	0.01799	0.01784	0.0081
97	0.02049	0.02044	0.02038	0.02030	0.02021	0.02010	0.01998	0.01984	0.01969	0.0077
98	0.02248	0.02244	0.02237	0.02229	0.02219	0.02208	0.02195	0.02180	0.02164	0.0073
99	0.02459	0.02454	0.02448	0.02439	0.02429	0.02417	0.02404	0.02389	0.02372	0.0069
100	0.02682	0.02677	0.02670	0.02661	0.02651	0.02639	0.02625	0.02610	0.02593	0.0065
101	0.02916	0.02911	0.02904	0.02895	0.02884	0.02872	0.02858	0.02842	0.02825	0.0061
102	0.03162	0.03157	0.03149	0.03140	0.03130	0.03117	0.03103	0.03087	0.03070	0.0057
103	0.03420	0.03414	0.03407	0.03398	0.03387	0.03375	0.03360	0.03344	0.03326	0.0053
104	0.03689	0.03683	0.03676	0.03667	0.03656	0.03644	0.03630	0.03614	0.03596	0.0049
105	0.03689	0.03684	0.03678	0.03669	0.03659	0.03648	0.03635	0.03620	0.03604	0.0045

### Non-Disability Annuitant Death Rate

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00077	0.00076	0.00076	0.00075	0.00074	0.00073	0.00073	0.00072	0.00071	0.0100
18	0.00078	0.00077	0.00076	0.00076	0.00075	0.00074	0.00073	0.00073	0.00072	0.0100
19	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.00074	0.00073	0.00073	0.0100
20	0.00079	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.00074	0.00073	0.0100
21	0.00080	0.00079	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.00074	0.0100
22	0.00081	0.00080	0.00079	0.00079	0.00078	0.00077	0.00076	0.00076	0.00075	0.0100
23	0.00082	0.00081	0.00080	0.00079	0.00079	0.00078	0.00077	0.00076	0.00076	0.0100
24	0.00083	0.00082	0.00081	0.00080	0.00079	0.00079	0.00078	0.00077	0.00076	0.0100
25	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00079	0.00078	0.00077	0.0100
26	0.00084	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00079	0.00078	0.0100
27	0.00085	0.00084	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.00079	0.0100
28	0.00086	0.00085	0.00084	0.00084	0.00083	0.00082	0.00081	0.00080	0.00079	0.0100
29	0.00087	0.00086	0.00085	0.00084	0.00084	0.00083	0.00082	0.00081	0.00080	0.0100
30	0.00088	0.00087	0.00086	0.00085	0.00084	0.00084	0.00083	0.00082	0.00081	0.0100
31	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00084	0.00083	0.00082	0.0100
32	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00084	0.00083	0.0100
33	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00084	0.0100
34	0.00091	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.0100
35	0.00092	0.00091	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.0100
36	0.00093	0.00092	0.00091	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.0100
37	0.00094	0.00093	0.00092	0.00091	0.00091	0.00090	0.00089	0.00088	0.00087	0.0100
38	0.00095	0.00094	0.00093	0.00092	0.00091	0.00091	0.00090	0.00089	0.00088	0.0100
39	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.00091	0.00090	0.00089	0.0100
40	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.00091	0.00090	0.0100
41	0.00098	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.00091	0.0100
42	0.00099	0.00098	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.0100
43	0.00100	0.00099	0.00098	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.0100
44	0.00101	0.00100	0.00099	0.00098	0.00097	0.00096	0.00095	0.00094	0.00093	0.0100
45	0.00102	0.00101	0.00100	0.00099	0.00098	0.00097	0.00096	0.00095	0.00094	0.0100
46	0.00103	0.00102	0.00101	0.00100	0.00099	0.00098	0.00097	0.00096	0.00095	0.0100
47	0.00149	0.00147	0.00146	0.00144	0.00143	0.00141	0.00140	0.00139	0.00137	0.0100
48	0.00186	0.00184	0.00182	0.00181	0.00179	0.00177	0.00175	0.00173	0.00172	0.0100
49	0.00215	0.00213	0.00211	0.00209	0.00207	0.00205	0.00203	0.00201	0.00199	0.0100
50	0.00236	0.00234	0.00231	0.00229	0.00227	0.00224	0.00222	0.00220	0.00218	0.0100
51	0.00248	0.00245	0.00243	0.00240	0.00238	0.00236	0.00233	0.00231	0.00229	0.0100
52	0.00250	0.00247	0.00245	0.00242	0.00240	0.00237	0.00235	0.00233	0.00230	0.0100
53	0.00242	0.00240	0.00237	0.00235	0.00233	0.00230	0.00228	0.00226	0.00223	0.0100
54	0.00231	0.00228	0.00226	0.00223	0.00221	0.00219	0.00216	0.00214	0.00212	0.0100
55	0.00229	0.00226	0.00224	0.00221	0.00219	0.00216	0.00214	0.00212	0.00209	0.0100
56	0.00248	0.00245	0.00242	0.00239	0.00236	0.00233	0.00231	0.00228	0.00226	0.0100
57	0.00288	0.00285	0.00281	0.00277	0.00274	0.00271	0.00268	0.00265	0.00262	0.0100
58	0.00338	0.00333	0.00329	0.00324	0.00320	0.00317	0.00313	0.00309	0.00306	0.0100
59	0.00384	0.00379	0.00374	0.00369	0.00364	0.00360	0.00356	0.00352	0.00348	0.0100
60	0.00418	0.00412	0.00407	0.00401	0.00396	0.00392	0.00387	0.00383	0.00379	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
61	0.00449	0.00443	0.00437	0.00431	0.00426	0.00420	0.00416	0.00411	0.00407	0.0100
62	0.00485	0.00478	0.00472	0.00466	0.00460	0.00455	0.00449	0.00444	0.00440	0.0100
63	0.00534	0.00527	0.00520	0.00514	0.00507	0.00501	0.00495	0.00490	0.00485	0.0100
64	0.00596	0.00589	0.00582	0.00575	0.00568	0.00561	0.00554	0.00548	0.00542	0.0100
65	0.00666	0.00659	0.00651	0.00643	0.00636	0.00628	0.00621	0.00614	0.00608	0.0100
66	0.00743	0.00734	0.00726	0.00718	0.00710	0.00702	0.00693	0.00686	0.00679	0.0100
67	0.00834	0.00824	0.00815	0.00806	0.00797	0.00788	0.00779	0.00771	0.00763	0.0100
68	0.00940	0.00928	0.00917	0.00907	0.00897	0.00888	0.00878	0.00869	0.00860	0.0100
69	0.01071	0.01058	0.01046	0.01035	0.01024	0.01014	0.01003	0.00993	0.00983	0.0100
70	0.01225	0.01212	0.01199	0.01186	0.01174	0.01162	0.01151	0.01139	0.01128	0.0100
71	0.01391	0.01379	0.01365	0.01351	0.01337	0.01324	0.01311	0.01298	0.01286	0.0100
72	0.01557	0.01546	0.01532	0.01518	0.01503	0.01488	0.01474	0.01460	0.01445	0.0100
73	0.01729	0.01721	0.01709	0.01694	0.01679	0.01662	0.01646	0.01631	0.01615	0.0100
74	0.01937	0.01932	0.01922	0.01908	0.01892	0.01875	0.01857	0.01839	0.01821	0.0100
75	0.02189	0.02186	0.02180	0.02167	0.02152	0.02133	0.02113	0.02093	0.02073	0.0100
76	0.02479	0.02476	0.02471	0.02462	0.02447	0.02428	0.02406	0.02384	0.02360	0.0100
77	0.02804	0.02802	0.02796	0.02787	0.02774	0.02756	0.02733	0.02708	0.02682	0.0100
78	0.03166	0.03164	0.03158	0.03148	0.03135	0.03117	0.03094	0.03067	0.03037	0.0100
79	0.03550	0.03548	0.03541	0.03530	0.03516	0.03497	0.03473	0.03444	0.03412	0.0100
80	0.03960	0.03957	0.03950	0.03938	0.03921	0.03900	0.03875	0.03844	0.03809	0.0100
81	0.04407	0.04403	0.04395	0.04381	0.04362	0.04339	0.04310	0.04277	0.04239	0.0100
82	0.04917	0.04912	0.04902	0.04887	0.04866	0.04839	0.04807	0.04770	0.04728	0.0100
83	0.05492	0.05487	0.05475	0.05457	0.05433	0.05403	0.05367	0.05325	0.05278	0.0100
84	0.06129	0.06122	0.06108	0.06088	0.06060	0.06027	0.05986	0.05940	0.05887	0.0100
85	0.06844	0.06835	0.06819	0.06796	0.06765	0.06727	0.06682	0.06630	0.06571	0.0100
86	0.07663	0.07654	0.07636	0.07610	0.07576	0.07533	0.07484	0.07426	0.07361	0.0099
87	0.08594	0.08584	0.08564	0.08535	0.08497	0.08450	0.08395	0.08332	0.08259	0.0097
88	0.09638	0.09626	0.09604	0.09572	0.09531	0.09480	0.09419	0.09348	0.09269	0.0096
89	0.10788	0.10776	0.10752	0.10718	0.10672	0.10616	0.10549	0.10472	0.10384	0.0094
90	0.12055	0.12043	0.12018	0.11981	0.11932	0.11870	0.11797	0.11712	0.11616	0.0093
91	0.13472	0.13461	0.13435	0.13396	0.13343	0.13277	0.13197	0.13104	0.12998	0.0091
92	0.15073	0.15064	0.15039	0.14999	0.14943	0.14871	0.14785	0.14683	0.14567	0.0089
93	0.16910	0.16896	0.16874	0.16833	0.16775	0.16699	0.16606	0.16495	0.16367	0.0088
94	0.19020	0.19003	0.18976	0.18938	0.18879	0.18799	0.18699	0.18578	0.18438	0.0086
95	0.21352	0.21338	0.21310	0.21267	0.21210	0.21128	0.21021	0.20891	0.20738	0.0085
96	0.23829	0.23826	0.23804	0.23763	0.23705	0.23627	0.23520	0.23386	0.23225	0.0081
97	0.26354	0.26373	0.26365	0.26333	0.26278	0.26200	0.26097	0.25962	0.25795	0.0077
98	0.28681	0.28710	0.28706	0.28673	0.28614	0.28531	0.28421	0.28284	0.28112	0.0073
99	0.30881	0.30925	0.30928	0.30897	0.30836	0.30748	0.30633	0.30490	0.30316	0.0069
100	0.32971	0.33037	0.33054	0.33030	0.32971	0.32881	0.32763	0.32616	0.32440	0.0065
101	0.34977	0.35074	0.35112	0.35100	0.35047	0.34960	0.34842	0.34694	0.34516	0.0061
102	0.36955	0.37061	0.37127	0.37135	0.37094	0.37013	0.36898	0.36751	0.36575	0.0057
103	0.38932	0.39046	0.39121	0.39155	0.39132	0.39063	0.38954	0.38812	0.38638	0.0053
104	0.40925	0.41049	0.41132	0.41175	0.41177	0.41124	0.41026	0.40890	0.40722	0.0049
105	0.42942	0.43075	0.43167	0.43219	0.43230	0.43200	0.43117	0.42992	0.42831	0.0045

