VALUATION OF THE MILITARY RETIREMENT SYSTEM

AS OF

SEPTEMBER 30, 2017

DoD Office of the Actuary
Revised April 2019

ACTUARIAL CERTIFICATION

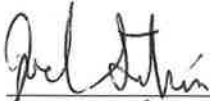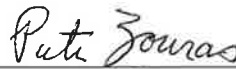This report on the valuation of the Military Retirement System as of September 30, 2017, has been prepared in accordance with generally accepted actuarial principles, standards, and practices. In preparing the report, we have relied upon information maintained by other Department of Defense activities regarding plan provisions, finances, and participants. The purpose of the actuarial valuation documented in this report is to develop actuarial liability and funding amounts to support the Secretary of Defense and the DoD Board of Actuaries ("Board") in meeting the requirements of Chapter 74, Title 10, United States Code. Use of these results for other purposes may not be appropriate. Any rates or parameters included in this report should not be used for other purposes without complete comprehension of the underlying derivation. Please contact the DoD Office of the Actuary for further information.

We have performed the valuation using methods and assumptions approved by the Board. In general, the decrement rates used in the valuation are based on Military Retirement System experience. The annual, long-term economic assumptions include a 2.75% rate of inflation, a 3.25% across-the-board salary increase, and a 5.00% interest rate. Unless otherwise stated, normal cost percentages (NCPs) shown in this report do not reflect budgetary reductions ("sequestration").
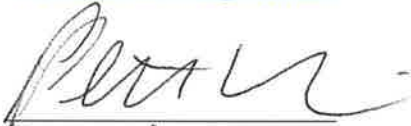
The actuarial methods and assumptions used in the preparation of this report are reasonable, and the valuation results present a fair picture of the financial condition of the Military Retirement System for purposes of meeting the requirements of Chapter 74, Title 10, United States Code. The Blended Retirement System (BRS) enacted in the National Defense Authorization Act for FY 2016, as amended, is reflected in this report. Future report results may differ significantly from those presented and documented in this report, for reasons that include uncertainty regarding how behavior will change under BRS.

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* Meets the qualification standards of the American Academy of Actuaries, and continuing professional development requirements of the Society of Actuaries, to render the actuarial opinion referenced above.

USE OF THIS REPORT

- **Intended Audience**: Those seeking actuarial information about the Military Retirement System (MRS) or financial information about the Military Retirement Fund (MRF).

- **Report Limitations**: Stated in *Actuarial Certification* section of this report.

*** Economic, demographic, and political forces impact the actuarial projections and valuation results and cannot be predicted precisely over long periods of time. ******

- For a high-level summary and bottom line results, refer to the *General Information and Key Results* section. Revisions to Dec. 2018 report can be found on pages 31 and 32.

- For those new to the MRS, the main text and associated tables/figures can be found in the central section of this report (*Valuation of the MRS*).

- For those familiar with the MRS, the appendices and supplementary information provide additional technical and background information about DoD Office of the Actuary's work.

- In various places throughout this report, figures may not add exactly due to rounding.

- Many references to "active duty" personnel throughout the report also include full-time support reservists. Similarly, many references to "reservists" or "selected reservists" exclude full-time support reservists.

ABBREVIATIONS AND COMMON TERMS

AEAN	Aggregate Entry-Age Normal cost method
Board	DoD Board of Actuaries
BRS	Blended Retirement System
COLA	Cost-of-Living Adjustment
CPI	Consumer Price Index
CSB/Redux	Career Status Bonus Retirement System combined with the Redux System
DIC	Dependency and Indemnity Compensation
DoD	U.S. Department of Defense
FY	Fiscal Year
GORGO	Actuarial Projection Model used by DoD OACT
MRF / MRS	Military Retirement Fund / Military Retirement System
NCP	Normal Cost Percentage
P.L.	Public Law
RSFPP	Retired Serviceman's Family Protection Plan
OACT	DoD Office of the Actuary
OMB	U.S. Office of Management and Budget
PEBD	Pay Entry Base Date
SBP	Survivor Benefit Plan
Services	Army, Navy, Air Force, Marines
SSIA	Special Survivor Indemnity Allowance
UFL	Unfunded Liability
U.S.C.	United States Code
VA	U.S. Department of Veterans Affairs

GENERAL INFORMATION AND KEY RESULTS
Military Retirement System – For Fiscal Year ending September 30, 2017

1. **Name of Plan:**
Military Retirement System

2. **Name and Address of Plan Sponsor:**
> Department of Defense
> 1400 Defense Pentagon
> Washington, DC 20301-1400
> Phone: (703) 571-3343
> Website: https://www.defense.gov/

3. **Type of Plan:**
> Defined Benefit

4. **Establishment of Funding Arrangement:**
> Public Law 98-94 (currently Chapter 74 of Title 10, U.S.C.)

5. **Administrative Costs:**
> Not borne by the Plan

6. **Funding Arrangement:**
> Trust Fund

7. **Actuarial Cost Method:**
> Aggregate Entry-Age Normal (AEAN)

8. **Oversight:**
> DoD Board of Actuaries. The Board approves methods and assumptions used in the valuation. The current members of the Board are:
>
> Mr. James F. Verlautz, Chairman
> Ms. Marcia A. Dush
> Mr. John H. Moore

9. **Plan Participant Information at *End of Plan Year*:**

	Members (in 000s)	Annualized Pay ($ in billions)
Active Duty and Full-time Reservists:	1,369	$57.87
Selected Drilling Reservists:	732	$7.87
Non-Selected Reservists – w/ 20 years:	207	-N/A-
Nondisability Retirees:	1,878	$52.08
Disability Retirees:	119	$1.61
Surviving Families:	325	$3.93

*** Only retirees and surviving families are paid from the Military Retirement Fund. ***

GENERAL INFORMATION AND KEY RESULTS (Continued)
Military Retirement System – For Fiscal Year ending September 30, 2017

10. Valuation Input Data:

Extracts from files maintained by the Defense Manpower Data Center (DMDC), and files submitted by the Defense Finance and Accounting Service (DFAS)

11. Retirement Criteria:

A. Nondisabled Retirement from Active Duty – Immediate, after 20 years of service

B. Disabled Retirement – Immediate, generally with no years of service requirement

C. Nondisabled Retirement from Reserve Duty - Deferred to age 60 (or earlier in some cases) after 20 years of creditable service

12. Actuarial Assumptions:

A. <u>Economic</u>:

(Annual Rates)

1) Inflation – 2.75%

2) Salary – 3.25% (excludes promotion and longevity increases)

3) Interest – 5.00%

B. <u>Demographic</u>:

1) Mortality and other assumptions: Based on Plan experience.

2) Mortality Improvement: Based on adjusted U.S. general population and projected by the Society of Actuaries (SOA).