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
<b>106</b>	0.44982	0.45125	0.45227	0.45289	0.45309	0.45288	0.45226	0.45115	0.44964	0.0041
<b>107</b>	0.47042	0.47196	0.47308	0.47380	0.47411	0.47401	0.47349	0.47256	0.47118	0.0037
<b>108</b>	0.49122	0.49286	0.49410	0.49493	0.49535	0.49536	0.49496	0.49415	0.49292	0.0033
<b>109</b>	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000

### Death Rate for Spouse Survivors of Females

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
17	0.00112	0.00111	0.00110	0.00109	0.00108	0.00107	0.00106	0.00105	0.00104	0.0100
18	0.00114	0.00112	0.00111	0.00110	0.00109	0.00108	0.00107	0.00106	0.00105	0.0100
19	0.00115	0.00114	0.00112	0.00111	0.00110	0.00109	0.00108	0.00107	0.00106	0.0100
20	0.00116	0.00115	0.00114	0.00112	0.00111	0.00110	0.00109	0.00108	0.00107	0.0100
21	0.00117	0.00116	0.00115	0.00114	0.00112	0.00111	0.00110	0.00109	0.00108	0.0100
22	0.00118	0.00117	0.00116	0.00115	0.00114	0.00112	0.00111	0.00110	0.00109	0.0100
23	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00112	0.00111	0.00110	0.0100
24	0.00121	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00112	0.00111	0.0100
25	0.00122	0.00121	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.00112	0.0100
26	0.00123	0.00122	0.00121	0.00119	0.00118	0.00117	0.00116	0.00115	0.00114	0.0100
27	0.00124	0.00123	0.00122	0.00121	0.00119	0.00118	0.00117	0.00116	0.00115	0.0100
28	0.00126	0.00124	0.00123	0.00122	0.00121	0.00119	0.00118	0.00117	0.00116	0.0100
29	0.00127	0.00126	0.00124	0.00123	0.00122	0.00121	0.00119	0.00118	0.00117	0.0100
30	0.00128	0.00127	0.00126	0.00124	0.00123	0.00122	0.00121	0.00119	0.00118	0.0100
31	0.00120	0.00119	0.00117	0.00116	0.00115	0.00114	0.00113	0.00112	0.00110	0.0100
32	0.00126	0.00125	0.00124	0.00123	0.00121	0.00120	0.00119	0.00118	0.00117	0.0100
33	0.00148	0.00147	0.00145	0.00144	0.00143	0.00141	0.00140	0.00138	0.00137	0.0100
34	0.00186	0.00184	0.00182	0.00180	0.00179	0.00177	0.00175	0.00173	0.00172	0.0100
35	0.00239	0.00237	0.00234	0.00232	0.00229	0.00227	0.00225	0.00223	0.00220	0.0100
36	0.00306	0.00303	0.00300	0.00297	0.00294	0.00291	0.00288	0.00285	0.00283	0.0100
37	0.00386	0.00382	0.00378	0.00374	0.00370	0.00367	0.00363	0.00359	0.00356	0.0100
38	0.00472	0.00467	0.00462	0.00458	0.00453	0.00449	0.00444	0.00440	0.00435	0.0100
39	0.00557	0.00552	0.00546	0.00541	0.00535	0.00530	0.00525	0.00519	0.00514	0.0100
40	0.00632	0.00625	0.00619	0.00613	0.00607	0.00601	0.00595	0.00589	0.00583	0.0100
41	0.00682	0.00676	0.00669	0.00662	0.00656	0.00649	0.00643	0.00636	0.00630	0.0100
42	0.00697	0.00690	0.00683	0.00676	0.00669	0.00663	0.00656	0.00650	0.00643	0.0100
43	0.00670	0.00663	0.00656	0.00650	0.00643	0.00637	0.00630	0.00624	0.00618	0.0100
44	0.00614	0.00608	0.00602	0.00596	0.00590	0.00584	0.00579	0.00573	0.00567	0.0100
45	0.00566	0.00561	0.00555	0.00549	0.00544	0.00539	0.00533	0.00528	0.00523	0.0100
46	0.00554	0.00549	0.00543	0.00538	0.00532	0.00527	0.00522	0.00516	0.00511	0.0100
47	0.00594	0.00588	0.00582	0.00577	0.00571	0.00565	0.00560	0.00554	0.00548	0.0100
48	0.00689	0.00683	0.00676	0.00670	0.00663	0.00656	0.00650	0.00643	0.00637	0.0100
49	0.00804	0.00797	0.00790	0.00782	0.00774	0.00767	0.00759	0.00751	0.00744	0.0100
50	0.00888	0.00880	0.00872	0.00864	0.00856	0.00847	0.00839	0.00830	0.00822	0.0100
51	0.00932	0.00924	0.00916	0.00908	0.00899	0.00891	0.00882	0.00873	0.00864	0.0100
52	0.00925	0.00917	0.00910	0.00902	0.00893	0.00885	0.00876	0.00867	0.00859	0.0100
53	0.00887	0.00881	0.00874	0.00866	0.00858	0.00850	0.00842	0.00834	0.00825	0.0100
54	0.00871	0.00865	0.00859	0.00851	0.00844	0.00836	0.00828	0.00820	0.00812	0.0100
55	0.00921	0.00915	0.00909	0.00901	0.00894	0.00885	0.00877	0.00869	0.00860	0.0100
56	0.01025	0.01019	0.01012	0.01004	0.00995	0.00987	0.00977	0.00968	0.00958	0.0100
57	0.01129	0.01122	0.01115	0.01106	0.01097	0.01088	0.01078	0.01068	0.01057	0.0100
58	0.01229	0.01222	0.01214	0.01205	0.01196	0.01186	0.01175	0.01164	0.01153	0.0100

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
59	0.01295	0.01289	0.01281	0.01272	0.01263	0.01252	0.01241	0.01229	0.01218	0.0100
60	0.01258	0.01252	0.01245	0.01237	0.01228	0.01218	0.01207	0.01196	0.01185	0.0100
61	0.01232	0.01227	0.01220	0.01212	0.01204	0.01194	0.01184	0.01173	0.01162	0.0100
62	0.01314	0.01309	0.01302	0.01294	0.01285	0.01275	0.01264	0.01253	0.01241	0.0100
63	0.01440	0.01433	0.01426	0.01418	0.01408	0.01397	0.01385	0.01373	0.01360	0.0100
64	0.01576	0.01569	0.01560	0.01551	0.01540	0.01529	0.01516	0.01502	0.01488	0.0100
65	0.01715	0.01707	0.01698	0.01687	0.01676	0.01663	0.01649	0.01634	0.01619	0.0100
66	0.01870	0.01861	0.01850	0.01838	0.01825	0.01811	0.01796	0.01780	0.01763	0.0100
67	0.02056	0.02045	0.02032	0.02019	0.02004	0.01989	0.01972	0.01955	0.01936	0.0100
68	0.02242	0.02229	0.02215	0.02200	0.02184	0.02166	0.02148	0.02129	0.02109	0.0100
69	0.02484	0.02469	0.02453	0.02436	0.02418	0.02399	0.02378	0.02357	0.02334	0.0100
70	0.02704	0.02687	0.02670	0.02650	0.02630	0.02609	0.02587	0.02563	0.02539	0.0100
71	0.02932	0.02913	0.02894	0.02873	0.02851	0.02827	0.02803	0.02778	0.02751	0.0100
72	0.03152	0.03131	0.03109	0.03086	0.03063	0.03038	0.03012	0.02984	0.02956	0.0100
73	0.03343	0.03320	0.03297	0.03273	0.03248	0.03222	0.03194	0.03166	0.03135	0.0100
74	0.03658	0.03632	0.03607	0.03580	0.03554	0.03525	0.03495	0.03464	0.03431	0.0100
75	0.04127	0.04099	0.04070	0.04041	0.04011	0.03979	0.03946	0.03911	0.03874	0.0100
76	0.04628	0.04599	0.04568	0.04536	0.04502	0.04467	0.04431	0.04392	0.04351	0.0100
77	0.05086	0.05056	0.05024	0.04990	0.04954	0.04916	0.04877	0.04834	0.04789	0.0100
78	0.05450	0.05421	0.05389	0.05354	0.05317	0.05277	0.05235	0.05190	0.05142	0.0100
79	0.05973	0.05946	0.05914	0.05878	0.05839	0.05796	0.05751	0.05702	0.05649	0.0100
80	0.06668	0.06642	0.06610	0.06572	0.06531	0.06485	0.06435	0.06380	0.06322	0.0100
81	0.07494	0.07469	0.07437	0.07398	0.07353	0.07302	0.07247	0.07186	0.07120	0.0100
82	0.08440	0.08417	0.08384	0.08343	0.08295	0.08239	0.08177	0.08109	0.08035	0.0100
83	0.09461	0.09439	0.09406	0.09362	0.09310	0.09249	0.09180	0.09104	0.09020	0.0100
84	0.10541	0.10519	0.10485	0.10439	0.10382	0.10315	0.10238	0.10153	0.10061	0.0100
85	0.11677	0.11655	0.11618	0.11569	0.11506	0.11432	0.11348	0.11254	0.11151	0.0100
86	0.12777	0.12753	0.12714	0.12661	0.12595	0.12515	0.12424	0.12323	0.12212	0.0099
87	0.13553	0.13525	0.13484	0.13429	0.13360	0.13278	0.13183	0.13077	0.12961	0.0097
88	0.14161	0.14130	0.14086	0.14030	0.13959	0.13875	0.13778	0.13670	0.13550	0.0096
89	0.15097	0.15061	0.15015	0.14956	0.14883	0.14796	0.14695	0.14582	0.14456	0.0094
90	0.16538	0.16497	0.16446	0.16383	0.16306	0.16215	0.16108	0.15987	0.15853	0.0093
91	0.18332	0.18287	0.18232	0.18165	0.18084	0.17987	0.17874	0.17744	0.17598	0.0091
92	0.20375	0.20328	0.20271	0.20202	0.20117	0.20016	0.19896	0.19757	0.19599	0.0089
93	0.22243	0.22200	0.22146	0.22078	0.21994	0.21891	0.21767	0.21622	0.21454	0.0088
94	0.23679	0.23638	0.23584	0.23516	0.23430	0.23326	0.23200	0.23050	0.22876	0.0086
95	0.24857	0.24806	0.24742	0.24665	0.24571	0.24460	0.24328	0.24173	0.23993	0.0085
96	0.26313	0.26253	0.26181	0.26095	0.25996	0.25879	0.25743	0.25586	0.25405	0.0081
97	0.28348	0.28278	0.28196	0.28101	0.27993	0.27869	0.27726	0.27563	0.27377	0.0077
98	0.31211	0.31130	0.31037	0.30930	0.30810	0.30675	0.30523	0.30350	0.30155	0.0073
99	0.34888	0.34796	0.34690	0.34570	0.34436	0.34287	0.34121	0.33936	0.33728	0.0069
100	0.39489	0.39385	0.39265	0.39130	0.38980	0.38815	0.38633	0.38432	0.38208	0.0065
101	0.45183	0.45069	0.44934	0.44782	0.44614	0.44430	0.44229	0.44009	0.43767	0.0061
102	0.52151	0.52027	0.51879	0.51709	0.51521	0.51315	0.51093	0.50851	0.50588	0.0057