3) Percent of a Typical New Entrant Cohort Serving 20 Or More Years:
Full-time (FT) personnel: 19% ||| Part-time (PT) personnel: 14%

13. Accounting Results *During Fiscal Year* 2017:

($ in billions)

A. Benefits paid to participants: $ 57.8

B. Contributions from Services: $ 18.3

C. Contributions from Treasury: $ 88.0

D. Investment Income: $ 21.2

14. Actuarial Results at *End of Fiscal Year* 2017:

($ in billions)

A. Present Value of Future Benefits: $ 1,748.1

B. Actuarial Accrued Liability: $ 1,502.0

C. Actuarial Value of Assets: $ 734.1

D. Unfunded Accrued Liability: $ 767.9

E. Funded Ratio (C./B.): 49%

15. Normal Cost Percentages Applied to Fiscal Year 2019 Basic Pay:

	DoD	**Treasury**	**Total**
Full-time:	30.4%	13.6%	44.0%
Part-time:	24.7%	3.6%	28.3%

TABLE OF CONTENTS FOR THE SEPTEMBER 30, 2017, VALUATION

TABLE OF CONTENTS FOR THE SEPTEMBER 30, 2017, VALUATION
(Continued)

SUMMARY OF CHANGES
FOR THE SEPTEMBER 30, 2017, VALUATION

Changes in Actuarial Assumptions

At its July 2017 meeting, the DoD Board of Actuaries approved the following changes for the September 30, 2017, valuation. Notes and transcript of the meeting can be found in the FACA database: https://www.facadatabase.gov/FACA/apex/FACAPublicAgencyNavigation. Please contact Kathleen Ludwig at OACT if you need any help with the FACA website.

Economic Assumptions (Long-Term Interest)

The Board approved a new long-term interest rate assumption of 5.0% (vs. 5.25%). The new interest assumption increases the full-time DoD NCP by 2.2 percentage points, and increases the part-time DoD NCP by 2.1 percentage points. The change leads to an actuarial loss of $60.2 billion (or 4.0%) to the Fund. For the September 30, 2017, valuation, this assumption is described in Appendices D and F.

Changes in Benefits

National Defense Authorization Act for FY 2018 (NDAA 2018)

The SSIA was extended to be a permanent benefit, with annual COLA increases. This change is estimated to increase the full-time and part-time DoD NCPs by approximately 0.1 percentage point and lead to an actuarial loss of approximately $8 billion.

SUMMARY OF ANTICIPATED CHANGES
FOR THE SEPTEMBER 30, 2018, VALUATION

Changes in Actuarial Assumptions

At its July 2018 meeting, the DoD Board of Actuaries approved the following changes for the September 30, 2018, valuation. Notes and transcript of the meeting can be found in the FACA database: https://www.facadatabase.gov/FACA/apex/FACAPublicAgencyNavigation. Please contact Kathleen Ludwig at OACT if you need any help with the FACA website.

Survivor Rates

The Board approved updates to the survivor rates. The net effect of the new rates is a -0.2% change to the full-time DoD NCP, and a -0.2% change to the part-time DoD NCP. The change led to an actuarial gain of $14.3 billion (or 1.0%) to the Fund. For the September 30, 2017, valuation, these assumptions are described in Appendix I.

Permanent Disability Retiree Rates

The Board approved updates to the permanent disability retiree rates. The net effect of the new rates is no change (to the 3rd decimal place) to the full- and part-time DoD NCPs, and decreases the accrued liability by $2.4B (or 0.2%). For the September 30, 2017, valuation, these assumptions are described in Appendix I.

Military Mortality Improvement Factors

The Board approved the use of mortality improvement factors based on military data using methods and assumptions underlying the Society of Actuaries' recent mortality improvement scales. They result in a +0.1% change to the full-time DoD NCP, and a -0.1% change the part-time DoD NCP. The change led to an actuarial gain of $2.3 billion (or 0.2%) to the Fund. For the September 30, 2017, valuation, mortality improvement factors are described in Appendix J.

Male/Female Adjustment Factors

The Board approved the use of new male/female adjustment factors which model the effect of expected future increases in the retiree population's percent female. They result in no change (to the 3rd decimal place) to the full- or part-time DoD NCPs, and led to an actuarial loss of $3 billion (or 0.2%) to the Fund. Since the factors are new, they are not described in this year's valuation. In next year's report, the male/female adjustment factors will be discussed in Appendix J.

Blended Retirement System Opt-in Rates

The Board approved the use of updated BRS Opt-In rate assumptions based on reported data through May / June 2018. The new rates led to a +1.0% change to the full-time DoD NCP, and a +0.2% change to the part-time DoD NCPs, and led to an actuarial loss of $8.2 billion (or 0.6%) to the Fund. For the September 30, 2017, valuation, these assumptions are described in Appendix F.

VALUATION OF THE MILITARY RETIREMENT SYSTEM

Introduction

The Military Retirement System provides benefits for retirement from active duty and from the reserves, disability retirement benefits, optional survivor coverage, and a special compensation program for certain disabled retirees. A detailed description of benefits can be found in Appendix A, and a history of the system is in Appendix B.

Public Law (P.L.) 98-94 (currently Chapter 74 of Title 10, U.S.C.) established that an aggregate entry-age normal cost funding method for the Military Retirement System starting October 1, 1984. Under this law, DoD pays the normal cost of the system and the Treasury Department makes payments from general revenues to amortize the unfunded liability, including any gains or losses that have arisen from assumption or benefit changes, or from actual experience differing from assumed experience. P.L. 108-136 modified this process such that DoD's normal cost contribution excludes the cost due to Concurrent Receipt benefits (refer to Appendix A for more information on Concurrent Receipt provisions). Treasury's total contribution includes an additional amount to fund the normal cost for Concurrent Receipt benefits.

P.L. 98-94 also established an independent three-member DoD Retirement Board of Actuaries who were appointed by the President. The Board is required to review valuations of the Military Retirement System; to determine the method of amortizing unfunded liabilities; to report annually to the Secretary of Defense; and to report to the President and the Congress on the status of the Military Retirement Fund at least every four years. The DoD Office of the Actuary provides technical and administrative support to the Board. P.L. 110-181 eliminated the Retirement and Education Benefits Boards, and created a new single DoD Board of Actuaries appointed by the Secretary of Defense. Board duties with respect to the Retirement and Education Benefits Funds are similar, and the new law expands the Board's responsibilities to include oversight of any other Fund the Secretary of Defense deems necessary.

The terms of the Board members are fifteen years and a member can be removed only for misconduct or failure to perform the duties of the office. The current (as of the July 2017, public meeting) Board members are Mr. James Verlautz (Chairman), Ms. Marcia Dush, and Mr. John Moore. The DoD Chief Actuary is the Executive Secretary for the Board.

Military retired pay is based on "basic pay." This is the principal element of military compensation that all members receive; however, it is not analogous to private or public sector salaries for comparative purposes. Reasonable comparisons can be made to Regular Military Compensation (RMC). RMC is the sum of (1) basic pay, (2) the housing allowance, which varies by grade, location, and dependency status, (3) the subsistence allowance and, (4) the tax advantages accruing to allowances because they are not subject to federal income tax. Consequently, comparisons of military retired pay to other pension systems should recognize the relationship to RMC rather than to basic pay only. Appendix A contains a more complete description of this topic.

Valuation Data and Procedure

The valuation input data were extracted from files maintained by the Defense Manpower Data Center (DMDC). Data on individual retirees and survivors come from official files submitted by the Defense Finance and Accounting Service (DFAS). Active data are obtained from the Active

Component Common Personnel Data System (RCCPDS) Master File. The DoD Office of the Actuary (OACT) reviews the data for reasonableness and consistency against figures provided by the DoD Comptroller, but does not audit the data and relies on the file suppliers for its accuracy and comprehensiveness.

Where applicable, dollar amounts include the subsequent January 1st, pay raise. These totals are summarized in Table 1.

TABLE 1

INITIAL ACCOUNTING FIGURES AS OF SEPTEMBER 30

	2017	2016
Total Active Duty Personnel + Full-Time Reservists	1,369,314	1,363,939
Total Annualized Basic Pay	$57.87 billion	$56.47 billion
BRS Non-Opt-In (estimated, see Note below)	506,966	570,161
Total Annualized Basic Pay	$30.32 billion	$32.18 billion
BRS Opt-In (estimated, see Note below)	862,348	793,778
Total Annualized Basic Pay	$27.55 billion	$24.29 billion
Total Selected Drilling Reservists	732,150	735,062
Total Annualized Basic Pay	$7.87 billion	$7.70 billion
BRS Non-Opt-In (estimated, see Note below)	529,981	546,184
Total Annualized Basic Pay	$6.25 billion	$6.25 billion
BRS Opt-In (estimated, see Note below)	202,169	188,878
Total Annualized Basic Pay	$1.62 billion	$1.45 billion
Total Non-Selected Reservists (with 20 years)	206,861	212,484
Total Annualized Basic Pay	-N/A-	-N/A-
Total Number of Nondisability Retirees	1,878,351	1,873,721
Total Annualized Retired Pay	$52.08 billion	$51.62 billion
Total Number of Disability Retirees	118,662	116,147
Total Annualized Retired Pay	$1.61 billion	$1.58 billion
Total Number of Surviving Families	283,262	286,730
Total Annualized Survivor Annuities	$3.68 billion	$3.74 billion
Total Number of SSIA Survivors	66,703	64,616
Total Annualized	$248 million	$208 million

Note: Personnel and pay allocations between those expected to opt-in to the Blended Retirement System (BRS) and those not expected to opt-in, are based on assumptions, not actual data. Actual opt-in allocations may prove different than these assumptions and won't be known until after the Open Season for opt-in elections, which is scheduled for calendar year 2018.

Some amounts do not reflect benefit increases described in Appendix A. Costs, liabilities, and outlays in this report, however, reflect these benefit increases unless otherwise stated. Only retirees and survivors are paid from the Military Retirement Fund. There is overlap between the Surviving Families and Special Survivor Indemnity Allowance (SSIA) counts; some people are in both.

Population and pay projections are generated by an actuarial projection model (GORGO[1]). GORGO is a deterministic model; use of a deterministic model assumes the average outcome will occur annually over a period of time. When projecting a large population such as the military, the law of large numbers manages certain risks.

Valuation results reflect additional minor adjustments to the projection made outside of GORGO. Further, the data on active duty personnel and drilling reservists are grouped into cells by age and number of years of service. Each cell contains the number and the average basic pay for personnel with that particular combination of age and length of service. Data on the retired population and surviving families are grouped into cells by age, and each cell contains the number and total net annualized retired pay or survivor annuity.

Separate data arrays are maintained in GORGO for each of the population categories listed in Table 2. These data arrays are displayed in Appendix C.

In GORGO, these starting populations are projected year by year into the future. Each year personnel are moved from one population category to another (e.g., from active to retired, or dropped from the system altogether) by means of decrement rates such as withdrawal, nondisability retirement, temporary disability, permanent disability, transfer, death with and without survivors, etc. The basic pay scale is assumed to increase at the valuation across-the-board salary increase assumption. Basic pay is also increased by individual promotion and longevity increases. Generally, retired pay and survivor annuities are increased by the valuation cost-of-living adjustments (COLA) assumption each year for retirees and survivors who receive a full COLA. At the end of each year, the number of people and the amounts paid in basic pay and benefits are saved, and the population is aged. After 100 years, when a relatively small portion (less than 0.02 percent) of basic pay and benefit expenditures are projected, the present values of the series of future benefit payments and future basic pay outlays are determined, using the valuation interest rate. Because no new entrants come into the system, the projection is said to be "closed group."

There is also an option in GORGO for an "open group" projection in which new entrants are added each year to meet DoD projected endstrengths. Detailed results of an open group projection of the Military Retirement System appear in Appendix K.

An open group projection also appears in Table 8. This projection, which shows the past and projected flow of plan assets, includes the total basic payroll over the next 25 years, the normal cost contributions, the payments to amortize the unfunded liability, investment income, fund disbursements, and the fund balance. All of these items are discussed in detail throughout the text of this report. An overview of the GORGO process is illustrated in Figure 1.

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[1]   GORGO was named after a monster featured in a 1961 British science fiction movie based on a variation of *Godzilla*.

TABLE 2

GORGO POPULATION CATEGORIES

1.   Active duty populations and basic pay, and benefit tier (BRS/Non-BRS)

      a.   Officers
      b.   Enlistees

2.   Selected reserve populations, basic pay, career points, and benefit tier (BRS/Non-BRS)

      a.   Officers
      b.   Enlistees

3.   Non-selected reserve (those who have completed 20 good years and have not reached paid retirement) populations, basic pay, accumulated retirement credit points, and benefit tier (BRS/Non-BRS)

      a.   Officers
      b.   Enlistees

4.   Retiree populations, benefit tier (BRS/Non-BRS), retired pay, and survivor benefit coverage

      a.   Nondisabled officers (non-CSB electors)
      b.   Nondisabled enlistees (non-CSB electors)
      c.   Nondisabled officers (CSB electors)
      d.   Nondisabled enlistees (CSB electors)
      e.   Reserve officers
      f.   Reserve enlistees
      g.   Disabled officers (Permanent and Temporary)
      h.   Disabled enlistees (Permanent and Temporary)

5.   Surviving families in a survivor benefit plan, total annuities, survivor benefit coverage, and benefit tier (BRS/Non-BRS)

      a.   Survivor Benefit Plan (SBP)
      b.   Reserve Component Survivor Benefit Plan (RCSBP)
      c.   Retired Serviceman's Family Protection Plan (RSFPP)
      d.   Death on active duty
      e.   Minimum income

6.   Typical new entrant cohort population and benefit tier (BRS/Non-BRS)

      a.   Officers
      b.   Enlistees

FIGURE 1

GORGO PROCESS OVERVIEW

ECONOMIC ASSUMPTIONS	POPULATION FILES	NON-ECONOMIC ASSUMPTIONS
- Inflation - Interest - Basic Pay Scale Increases	– Active Duty – Selected Reserve – Non-Selected Reserve – Retirees – Survivors	– Retirement – Mortality – Withdrawal – Etc.