Age	Fiscal Year									Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029+
<b>103</b>	0.60567	0.60440	0.60279	0.60091	0.59882	0.59654	0.59408	0.59142	0.58855	0.0053
<b>104</b>	0.70517	0.70393	0.70224	0.70022	0.69793	0.69542	0.69270	0.68979	0.68667	0.0049
<b>105</b>	0.71558	0.71463	0.71317	0.71133	0.70918	0.70680	0.70422	0.70147	0.69853	0.0045
<b>106</b>	0.72633	0.72573	0.72457	0.72295	0.72100	0.71878	0.71637	0.71378	0.71103	0.0041
<b>107</b>	0.73676	0.73660	0.73578	0.73446	0.73274	0.73073	0.72850	0.72610	0.72356	0.0037
<b>108</b>	0.74682	0.74713	0.74673	0.74574	0.74431	0.74255	0.74054	0.73836	0.73605	0.0033
<b>109</b>	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.0000



## Disability Annuitants

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur.1	Dur.2	Dur.3+	2029+
17	0.00089	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	0.00080	1.285	1.543	0.800	0.0100
18	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	0.00081	1.285	1.543	0.800	0.0100
19	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	0.00082	1.285	1.543	0.800	0.0100
20	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	0.00083	1.285	1.543	0.800	0.0100
21	0.00092	0.00091	0.00090	0.00089	0.00087	0.00086	0.00085	0.00084	0.00084	1.285	1.543	0.800	0.0100
22	0.00093	0.00092	0.00091	0.00089	0.00088	0.00087	0.00086	0.00085	0.00084	1.285	1.543	0.800	0.0100
23	0.00094	0.00093	0.00092	0.00090	0.00089	0.00088	0.00087	0.00086	0.00085	1.285	1.543	0.800	0.0100
24	0.00095	0.00094	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	0.00086	1.285	1.543	0.800	0.0100
25	0.00096	0.00095	0.00093	0.00092	0.00091	0.00090	0.00089	0.00088	0.00087	1.285	1.543	0.800	0.0100
26	0.00097	0.00096	0.00094	0.00093	0.00092	0.00091	0.00090	0.00089	0.00088	1.285	1.543	0.800	0.0100
27	0.00098	0.00097	0.00095	0.00094	0.00093	0.00092	0.00091	0.00090	0.00089	1.285	1.543	0.800	0.0100
28	0.00099	0.00098	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	0.00090	1.285	1.543	0.800	0.0100
29	0.00100	0.00099	0.00097	0.00096	0.00095	0.00094	0.00093	0.00092	0.00091	1.285	1.543	0.800	0.0100
30	0.00101	0.00100	0.00098	0.00097	0.00096	0.00095	0.00093	0.00092	0.00091	1.285	1.543	0.800	0.0100
31	0.00102	0.00101	0.00099	0.00098	0.00097	0.00096	0.00094	0.00093	0.00092	1.285	1.543	0.800	0.0100
32	0.00103	0.00102	0.00100	0.00099	0.00098	0.00096	0.00095	0.00094	0.00093	1.285	1.543	0.800	0.0100
33	0.00104	0.00103	0.00101	0.00100	0.00099	0.00097	0.00096	0.00095	0.00094	1.285	1.543	0.800	0.0100
34	0.00105	0.00104	0.00102	0.00101	0.00100	0.00098	0.00097	0.00096	0.00095	1.285	1.543	0.800	0.0100
35	0.00175	0.00173	0.00170	0.00168	0.00166	0.00164	0.00162	0.00161	0.00159	1.285	1.543	0.800	0.0100
36	0.00253	0.00250	0.00247	0.00243	0.00240	0.00237	0.00235	0.00232	0.00230	1.285	1.543	0.800	0.0100
37	0.00333	0.00329	0.00324	0.00320	0.00316	0.00312	0.00309	0.00305	0.00302	1.285	1.543	0.800	0.0100
38	0.00407	0.00401	0.00396	0.00390	0.00386	0.00381	0.00376	0.00372	0.00368	1.285	1.543	0.800	0.0100
39	0.00464	0.00458	0.00451	0.00446	0.00440	0.00435	0.00430	0.00425	0.00421	1.285	1.543	0.800	0.0100
40	0.00504	0.00497	0.00491	0.00484	0.00478	0.00472	0.00467	0.00462	0.00457	1.285	1.543	0.800	0.0100
41	0.00527	0.00520	0.00513	0.00506	0.00500	0.00494	0.00488	0.00483	0.00478	1.285	1.543	0.800	0.0100
42	0.00529	0.00522	0.00515	0.00508	0.00502	0.00496	0.00490	0.00485	0.00480	1.285	1.543	0.800	0.0100
43	0.00514	0.00507	0.00500	0.00494	0.00488	0.00482	0.00476	0.00471	0.00466	1.285	1.543	0.800	0.0100
44	0.00492	0.00485	0.00478	0.00472	0.00466	0.00460	0.00455	0.00450	0.00445	1.285	1.543	0.800	0.0100
45	0.00477	0.00471	0.00464	0.00458	0.00453	0.00447	0.00442	0.00437	0.00433	1.285	1.543	0.849	0.0100
46	0.00486	0.00479	0.00472	0.00466	0.00460	0.00455	0.00450	0.00445	0.00440	1.285	1.543	0.863	0.0100