GORGO

CLOSED GROUP PROJECTION	OPEN GROUP PROJECTION	NEW ENTRANT PROJECTION
- Actuarial Liability	- Long-Term Projections	- Normal Cost Percentage

Economic assumptions, i.e., the annual rate of inflation, the annual basic pay scale increases, and the annual valuation interest rate, were approved by the DoD Board of Actuaries after extensive analysis of past trends, current environment, and future expectations. A discussion of these considerations is contained in Appendix D.

The decrement rates and other non-economic assumptions can be categorized as follows:

1. Active duty decrement rates
2. Retiree and survivor decrement rates
3. Drilling and non-drilling (with 20 good years) reserve decrement rates
4. Actuarial projection model parameters
5. Other rates (e.g., mortality improvement)

The decrement rates and GORGO parameters are generally based on military-specific experience. The rates and descriptions of how they were derived appear in Appendices G through J. The actuarial projection model parameters, dealing with such matters as the survivor benefit elections, premium deductions, and member/beneficiary age differences, appear in Appendix F. In general, the valuation results are most sensitive to changes in the economic (e.g., long-term interest assumption) and retention assumptions, where retention refers to the active and reserve duty withdrawal/reentrant and separation rates – refer to Table 6B for analysis.

Assets

The assets of the Military Retirement Fund (the Fund) are invested in special issue Treasury obligations bearing interest at rates determined by the Secretary of the Treasury taking into consideration current market yields for outstanding marketable U.S. obligations of comparable maturities. Each security issued to the Fund "mirrors" a security that has been issued to the public, i.e., it has the same maturity date and coupon rate. The special issue "mirrored" security may have been issued recently, or at any time in the past. Under current procedures adopted by Treasury, the investment manager (DFAS Trust Fund Accounting & Reporting Division) is permitted to redeem long-term special issue securities at any time before maturity for their fair market value, which is based on the public issue bid price with the same maturity date and coupon rate. However, Treasury policy encourages a buy-and-hold approach giving consideration to the needs of the Fund in determining the maturities of securities purchased.

The investment manager must follow the asset investment strategy approved by the DFAS Investment Board at their semiannual meetings. The current investment strategy includes investing the assets so that the Fund generates sufficient cash to fund benefit payments and expenses as they come due. Many considerations are taken into account when making investment decisions, including balancing various risks, targeting an expected average maturity of future investments of 20 years (which is reasonably close to the duration of the liabilities), and current and expected economic conditions. A large majority of purchases are in Treasury Inflation-Protected Securities (TIPS). This strategy hedges inflationary pressures while minimizing liquidity risks to the Fund. Timing issues and the inconsistency between the TIPS calculation of inflation (CPI-U) and the Fund's crediting of inflation (CPI-W) to retiree and survivor benefits leave some residual inflationary risks.

For purposes of determining the unfunded liability, the assets of the Fund are valued using the amortized cost method. Under this method, the yield to maturity of a security valued at any point in time is equal to the yield to maturity at the time of purchase. In the valuation of the Military Retirement System, the amortized cost value is referred to as the "actuarial value of assets." The actuarial value of assets is determined by amortizing premium and discount over the life of the securities. The total investment return includes: the interest coupons received; the change in the amortized cost value during the year; and the inflation compensation accrued from the holdings of TIPS. The actuarial value of assets used in the determination of the unfunded liability includes the "accrued interest," which is the amount of the next semiannual interest coupon payment that has accrued since the date of the last coupon payment. The amount of the "accrued interest" is determined by multiplying the coupon payment by the ratio of the time that has elapsed since the last coupon payment date to the total time between coupon payments. Table 3 presents a statement of the actuarial value of assets; Table 4 presents a statement of changes in the actuarial value of assets. Other associated asset statements and disclosures are included in Appendix L.

In an open group projection of a retirement system where the total number of employees is held constant and assumptions do not vary year by year, the number of retirees and survivors on the rolls at year end, as well as the number withdrawing, retiring, dying, etc., each year, eventually levels out. When this occurs, the population is said to be "stationary." In this report's open group projection, DoD-projected endstrengths are used through the end of FY 2021 (as depicted in Table 8). Subsequently, the force size is held constant each year. However, the assumption of future mortality improvement results in a small increase in the retired population each year, so that the retired population is nearly, but not completely, stationary[1].

When a population becomes stationary, the fund disbursements increase each year at the same rate as total pay, which in this valuation is 3.25 percent per year. If the method of funding the system is theoretically sound, the value of the assets in the Fund will also increase at this same rate, and thus will become a level percentage of pay. Otherwise, the fund would either increase indefinitely as a percent of pay, or decrease until it was zero. Practical considerations in this report's open group projection, including (1) mortality improvement, and (2) the difference between the short-term economic assumptions and the ultimate economic assumptions (see Table 8 Footnote) and the fact that payments on future (after September 30, 2017) gains and losses implied by the short-term assumptions are not projected, cause the fund disbursements to grow at an ultimate rate different than 3.25 percent per year.

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[1] More precisely, the retired population would become nearly, but not completely stationary if the open group projection were extended many years beyond what is shown in this report.

TABLE 3

DEPARTMENT OF DEFENSE
MILITARY RETIREMENT FUND
STATEMENT OF ACTUARIAL VALUE OF ASSETS
($ in millions)

For the Plan Year Ended September 30:

	2017	2016
Assets		
1) Investments, at book value:		
U.S. Government securities[1]	$728,492	$658,723
2) Accounts receivable:		
a) Accrued interest[2]	$5,141	$5,143
b) Due from military retirees or their survivors	$133	$129
c) Intragovernmental	$0	$0
3) Cash:	$329	$368
Actuarial value of assets	$734,095	$664,363

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[1] Book value is determined by 1) amortizing premium and discount over the life of the securities using the effective interest method and 2) including additional inflation compensation from TIPS. Additional adjustment made as a result of FY 2011 National Defense Authorization Act (P.L. 111-383) regarding retired pay date as follows:

	2017	2016
Investments, at book value (actual)	$724,132	$654,376
October Expenditures paid in September	$4,360	$4,347
Investments, at book value (adjusted)	$728,492	$658,723

[2] Includes accrued interest receivable and interest purchased.

TABLE 4

DEPARTMENT OF DEFENSE
MILITARY RETIREMENT FUND
STATEMENT OF CHANGES IN ACTUARIAL VALUE OF ASSETS
($ in millions)

| | For the Plan Year Ended September 30: | |
	2017	2016
1) Actuarial value of assets at beginning of plan year:	$664,363	$600,585
2) Investment income:		
a) Interest/Inflation	$26,335	$20,802
b) Net appreciation (depreciation) in book value of investments[1]	$(5,122)	$(5,238)
3) Contributions:		
a) From Services	$18,300	$19,260
b) Appropriation to amortize the unfunded liability	$81,192	$79,289
c) Appropriation for Treasury Normal Cost Contribution	$6,822	$6,870
4) Total additions (2 + 3):	$122,527	$120,983
5) Change in Accounts Receivable	$4	$37
6) Benefits paid to participants:	$57,799	$57,241
Actuarial value of assets (1 + 4 + 5 - 6):	$734,095	$664,363

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[1] Investments bought, sold and held during the plan year ended September 30 appreciated (depreciated) in value as follows:

	2017	2016
Amortized discount	$227	$218
Amortized premium	$(5,349)	$(5,456)
Gain (loss) on sale *	$0	$0
	$(5,122)	$(5,238)

* Gain (loss) on sale is only shown for informational purposes and is not included in the net appreciation (depreciation).

Normal Cost

The aggregate entry-age normal cost percentage (NCP) is the level percentage of basic pay that must be contributed over the entire active career of a typical group of new entrants to pay for all the future retirement and survivor benefits of that group. It is determined by using the new-entrant cohort as the starting population in a GORGO projection. Their basic pay and benefits are projected over 100 years, and then discounted back to the present (i.e. valuation date). Mathematically, a NCP is calculated by dividing the present value of future benefits for the entire cohort by the present value of future basic pay, evaluated at the assumed interest rate.

There are four nondisability benefit formulas (for four distinct populations) within the Military Retirement System (see Appendix A). Retirement benefits are based on final basic pay (Final Pay) for military personnel who first became members of a uniformed service before September 8, 1980, and are based on the average of the highest 36 months (High-3) for those becoming members on or after this date. Additionally, active duty military personnel who first became members of a uniformed service on or after August 1, 1986, are High-3 unless they elect the Career Status Bonus (CSB), which provides a bonus in exchange for reduced (Redux) benefits[3]. Military personnel who first become a member of a uniformed service after December 31, 2017, will be under the new Blended Retirement System (BRS) which was enacted in NDAA 2016 and takes effect January 1, 2018. Members who first entered the military before January 1, 2018, and who have served for fewer than 12 years as of December 31, 2017 (or less than 4,320 points for reservists), will have the option to "opt-in" to BRS via an irrevocable election during a one-year (calendar year 2018) open season or remain in the High-3 system. Members who have served 12 or more years as of December 31, 2017 (or more than 4,320 points for reservists), are not permitted to opt-in to BRS and will receive benefits based on their current plan.

P.L. 99-661, enacted in November 1986, mandated that two separate NCPs be used for the valuation of the Military Retirement System. One NCP is for active duty personnel and full-time reservists (full-time) and one is for part-time reservists (part-time). Full-time and part-time NCPs are calculated for each of the separate benefit formulas. Only full-time personnel are under the CSB/Redux benefit formula, thus an analogous part-time NCP is not applicable ("N/A"). The FY 2018 NCPs are summarized below (with DoD NCPs in parentheses):

Benefit Formula	Full-Time	Part-Time
Final Pay	54.3% (38.3%)	31.2% (27.3%)
High-3	49.5% (35.0%)	29.5% (25.8%)
CSB/Redux[4]	48.8% (34.3%)	-N/A-
BRS	38.1% (25.6%)	23.5% (20.2%)

P.L. 108-136 required the U.S. Department of Treasury to pay into the Fund at the beginning of each year the normal cost arising from increased Concurrent Receipt benefits. The NCPs shown above include the respective Total ('DoD plus Treasury') and DoD percentages. Table 6A displays the DoD and Treasury NCPs separately. The NCPs are further disaggregated in Table 5.

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[3]   The National Defense Authorization Act of FY 2016 (NDAA 2016, P.L. 114-92) sunsets the CSB/Redux benefit tier by not allowing any CSB elections after December 31, 2017.

[4]   This NCP represents a blend of NCPs for CSB/Redux and HI-3 benefit formulas based on the CSB/ Redux Election Proportion (see Appendix F).

The FY 2018 weighted NCPs in Table 5 are calculated using the NCP weighting factors (see Appendix E), along with BRS opt-in rates (see Appendix F). The sum of the DoD and Treasury components of the weighted aggregate full-time NCP is 44.4 percent, and the weighted aggregate part-time NCP is 28.4 percent. Due to federal budget deadlines, the two NCPs used to determine the actual contributions to the Fund must be established in advance of implementation and may vary from those actually derived in a valuation.

Table 5 summarizes the components of the FY 2018 normal cost percentages. Note that the implemented NCPs in FY 2018 are the first to reflect the BRS benefit tier.

TABLE 5

NORMAL COST AS A PERCENT OF BASIC PAY (NCPs)
(DoD Normal Cost Percentage in Parentheses)

FULL-TIME	FINAL PAY	HIGH-3	CSB/REDUX	BRS	FY 2018 Weighted
Nondisability benefits	50.3 (35.6)	45.9 (32.6)	45.1 (31.9)	34.9 (23.6)	40.9 (28.5)
Disability benefits	1.6 (0.9)	1.4 (0.8)	1.4 (0.8)	1.4 (0.8)	1.4 (0.8)
Survivor benefits	2.5 (1.8)	2.3 (1.6)	2.3 (1.6)	1.8 (1.2)	2.1 (1.4)
Total	54.3 (38.3)	49.5 (35.0)	48.8 (34.3)	38.1 (25.6)	44.4 (30.7)
PART-TIME					
Nondisability benefits	26.4 (23.6)	25.1 (22.4)	-N/A-	19.6 (17.3)	24.1 (21.5)
Disability benefits	1.8 (1.1)	1.7 (1.0)	-N/A-	1.7 (1.0)	1.7 (1.0)
Survivor benefits	2.9 (2.5)	2.8 (2.4)	-N/A-	2.2 (1.9)	2.7 (2.3)
Total	31.2 (27.3)	29.5 (25.8)	-N/A-	23.5 (20.2)	28.4 (24.8)

- Note that columns may not add exactly due to rounding of the separate NCP components.
- Only full-time personnel are under the CSB/Redux benefit formula, thus an analogous part-time NCP is not applicable ("N/A").