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur.1	Dur.2	Dur.3+	2029+
47	0.00516	0.00509	0.00502	0.00495	0.00489	0.00483	0.00478	0.00473	0.00468	1.285	1.543	0.870	0.0100
48	0.00565	0.00557	0.00549	0.00542	0.00535	0.00529	0.00523	0.00517	0.00512	1.285	1.543	0.876	0.0100
49	0.00628	0.00619	0.00611	0.00603	0.00595	0.00588	0.00581	0.00575	0.00569	1.285	1.543	0.887	0.0100
50	0.00699	0.00689	0.00679	0.00670	0.00662	0.00654	0.00647	0.00639	0.00633	1.285	1.543	0.887	0.0100
51	0.00763	0.00752	0.00741	0.00731	0.00722	0.00713	0.00705	0.00697	0.00690	1.285	1.543	0.886	0.0100
52	0.00802	0.00790	0.00779	0.00769	0.00759	0.00750	0.00741	0.00733	0.00725	1.285	1.543	0.892	0.0100
53	0.00819	0.00807	0.00796	0.00785	0.00775	0.00766	0.00757	0.00749	0.00741	1.285	1.543	0.902	0.0100
54	0.00832	0.00820	0.00808	0.00797	0.00787	0.00777	0.00768	0.00760	0.00752	1.285	1.543	0.909	0.0100
55	0.00859	0.00846	0.00834	0.00822	0.00812	0.00802	0.00792	0.00784	0.00775	1.285	1.543	0.918	0.0100
56	0.00907	0.00893	0.00880	0.00868	0.00857	0.00846	0.00836	0.00827	0.00818	1.285	1.543	0.933	0.0100
57	0.00971	0.00957	0.00943	0.00930	0.00918	0.00906	0.00896	0.00886	0.00876	1.285	1.543	0.946	0.0100
58	0.01046	0.01030	0.01015	0.01001	0.00988	0.00975	0.00964	0.00953	0.00943	1.285	1.543	0.955	0.0100
59	0.01119	0.01102	0.01086	0.01071	0.01057	0.01044	0.01031	0.01020	0.01009	1.285	1.543	0.962	0.0100
60	0.01199	0.01181	0.01163	0.01147	0.01132	0.01117	0.01104	0.01092	0.01080	1.285	1.543	0.971	0.0100
61	0.01290	0.01270	0.01251	0.01234	0.01217	0.01202	0.01188	0.01174	0.01162	1.285	1.543	0.982	0.0100
62	0.01384	0.01362	0.01341	0.01322	0.01305	0.01288	0.01273	0.01258	0.01245	1.285	1.543	0.993	0.0100
63	0.01476	0.01451	0.01428	0.01408	0.01389	0.01371	0.01355	0.01340	0.01325	1.285	1.543	0.997	0.0100
64	0.01570	0.01543	0.01518	0.01495	0.01475	0.01456	0.01439	0.01423	0.01407	1.285	1.543	1.000	0.0100
65	0.01665	0.01636	0.01609	0.01585	0.01563	0.01543	0.01524	0.01507	0.01491	1.238	1.424	1.000	0.0100
66	0.01771	0.01741	0.01713	0.01687	0.01664	0.01643	0.01624	0.01606	0.01590	1.191	1.306	1.000	0.0098
67	0.01896	0.01865	0.01836	0.01809	0.01784	0.01762	0.01741	0.01723	0.01705	1.144	1.187	1.000	0.0095
68	0.02034	0.02001	0.01971	0.01942	0.01916	0.01892	0.01870	0.01850	0.01832	1.097	1.069	1.000	0.0093
69	0.02220	0.02185	0.02152	0.02122	0.02094	0.02068	0.02044	0.02023	0.02003	1.050	0.950	1.000	0.0090
70	0.02483	0.02447	0.02411	0.02378	0.02347	0.02319	0.02293	0.02269	0.02248	1.050	0.950	1.000	0.0088
71	0.02807	0.02769	0.02732	0.02695	0.02662	0.02630	0.02602	0.02575	0.02552	1.050	0.950	1.000	0.0085
72	0.03152	0.03116	0.03077	0.03039	0.03003	0.02969	0.02937	0.02908	0.02882	1.050	0.950	1.000	0.0083
73	0.03490	0.03456	0.03419	0.03381	0.03343	0.03307	0.03273	0.03242	0.03214	1.050	0.950	1.000	0.0080
74	0.03829	0.03799	0.03766	0.03729	0.03691	0.03654	0.03618	0.03585	0.03555	1.050	0.950	1.000	0.0078
75	0.04167	0.04143	0.04113	0.04080	0.04043	0.04006	0.03970	0.03935	0.03903	1.050	0.950	1.000	0.0075
76	0.04497	0.04478	0.04453	0.04424	0.04391	0.04355	0.04319	0.04284	0.04250	1.050	0.950	1.000	0.0073
77	0.04811	0.04798	0.04779	0.04754	0.04725	0.04692	0.04657	0.04621	0.04587	1.050	0.950	1.000	0.0070
78	0.05130	0.05121	0.05107	0.05087	0.05062	0.05032	0.04998	0.04963	0.04929	1.050	0.950	1.000	0.0068

Age	Disability Annuitant Death Rate									Disability Death Rate Adjustment By Duration			Annual Improvement
	2021	2022	2023	2024	2025	2026	2027	2028	2029	Dur.1	Dur.2	Dur.3+	2029+
79	0.05504	0.05499	0.05489	0.05473	0.05451	0.05424	0.05392	0.05358	0.05323	1.050	0.950	1.000	0.0065
80	0.05992	0.05989	0.05982	0.05969	0.05949	0.05924	0.05894	0.05860	0.05824	1.050	0.950	1.000	0.0063
81	0.06603	0.06603	0.06597	0.06585	0.06568	0.06544	0.06515	0.06480	0.06443	1.050	0.950	1.000	0.0060
82	0.07327	0.07328	0.07323	0.07312	0.07295	0.07272	0.07242	0.07208	0.07169	1.050	0.950	1.000	0.0058
83	0.08117	0.08119	0.08114	0.08103	0.08086	0.08063	0.08033	0.07997	0.07957	1.050	0.950	1.000	0.0055
84	0.08914	0.08917	0.08913	0.08902	0.08884	0.08860	0.08829	0.08793	0.08751	1.050	0.950	1.000	0.0053
85	0.09679	0.09684	0.09681	0.09669	0.09651	0.09627	0.09596	0.09559	0.09516	1.050	0.950	1.000	0.0050
86	0.10448	0.10452	0.10450	0.10440	0.10423	0.10398	0.10366	0.10329	0.10285	1.050	0.950	1.000	0.0048
87	0.11329	0.11335	0.11334	0.11326	0.11310	0.11286	0.11254	0.11216	0.11172	1.050	0.950	1.000	0.0045
88	0.12449	0.12459	0.12461	0.12455	0.12442	0.12420	0.12389	0.12350	0.12305	1.050	0.950	1.000	0.0043
89	0.13871	0.13887	0.13895	0.13894	0.13883	0.13864	0.13835	0.13796	0.13749	1.050	0.950	1.000	0.0040
90	0.15526	0.15546	0.15555	0.15555	0.15546	0.15526	0.15497	0.15458	0.15409	1.050	0.950	1.000	0.0037
91	0.17388	0.17410	0.17423	0.17424	0.17416	0.17396	0.17367	0.17327	0.17276	1.050	0.950	1.000	0.0035
92	0.19362	0.19388	0.19403	0.19407	0.19400	0.19381	0.19352	0.19311	0.19260	1.050	0.950	1.000	0.0032
93	0.21369	0.21399	0.21417	0.21423	0.21418	0.21401	0.21372	0.21331	0.21279	1.050	0.950	1.000	0.0030
94	0.23373	0.23407	0.23428	0.23438	0.23435	0.23420	0.23392	0.23352	0.23300	1.050	0.950	1.000	0.0027
95	0.25362	0.25400	0.25425	0.25438	0.25438	0.25425	0.25400	0.25362	0.25311	1.050	0.950	1.000	0.0025
96	0.27283	0.27326	0.27355	0.27371	0.27375	0.27365	0.27343	0.27307	0.27259	1.050	0.950	1.000	0.0022
97	0.29054	0.29101	0.29134	0.29155	0.29162	0.29156	0.29137	0.29105	0.29060	1.050	0.950	1.000	0.0020
98	0.30609	0.30659	0.30697	0.30721	0.30733	0.30731	0.30717	0.30689	0.30648	1.050	0.950	1.000	0.0017
99	0.31911	0.31965	0.32006	0.32035	0.32051	0.32055	0.32045	0.32022	0.31987	1.050	0.950	1.000	0.0015
100	0.32954	0.33012	0.33057	0.33090	0.33111	0.33119	0.33115	0.33098	0.33069	1.050	0.950	1.000	0.0012
101	0.33219	0.33278	0.33327	0.33363	0.33388	0.33402	0.33403	0.33393	0.33372	1.050	0.950	1.000	0.0010
102	0.33480	0.33542	0.33593	0.33633	0.33663	0.33681	0.33689	0.33685	0.33671	1.050	0.950	1.000	0.0007
103	0.33748	0.33806	0.33860	0.33904	0.33938	0.33962	0.33975	0.33979	0.33972	1.050	0.950	1.000	0.0005
104	0.34034	0.34082	0.34133	0.34181	0.34220	0.34249	0.34268	0.34279	0.34280	1.050	0.950	1.000	0.0002
105	0.34342	0.34379	0.34423	0.34470	0.34513	0.34547	0.34573	0.34590	0.34599	1.050	0.950	1.000	0.0000
106	0.34672	0.34699	0.34733	0.34770	0.34810	0.34844	0.34871	0.34888	0.34897	1.050	0.950	1.000	0.0000
107	0.35028	0.35047	0.35071	0.35100	0.35132	0.35164	0.35190	0.35208	0.35216	1.050	0.950	1.000	0.0000
108	0.35412	0.35425	0.35442	0.35463	0.35487	0.35513	0.35537	0.35555	0.35564	1.050	0.950	1.000	0.0000
109	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.050	0.950	1.000	0.0000