As can be determined from this table, 92 percent of the full-time normal cost and 85 percent of the part-time normal cost stems from nondisability retirement. Based on current decrement rates, 19 percent of a typical group of new entrants attains 20 years of active duty service and becomes eligible for nondisability retirement from active duty. Specifically, 49 percent of new officers and 17 percent of new enlistees attain 20 years of active duty service.[5] It should be noted that some military personnel who begin their careers on active duty move to the reserves and retire from there. This is modeled through the allocation of a portion of the reserve benefit, in present values terms, to the full-time normal cost (see Appendix F). Based on current reserve decrement rates, 14 percent of a typical group of members entering the reserves for the first time (including members with prior

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[5] As in past valuation reports, these percentages are stated from the perspective of a new entrant cohort still in active service at its first fiscal-year boundary (i.e., September 30). If losses prior to the first fiscal-year boundary are taken into account, the percentages would be reduced by approximately 15 percent (19 percent would become 16 percent). The stated percentages also reflect the effect of reentrants, i.e., members who appear in the active duty population one year without having been there the year before, who are not new entrants. Without the effect of reentrants, the proportion of a typical group of new entrants who attain 20 years of active duty service is reduced from 19 percent to 15 percent. The paygrade transfer rates have no effect.

The effect of reentrants on the reserve duty percentages is more pronounced relative to the above active duty figures due to the inherent nature of a reserve career (i.e., a higher proportion entering the reserves for the first time as a reentrant to the military).

active or non-drilling reserve time) become eligible for a reserve nondisability retirement (46% for officers, and 13% for enlisted).

Table 9 lists the past and projected weighted aggregate full-time and part-time NCPs under current law in the normal cost columns. The columns are separated into the DoD and Treasury NCPs due to P.L. 108-136. In recent years both the full- and part-time sums of the DoD and Treasury component weighted aggregate percentages are (generally) at the level of the CSB/Redux normal cost percentages (High-3 for part-time) since virtually all non-retired personnel entered the uniformed service on or after August 1, 1986. With the passage of BRS, projected NCPs will eventually converge to the level of the BRS NCPs. As indicated in the Table 8 footnote, the Treasury Concurrent Receipt normal cost payments reflect amounts sequestered by fiscal year.

Amortization of Unfunded Liability

Under P.L. 98-94, normal cost contributions began to be made by DoD on behalf of all military personnel on October 1, 1984. Since normal cost contributions had not been made for service prior to this date, there was an initial unfunded accrued liability, or "initial unfunded liability," of $528.7 billion as of September 30, 1984. If this amount had been deposited in the retirement fund on September 30, 1984, then it, together with the future normal cost payments to be made on behalf of all active duty personnel and drilling reservists over the balance of their active careers, plus investment earnings at the assumed rate, would have been sufficient to provide all expected retirement and survivor benefits for those in the system on that date.

The Board of Actuaries originally determined that the initial unfunded accrued liability of the system ($528.7 billion) should be amortized with payments equal to 33 percent of the second preceding fiscal year's basic payroll. It was originally projected that this method would amortize the initial unfunded liability over 60 years. However, economic assumption changes extended this amortization period well beyond 60 years. As a result, the Board revised the amortization method of the original unfunded liability in such a way that the amortization would have been completed in FY 2044. In more recent years, it was determined that the Military Retirement Fund was projected to have a negative balance for several years before becoming positive again. The Board decided to shorten the amortization period to 50 years in 1996. The Board again shortened the amortization period in 2007 to 42 years in order for the payments to cover the interest on the unfunded liability each year. The initial unfunded liability is now expected to be fully amortized in calendar year 2025 (FY 2026).

Changes in the unfunded liability can also arise because of: 1) modifications to benefit provisions, 2) changes in actuarial assumptions, and 3) deviations in actual experience from expected experience (gains and losses). The Board approved a method to amortize these changes over 30 years by payments that increase in absolute value at the same rate as the annual long-term basic pay scale assumption. A description of the methods and computations used to calculate the payment streams for changes in unfunded liability can be found in Appendix M.

Unfunded Accrued Liability as of September 30, 2017

Table 6A summarizes the calculation of the unfunded accrued liability as of September 30, 2017. The present value of future benefits is obtained by projecting future benefits for the total covered population (closed group with no new entrants) as of September 30, 2017, and discounting these benefits back to the present (i.e. valuation date) at the assumed interest rate. The GORGO actuarial model projects benefits for the current active and retired populations over the duration of their lifetimes. Additional adjustments (generally minor) to the projection results are made outside of the GORGO model to capture the more complex law changes. The initial retirement benefits for military personnel are based on their total projected service at retirement, the applicable benefit formula, and assumed basic pay increases. Subsequent retirement benefits include assumed cost-of-living adjustments and the age 62 adjustment for those retiring under the CSB/Redux formula.

The present value of future normal cost contributions is obtained by (1) using GORGO to project future yearly full-time and part-time basic pay for the September 30, 2017, covered population, (2) multiplying the pay by the total projected (DoD and Treasury) full-time and part-time weighted aggregate entry-age NCPs, and (3) discounting the resulting normal costs back to September 30, 2017. For this closed group, the relative percentages of basic pay subject to the four separate benefit formulas will change over time as fewer members are covered under the CSB/Redux, High-3 and Final Pay formulas, and more are covered under BRS. The *weighted* full- and part-time NCPs that are multiplied against the future full- or part-time pay in each year reflect expected changing percentages of pay going to members covered by the multiple benefit formulas. This will change in future years as more personnel are covered under BRS. This weighted procedure is roughly equivalent in the aggregate to projecting separately the pay of each of the eight groups of active duty and selected reserve members and multiplying it by the individual group's NCP.

The sum of the DoD and Treasury components of the weighted aggregate entry-age NCPs for FY 2018 are 44.4 percent full-time and 28.4 percent part-time. Federal budget deadlines require the establishment of NCPs in advance of the valuation. Consequently, the percentages actually implemented in a fiscal year may vary from those derived in the valuation. These differences, which are small unless major actuarial assumptions or benefits are changed, are reflected in the unfunded liability by using the implemented normal cost in the first year of the projection.

Table 6B displays selected sensitivities in the estimated valuation cost figures due to changes in key economic and non-economic assumptions. The figures require the use of actuarial assumptions regarding future economic and demographic experience, which are typically disclosed as a single value. In an attempt to assess system financial risks, key underlying valuation assumptions were tested for their respective impacts. The absolute levels of change tested in Table 6B were selected to show directional magnitudes, not necessarily anticipated changes.

Deducting the present value of future normal costs and the actuarial asset value of the Fund from the present value of future benefits leaves an unfunded liability of $767.9 billion as of September 30, 2017. This was greater than the expected unfunded liability of $696.1 billion. The expected unfunded liability is what the unfunded liability would have been if all actuarial assumptions had been realized and all benefit formulas had remained unchanged. The fact that the actual unfunded liability is greater than expected means that there was a total FY 2017 loss of $71.8 billion ($767.9 billion minus $696.1 billion). The components of this gain are outlined in Table 7. The total experience gain/loss is divided into five segments: (1) the loss due to the difference between the actual interest rate (2.9%) earned by the Fund in FY17 and the assumed interest rate (5.25%); (2) the gain due to the actual January 1, 2018, COLA (2.0%) being different from that assumed

(2.75%); (3) the gain due to the actual January 1, 2018, across-the-board salary (2.4%) increase being different from that assumed (3.25%); (4) the gain due to the difference between the actual and assumed non-economic experience; and (5) the loss due to the sequestration-required nonpayment of the October 1, 2017, Treasury Concurrent Receipt normal cost contribution. See the Summary of Changes for the September 30, 2017, Valuation for a more detailed discussion of the actuarial assumptions outlined in Table 7.

These changes in unfunded liability were used to calculate the October 1, 2018, unfunded liability payment. The total payment was determined to be $87.996 billion. This total payment includes (1) a payment of $94.971 billion to amortize the original unfunded liability, plus (2) an amount of $6.383 billion to amortize changes in actuarial assumptions, plus (3) an amount of $8.214 billion to amortize benefit changes, less (4) an amount of $22.273 billion to amortize total combined experience gains and losses through FY 2017, plus (5) $0.701 billion to amortize over one year the loss due to sequestration of the October 1, 2017, Treasury Concurrent Receipt normal cost contribution. The detailed calculations of these payment components can be found in Appendix M. Tables 10 and 11 show the projection of the unfunded liability payments and unfunded liability balances. As stated earlier, Tables 8 and 9 display all projected transactions to the Fund.

Starting in FY 2005, the total payment to be made by Treasury includes the amount required by P.L. 108-136 to pay for the increased normal cost due to Concurrent Receipt benefits in addition to the unfunded liability amortization amount. The total actuarially determined Treasury payment on October 1, 2018, is $96.659 billion, equal to $87.996 billion for the unfunded liability amortization *plus* $8.663 billion for Concurrent Receipt benefits. Note that the actual contribution will reflect a sequestration-mandated reduction to the $8.663 billion, to $7.909 billion. Detailed calculations of the total Treasury payment are also located in Appendix M.

TABLE 6A

MILITARY RETIREMENT SYSTEM
ACTUARIAL STATUS INFORMATION
($ in billions)

			For the Plan Year Ended September 30:	
			2017	2016
1.	Present value of future benefits			
	a.	Annuitants now on roll	$974.0	$914.1
	b.	Nonretired reservists	$200.3	$184.1
	c.	Active duty personnel[1]	$573.8	$530.0
		TOTAL	$1,748.1	$1,628.1
2.	Present value of future normal cost contributions[2]		$246.1	$221.2
3.	Actuarial accrued liability (1. – 2.)		$1,502.0	$1,406.9
4.	Actuarial value of assets[3]		$734.1	$664.4
5.	Unfunded accrued liability (3. – 4.)		$767.9	$742.6
6.	Funded Ratio (4. / 3.)		49%	47%

		FY 2019	FY 2018
7.	DoD normal cost percentage (NCP)[4] to be applied to basic pay in fiscal year		
	a. Full-time (FT)	30.4%	28.4%
	b. Part-time (PT)	24.7%	22.6%
8.	Treasury normal cost percentage (NCP)[5] to be applied to basic pay in fiscal year		
	a. Full-time (FT)	13.6%	12.5%
	b. Part-time (PT)	3.6%	3.3%

Basic pay is only a portion of active duty military compensation. See The Military Retirement System: Benefits (Appendix A) for details.

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[1] The future benefits of active duty personnel expected to retire as reservists are counted on line 1.b.

[2] The September 30, 2017, Present Value of Future Normal Cost (PVFNC) contributions reflects a reduction of $667.945 million due to sequestration of the October 1, 2017, Treasury Concurrent Receipt normal cost contribution. The September 30, 2016, PVFNC reflects a reduction of $677.677 million due to sequestration of the October 1, 2016, Treasury Concurrent Receipt normal cost contribution.

[3] The actuarial value of assets is determined using the amortized cost method from Table 4.

[4] Due to the need to establish the NCPs in advance of implementation (federal budget deadlines), the percentages actually used in a fiscal year may vary from the ones derived in the valuation.

[5] P.L. 108-136 requires the Department of Treasury to pay the normal cost resulting from the increase in benefits due to Concurrent Receipt.

TABLE 6B

MILITARY RETIREMENT SYSTEM
SENSITIVITY TESTS[*]
($ in billions)

Long-Term Interest Assumption
[Baseline Interest = 5.00%]

		Baseline	1% LOWER	1% HIGHER
1.	Present value of future benefits	$ 1,748.1	$ 2,150.9	$ 1,455.0
2.	Actuarial accrued liability	$ 1,502.0	$ 1,791.0	$ 1,280.8
3.	Actuarial value of assets	$ 734.1	$ 734.1	$ 734.1
4.	Unfunded accrued liability (2. – 3.)	$ 767.9	$ 1,056.9	$ 546.7
5.	Funded Ratio	49%	41%	57%
6.a.	FY 2019 FT NCP [DoD + Treasury]	44.0%	61.1%	32.3%
6.b.	FY 2019 PT NCP [DoD + Treasury]	28.3%	41.2%	19.7%

Retention Assumptions
[FT Baseline Retention = 'Withdrawal' rates, Appendix G]
[PT Baseline Retention = 'Separation' rates, Appendix H]

		Baseline	25% LOWER	25% HIGHER
1.	Present value of future benefits	$ 1,748.1	$ 1,822.9	$ 1,677.6
2.	Actuarial accrued liability	$ 1,502.0	$ 1,509.1	$ 1,496.1
3.	Actuarial value of assets	$ 734.1	$ 734.1	$ 734.1
4.	Unfunded accrued liability (2. – 3.)	$ 767.9	$ 775.0	$ 762.0
5.	Funded Ratio	49%	49%	49%
6.a.	FY 2019 FT NCP [DoD + Treasury]	44.0%	50.1%	36.3%
6.b.	FY 2019 PT NCP [DoD + Treasury]	28.3%	35.4%	20.2%
7.a.	New Entrants eligible for FT retirement (%)	19%	27%	12%
7.b.	New Entrants eligible for PT retirement (%)	14%	27%	6%

[*] A sensitivity test is a process for assessing the impact of a change in an actuarial assumption on an actuarial measurement. As mentioned earlier in the *Valuation Data and Procedures* section of this report, the valuation results/measurements are most sensitive to changes in the economic (e.g., long-term interest) assumptions and retention assumptions. 'Baseline' figures are generally from Table 6A and other sections of this report. **The absolute levels of the changes (+/- 1% and +/- 25%, respectively) were selected to show potential directional magnitudes, not necessarily anticipated changes, assisting the report user to analyze system risks.**

TABLE 7

MILITARY RETIREMENT SYSTEM
FY 2017 CHANGE IN UNFUNDED LIABILITY
($ in billions)

		For the Plan Year Ended September 30, 2017	
1.	Actual unfunded accrued liability (9/30/17)	$767.9	
2.	Expected unfunded accrued liability (9/30/17)	$696.1	
3.	Total (gain)/loss	$71.8	4.8%
a.	Total experience (gain)/loss	$2.8	0.2%
	Interest assumption	$17.1	1.1%
	COLA assumption	($6.8)	0.5%
	Salary assumption	($2.9)	0.2%
	Non-economic experience	($4.6)	0.3%
b.	10/1/17 unpaid contribution	$0.7	0.0%
c.	Total benefit change (gain)/loss	$8.1	0.5%
	FY18 NDAA "SSIA Extension"	$8.1	0.5%
d.	Total assumption change (gain)/loss	$60.2	4.0%
	Interest Rate Change	$60.2	4.0%

In this table, negative values represent actuarial gains and positive values represent actuarial losses.