## Disability and Survivor Assumptions

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
17	0.00067	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18	0.00058	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19	0.00053	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00050	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21	0.00050	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
22	0.00053	0.00000	0.00000	0.00010	0.00000	0.00000	0.00000
23	0.00059	0.00000	0.00000	0.00115	0.00000	0.00051	0.00000
24	0.00069	0.00000	0.00000	0.00218	0.00000	0.01125	0.00000
25	0.00081	0.00000	0.00000	0.00317	0.00000	0.02772	0.00000
26	0.00096	0.00000	0.00000	0.00412	0.00000	0.04839	0.01158
27	0.00114	0.00000	0.00000	0.00502	0.00000	0.07138	0.05431
28	0.00134	0.00000	0.00000	0.00584	0.00000	0.09463	0.08926
29	0.00155	0.00000	0.00000	0.00657	0.00000	0.11609	0.11643
30	0.00175	0.00000	0.00000	0.00720	0.00112	0.13388	0.13584
31	0.00195	0.00000	0.00000	0.00768	0.00786	0.14647	0.14755
32	0.00214	0.00000	0.00000	0.00800	0.01358	0.15290	0.15174
33	0.00232	0.00017	0.00000	0.00814	0.01822	0.15296	0.14892
34	0.00249	0.00076	0.00000	0.00808	0.02165	0.14749	0.14010
35	0.00267	0.00144	0.00000	0.00781	0.02376	0.13795	0.12661
36	0.00287	0.00214	0.00000	0.00735	0.02441	0.12605	0.10994
37	0.00309	0.00279	0.00000	0.00670	0.02355	0.11337	0.09167
38	0.00334	0.00326	0.00045	0.00591	0.02126	0.10124	0.07346
39	0.00361	0.00343	0.00107	0.00506	0.01788	0.09055	0.05677
40	0.00389	0.00323	0.00180	0.00428	0.01387	0.08172	0.04256
41	0.00416	0.00273	0.00260	0.00368	0.00974	0.07463	0.03133
42	0.00439	0.00207	0.00339	0.00329	0.00595	0.06875	0.02317
43	0.00461	0.00140	0.00408	0.00314	0.00284	0.06336	0.01784
44	0.00480	0.00084	0.00466	0.00319	0.00064	0.05793	0.01488
45	0.00499	0.00048	0.00513	0.00338	0.00000	0.05229	0.01385
46	0.00523	0.00039	0.00546	0.00362	0.00000	0.04629	0.01440
47	0.00555	0.00057	0.00556	0.00382	0.00000	0.03995	0.01592
48	0.00595	0.00097	0.00531	0.00392	0.00062	0.03362	0.01761
49	0.00640	0.00155	0.00476	0.00387	0.00208	0.02760	0.01876
50	0.00680	0.00218	0.00402	0.00366	0.00364	0.02221	0.01906
51	0.00709	0.00266	0.00327	0.00331	0.00503	0.01742	0.01826
52	0.00729	0.00281	0.00266	0.00292	0.00601	0.01286	0.01617
53	0.00749	0.00252	0.00229	0.00262	0.00630	0.00802	0.01253
54	0.00776	0.00196	0.00217	0.00241	0.00567	0.00281	0.00756
55	0.00811	0.00139	0.00226	0.00226	0.00000	0.00000	0.00000
56	0.00847	0.00097	0.00257	0.00208	0.00000	0.00000	0.00000
57	0.00875	0.00085	0.00296	0.00188	0.00000	0.00000	0.00000
58	0.00892	0.00106	0.00323	0.00171	0.00000	0.00000	0.00000
59	0.00892	0.00160	0.00321	0.00157	0.00000	0.00000	0.00000

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
60	0.00872	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
61	0.00831	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
62	0.00771	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
63	0.00699	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
64	0.00621	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.00543	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
66	0.00470	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
67	0.00404	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
68	0.00349	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
69	0.00304	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.00269	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
71	0.00244	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
72	0.00227	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
73	0.00218	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
74	0.00215	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
75	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
76	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
77	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
78	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
79	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
80	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
81	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
82	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
83	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
84	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
85	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
86	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
87	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
88	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
89	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
90	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
91	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
92	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
93	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
94	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
95	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
96	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
97	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
98	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
99	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
101	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
102	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
103	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Age	Disability Retirement Rate	Non-Death Termination of Disability			Survivor Spouse Remarriage		
		Duration 1	Duration 2	Duration 3+	Duration 1	Duration 2	Duration 3+
104	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
105	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
106	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
107	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
108	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
109	0.00219	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

### Survivor and Sick Leave Assumptions

Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
17	0.29548	0.19543	1.00000	0	0.0000	0.0000
18	0.29548	0.19543	1.00000	1	0.0000	0.0001
19	0.29548	0.19543	1.00000	2	0.0000	0.0008
20	0.29548	0.19543	1.00000	3	0.0000	0.0014
21	0.29548	0.19543	1.00000	4	0.0000	0.0018
22	0.29548	0.19543	1.00000	5	0.0326	0.0021
23	0.29548	0.19543	1.00000	6	0.0361	0.0023
24	0.29548	0.19543	1.00000	7	0.0400	0.0024
25	0.29548	0.19543	1.00000	8	0.0442	0.0024
26	0.29548	0.19543	1.00000	9	0.0489	0.0022
27	0.29548	0.24052	1.00000	10	0.0540	0.0020
28	0.29548	0.27834	1.00000	11	0.0596	0.0018
29	0.29548	0.30892	1.00000	12	0.0658	0.0016
30	0.29548	0.33231	1.00000	13	0.0727	0.0017
31	0.29548	0.34860	1.00000	14	0.0804	0.0019
32	0.29548	0.35803	1.00000	15	0.0889	0.0024
33	0.29548	0.36110	1.00000	16	0.0983	0.0031
34	0.29548	0.35889	1.00000	17	0.1081	0.0039
35	0.29548	0.35317	1.00000	18	0.1181	0.0046
36	0.29548	0.34608	1.00000	19	0.1276	0.0052
37	0.29548	0.33949	1.00000	20	0.1358	0.0055
38	0.29548	0.33498	1.00000	21	0.1425	0.0055
39	0.29548	0.33323	1.00000	22	0.1474	0.0052
40	0.29548	0.33413	1.00000	23	0.1518	0.0050
41	0.29548	0.33721	1.00000	24	0.1575	0.0051
42	0.29548	0.34114	1.00000	25	0.1666	0.0056
43	0.29548	0.34413	1.00000	26	0.1810	0.0067
44	0.29548	0.34569	1.00000	27	0.2014	0.0082
45	0.29548	0.34665	1.00000	28	0.2274	0.0101
46	0.29548	0.34838	1.00000	29	0.2573	0.0119
47	0.29548	0.35180	1.00000	30	0.2886	0.0125
48	0.29548	0.35672	1.00000	31	0.3189	0.0150
49	0.29548	0.36201	1.00000	32	0.3464	0.0175
50	0.30612	0.36565	1.00000	33	0.3708	0.0200
51	0.31765	0.36595	1.00000	34	0.3928	0.0225
52	0.32974	0.36261	1.00000	35	0.4133	0.0250
53	0.34193	0.35543	1.00000	36	0.4333	0.0275
54	0.35329	0.34554	1.00000	37	0.4528	0.0300
55	0.36234	0.33660	1.00000	38	0.4715	0.0350
56	0.36752	0.33063	1.00000	39	0.4893	0.0400
57	0.36786	0.32829	1.00000	40	0.5064	0.0450
58	0.36497	0.32695	1.00000	41	0.5230	0.0500

Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
59	0.36143	0.32490	1.00000	42	0.5391	0.0550
60	0.35936	0.32101	1.00000	43	0.5548	0.0600
61	0.35946	0.31456	1.00000	44	0.5703	0.0650
62	0.36126	0.30678	1.00000	45	0.5868	0.0700
63	0.36335	0.30075	1.00000	46	0.6056	0.0750
64	0.36421	0.29811	1.00000	47	0.6280	0.0800
65	0.36334	0.29729	0.99759	48	0.6551	0.0850
66	0.36109	0.29503	0.99382	49	0.6876	0.0900
67	0.35721	0.29252	0.98924	50	0.7257	0.0950
68	0.35104	0.29194	0.98273	51	0.7693	0.1000
69	0.34322	0.29422	0.97771	52	0.8173	0.1000
70	0.33520	0.29782	0.97666	53	0.8688	0.1000
71	0.32801	0.30023	0.97853	54	0.9229	0.1000
72	0.32154	0.30001	0.98028	55	0.9791	0.1000
73	0.31508	0.29657	0.97993	56	1.0371	0.1000
74	0.30824	0.28943	0.97828	57	1.0967	0.1000
75	0.30107	0.27865	0.97676	58	1.1578	0.1000
76	0.29374	0.26594	0.97565	59	1.2203	0.1000
77	0.28568	0.25473	0.97256	60+	1.2843	0.1000
78	0.27539	0.24713	0.96398			
79	0.26170	0.24254	0.95026			
80	0.24481	0.23828	0.93548			
81	0.22623	0.23179	0.92409			
82	0.20774	0.22264	0.91826			
83	0.19086	0.21208	0.91875			
84	0.17622	0.20209	0.92328			
85	0.16378	0.19435	0.92942			
86	0.15264	0.18602	0.93199			
87	0.14125	0.17865	0.92536			
88	0.12860	0.17022	0.91046			
89	0.11492	0.15896	0.89362			
90	0.10135	0.14445	0.88188			
91	0.08926	0.12757	0.88075			
92	0.07953	0.10982	0.89101			
93	0.07228	0.09264	0.90885			
94	0.06713	0.07700	0.92865			
95	0.06362	0.07290	0.94770			
96	0.06138	0.06984	0.96479			
97	0.06007	0.06754	0.97875			
98	0.05942	0.06570	0.98920			
99	0.05922	0.06413	0.99667			
100	0.05922	0.06413	1.00000			
101	0.05922	0.06413	1.00000			
102	0.05922	0.06413	1.00000			



Age	Fraction of Annuitants with a Reduced Benefit		Actual to Predicted Survivors	Service	Years Sick Leave at Retire.	
	Non-Disab.	Disability			Non-Disab.	Disability
<b>103</b>	0.05922	0.06413	1.00000			
<b>104</b>	0.05922	0.06413	1.00000			
<b>105</b>	0.05922	0.06413	1.00000			
<b>106</b>	0.05922	0.06413	1.00000			
<b>107</b>	0.05922	0.06413	1.00000			
<b>108</b>	0.05922	0.06413	1.00000			
<b>109</b>	0.05922	0.06413	1.00000			

**Table 8: Plan Provisions**

**CSRS and FERS Plan Summaries**

<b>Plan Provision</b>	<b>CSRS Basic Benefit</b>	<b>FERS Basic Benefit</b>
<b>Regular Annuity</b>	Guaranteed annuity based on service and salary.	Guaranteed annuity based on service and salary.
<b>Alternative Annuity</b>	Lump-sum payment generally available only to non-disability retirees with life-threatening or critical condition and only with spousal consent.	Lump-sum payment generally available only to non-disability retirees with life-threatening or critical condition and only with spousal consent.
<b>Coverage</b>	All employees hired prior to January 1, 1984, except for those who transferred to FERS during an open season.	All employees who were first employed in a covered position after December 31, 1983, or who were hired after December 31, 1986, with less than 5 years of creditable civilian service, or who transferred to FERS during an open season.
<b>Employee Contributions</b>	7.0% of total pay (does not apply to Special Employee groups).	Contribution for FERS basic benefit plus Social security taxes generally equals: <ul style="list-style-type: none"> <li>• FERS: 7.0%</li> <li>• FERS-RAE: 9.3%</li> <li>• FERS-FRAE: 10.6%</li> </ul> Special employee groups contribute an additional 0.5% of pay.
<b>Refund Option</b>	Withdrawal of contributions plus interest is allowed when leaving Federal employment. Interest is paid only to an employee with at least one year of covered service (but less than five years of total creditable civilian service). Contributions may be redeposited after reemployment with the Federal government for annuity credit.	Withdrawal of contributions plus interest is allowed when leaving Federal employment (employee must have more than one year of covered service to accrue interest). Effective for 2010 forward, contributions may be redeposited after reemployment with the Federal government for annuity credit.

<b>Plan Provision</b>	<b>CSRS Basic Benefit</b>	<b>FERS Basic Benefit</b>
<b>COLAs</b>	COLAs are paid annually to all annuitants. COLAs equal the rate of inflation as measured by the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).	COLAs are paid annually to retirees over age 62, to disability benefit recipients (after one year of payments), to survivor benefit recipients, and to certain other special groups. COLA is based on the Consumer Price Index (CPI-W) as follows: <ul style="list-style-type: none"> <li>• For CPI of 0 to 2%, COLA is CPI;</li> <li>• For CPI of 2 to 3%, COLA is 2%;</li> <li>• For CPI of 3% or more, COLA is CPI minus 1%</li> </ul>

## Retirement Benefits

Qualifications	CSRS Basic Benefit	FERS Basic Benefit
<b>Regular Retirement</b>	<b>Unreduced Benefits:</b> 55 years old with 30+ years of service; 60 years old with 20+ years of service; 62 years old with 5+ years of service.	<b>Unreduced Benefits:</b> MRA* with 30+ years of service; 60 years old with 20+ years of service; 62 years old with 5+ years of service. * See MRA Table below
	<b>Reduced Benefits:</b> Not Applicable	<b>Reduced Benefits:</b> MRA with 10+ years of service. Reduction will be 5% per year for each year payment begins below age 62.
<b>Deferred Retirement</b> (delayed benefit payments)	With 5+ years of service, benefit begins at age 62.	With 5+ years of service, benefit begins at age 62. With 10+ years of service, may elect to begin at MRA or no later than age 62. If age/service does not meet MRA/30 or 60/20 at commencement, reduction will be 5% per year for each year payment begins below age 62.
<b>Involuntary / Early Retirement</b> (when applicable)	<b>Unreduced Benefits:</b> Not applicable	<b>Unreduced Benefits:</b> Any age with 25+ years of service; OR Age 50+ with 20+ years of service.
	<b>Reduced Benefits:</b> Any age with 25+ years of service; Or Age 50 with 20+ years of service. Reduction is 2% per year for each year payment begins before age 55.	<b>Reduced Benefits:</b> Not applicable; however, special retirement supplement does not begin until MRA.
<b>Amount Of Annuity</b>	A retiree's annuity is based on an average of the retiree's highest three consecutive years of basic pay (high-three average salary =HT) and is calculated as follows:  (1.50% x HT x first 5 years) PLUS (1.75% x HT x second 5 years) PLUS (2.00% HT x all years of service over 10 years)	A retiree's annuity is based on an average of the retiree's highest three consecutive years of basic pay in the Federal career (high-three average salary = HT) and is calculated as follows:  Generally: (1.0% x HT x # years of service)

Qualifications	CSRS Basic Benefit	FERS Basic Benefit
		Age 62+ with 20+ years of service: (1.1 % x HT x # years of service)
<b>Special Retirement Supplement</b>	Not available	At the MRA with 30+ years of service OR at age 60 with 20+ years of service, payable (subject to an earnings test) until Social Security benefits are payable at age 62 (approximates the portion of a full-career Social Security benefit earned while under FERS); only payable when employee receives an immediate annuity.

**Disability Benefits**

<b>Plan Provision</b>	<b>CSRS Basic Benefit</b>	<b>FERS Basic Benefit</b>
<b>Qualifications</b>	<p>An employee must have 5 or more years of creditable civilian service. An employee must be unable to do his/her job and must not refuse a suitable vacancy within the agency in the same commuting area at the same grade or pay level as the current position. Disability benefits will end if the employee recovers from the disabling condition or earns more than 80% of the current salary of the position from which retired. Disabled employees may be required at times to prove continued disability.</p>	<p>An employee must have 18+ months of creditable civilian service and must apply for or show ineligibility for Social Security benefits. An employee must be unable to do his/her job and must not refuse a suitable vacancy within the agency in the same commuting area at the same grade or pay level as the current position. Disability benefits will end if the employee recovers from the disabling condition or earns more than 80% of the current salary of the position from which retired. Disabled employees may be required at times to prove continued disability.</p>
<b>Amount Of Benefits</b>	<p>Benefits are equal to the lesser of (1) 40% of high-three average salary or (2) annuity computed according to the general formula after first increasing the time base as if the employee worked to age 60, unless actual earned annuity is greater.</p>	<p>Benefits differ depending on how many years an employee is disabled. During the first year of disability, FERS pays 60% of an employee's high-three average salary minus 100% of any Social Security benefits received. No COLAs are paid during this year.</p> <p>During the second year and any additional years of disability until an employee reaches age 62, the employee will receive 40% of his/her high-three average salary minus 60% of any Social security benefits received. COLAs are paid for these years.</p> <p>FERS disability benefits are recomputed at age 62 to equal the individual's non-disability benefit, including credit for the period the individual was receiving disability benefits, with the average salary</p>

Plan Provision	CSRS Basic Benefit	FERS Basic Benefit
		<p>increased by all FERS COLAs that were effective during the periods of disability. Whenever the individual's earned benefit based on years of service and average salary provide a higher benefit than that payable under the disability provisions, the person is entitled to the earned rate.</p>

## Survivor Benefits

Plan Provision	CSRS Basic Benefit	FERS Basic Benefit
<b>Qualifications</b>	Eligible survivors of an employee may receive benefits if the employee had at least 18 months of creditable civilian service. Eligible survivors may include current and former spouses and children who meet certain age and/or length of marriage requirements.	Eligible survivors of an employee may receive benefits if the employee had at least 18 months of creditable civilian service. Eligible survivors may include current and former spouses and children who meet certain age and/or length of marriage requirements.
<b>Amount Of Benefits</b>	Survivor benefits are based on the relationship of the survivor and are calculated as follows:	Survivor benefits are based on the relationship of the survivor and the employee's length of Federal service and are calculated as follows:
Spouse of an employee who dies	55% of the disability annuity that would have been payable if the employee had retired on the date of death;	With 18 months to 10 years of service, lump-sum payment only; in 2022 the amount is \$37,055.54 plus the LARGER of (1) 50% of the employee's annual salary at death OR (2) 50% of the employee's HT;  With 10+ years of service, lump sum payment as above plus annuity equal to 50% of the employee's accrued basic benefit.
Spouse of an annuitant who dies	Up to 55% of the retiree's annuity, depending on elected survivor benefit;	50% (or 25% if jointly elected by employee and spouse) of the retiree's annuity amount plus a special retirement supplement if the spouse is younger than age 60 and not yet eligible for Social Security benefits;
Spouse of an employee who dies after leaving Federal service but before annuity payments begin	Refund of the deceased's retirement contributions only; no other benefits.	With less than 10 years of service, refund of contributions;  With 10+ years of service without a refund of contributions, 50% of the employee's accrued basic benefit beginning when the employee would have reached age 62.



<b>Plan Provision</b>	<b>CSRS Basic Benefit</b>	<b>FERS Basic Benefit</b>
Child(ren)	Varies according to the number of children and whether there is a surviving parent who was married to the employee.	Varies according to the number of children and whether there is a surviving parent who was married to the employee, reduced by Social Security benefits the child(ren) are entitled to receive.
<b>Annuity Reduction to Cover Survivor Benefits</b>	<p>A retiree's annuity will be reduced as follows to provide for a survivor benefit:</p> <p>First \$3,600 reduced 2.5%;</p> <p>Amounts over \$3,600 reduced 10%.</p> <p>Note: The 55% spouse's benefit is based on the amount of the annuity before this reduction is taken.</p>	<p>A retiree's annuity will be reduced 10% (or 5%) of the entire annual benefit in order to provide for a survivor benefit unless waived by both the retiree and the spouse.</p> <p>Note: The 50% (or 25% if jointly elected by employee and spouse) spouse's benefit is based on the amount of the annuity before this reduction is taken.</p>

#### **Minimum Retirement Age (MRA) for FERS Basic Benefit**

<b>Birth Year</b>	<b>MRA</b>
Before 1948	55
1948	55 and 2 months
1949	55 and 4 months
1950	55 and 6 months
1951	55 & and 8 months
1952	55 and 10 months
1953-1964	56
1965	56 and 2 months
1966	56 and 4 months
1967	56 and 6 months
1968	56 and 8 months
1969	56 and 10 months
1970 and after	57



## U.S. Office of Personnel Management

Healthcare and Insurance, Office of the Actuaries  
1900 E Street NW, Washington DC 20415

[OPM.gov](https://www.opm.gov)