Percentages shown are ratios of absolute values of each gain or loss component to the accrued liability (Table 6A, line 3), except the percentage for the experience (gain)/loss due to the interest assumption is the ratio to the actuarial value of assets (Table 6A, line 4).

The reasons for the experience (gain)/loss for: interest = 5.25% long-term assumed vs 2.9% FY17 fund yield; salary = 3.25% long-term assumed vs 2.4% Jan 2018 increase; COLA = 2.75% long-term assumed vs. 2.0% Jan 2018 COLA. The 10/1/17 unpaid contribution loss is due to sequestration of the Treasury Concurrent Receipt normal cost contribution.

The benefit change (gain)/loss for: SSIA Extension = indefinite extension with indexation. The interest rate changed from 5.25% to 5.00%.

TABLE 8

MILITARY RETIREMENT SYSTEM
PAST AND PROJECTED FLOW OF PLAN ASSETS [1]
(In Billions of Dollars and as a Proportion of Payroll)

Fiscal Year	Basic Payroll [2]	From DoD, for Normal Costs [3]		From Treasury, for Normal Costs [3]		From Treasury, for Amortization of Unfunded Liability [4]		Investment Income		Fund Disbursements [5]		Fund Balance, End of Year [6]	
1985	$33.5	$17.0	(50.7%)	---	---	$9.5	(28.4%)	$1.1	(3.3%)	$15.8	(47.2%)	$11.8	(35.2%)
1986	35.4	17.4	(49.2)	---	---	10.5	(29.7)	2.5	(7.1)	17.6	(49.7)	24.6	(69.5)
1987	36.4	18.3	(50.3)	---	---	10.5	(28.8)	3.6	(9.9)	18.1	(49.7)	38.9	(106.9)
1988	37.3	18.4	(49.3)	---	---	10.3	(27.6)	5.0	(13.4)	17.5	(46.9)	53.4	(143.2)
1989	38.6	18.5	(47.9)	---	---	9.8	(25.4)	6.1	(15.8)	20.2	(52.3)	67.6	(175.1)
1990	39.8	16.3	(41.0)	---	---	10.6	(26.6)	7.3	(18.3)	21.5	(54.0)	80.4	(202.0)
1991	42.3	17.2	(40.7)	---	---	10.8	(25.5)	8.5	(20.1)	23.1	(54.6)	93.7	(221.5)
1992	41.1	16.3	(39.7)	---	---	11.2	(27.3)	9.4	(22.9)	24.5	(59.6)	106.1	(258.2)
1993	38.9	13.2	(33.9)	---	---	12.3	(31.6)	10.0	(25.7)	25.7	(66.1)	115.9	(297.9)
1994	38.3	12.8	(33.4)	---	---	11.9	(31.1)	10.3	(26.9)	26.7	(69.7)	124.2	(324.3)
1995	37.1	12.2	(32.9)	---	---	11.5	(31.0)	10.9	(29.4)	27.8	(74.9)	131.0	(353.1)
1996	36.7	11.2	(30.5)	---	---	10.7	(29.2)	11.3	(30.8)	28.8	(78.5)	135.3	(368.7)
1997	36.8	11.1	(30.2)	---	---	15.2	(41.3)	11.9	(32.3)	30.2	(82.1)	143.3	(389.4)
1998	37.1	10.4	(28.0)	---	---	15.1	(40.7)	12.2	(32.9)	31.1	(83.8)	149.9	(404.0)
1999	37.6	10.4	(27.7)	---	---	15.3	(40.7)	12.4	(33.0)	31.9	(84.8)	156.0	(414.9)
2000	39.0	11.4	(29.2)	---	---	15.3	(39.2)	12.7	(32.6)	32.8	(84.1)	162.7	(417.2)
2001	40.9	11.4	(27.9)	---	---	16.1	(39.4)	13.2	(32.3)	34.1	(83.4)	169.2	(413.7)
2002	44.7	12.9	(28.9)	---	---	17.0	(38.0)	12.4	(27.7)	35.1	(78.5)	176.5	(394.9)
2003	52.0	13.7	(26.3)	---	---	17.9	(34.4)	10.0	(19.2)	35.6	(68.5)	182.6	(351.2)
2004	53.6	14.1	(26.3)	---	---	18.2	(34.0)	10.1	(18.8)	37.0	(69.0)	188.0	(350.7)
2005	56.3	15.0	(26.6)	$1.5	(2.7%)	21.4	(38.0)	10.9	(19.4)	39.0	(69.3)	197.9	(351.5)
2006	54.0	13.9	(25.7)	2.3	(4.3)	23.2	(43.0)	12.3	(22.8)	41.1	(76.1)	208.4	(385.9)
2007	56.4	14.5	(25.7)	2.5	(4.4)	26.0	(46.1)	10.3	(18.3)	43.5	(77.1)	218.2	(386.9)
2008	59.2	16.1	(27.2)	2.8	(4.7)	46.2	(78.0)	15.6	(26.4)	45.8	(77.4)	253.1	(427.5)
2009	63.0	17.5	(27.8)	3.7	(5.9)	51.1	(81.1)	2.9	(4.6)	50.0	(79.4)	278.4	(441.9)
2010	64.4	20.4	(31.7)	4.5	(7.0)	58.6	(91.0)	10.4	(16.1)	50.6	(78.6)	321.7	(499.5)
2011	66.9	21.0	(31.4)	5.0	(7.5)	61.4	(91.8)	18.0	(26.9)	51.0	(76.2)	376.1	(562.2)
2012	66.8	21.9	(32.8)	5.4	(8.1)	64.8	(97.0)	12.5	(18.7)	52.6	(78.7)	428.0	(640.7)
2013	66.3	20.5	(30.9)	6.8	(10.3)	67.7	(102.1)	15.0	(22.6)	54.5	(82.2)	483.5	(729.3)
2014	65.4	20.5	(31.3)	6.3	(9.6)	72.9	(111.5)	17.1	(26.1)	55.4	(84.7)	545.0	(833.3)
2015	64.3	19.7	(30.6)	6.2	(9.6)	75.6	(117.6)	10.8	(16.8)	56.7	(88.2)	600.6	(934.1)
2016	64.5	19.5	(30.2)	6.9	(10.7)	79.3	(122.9)	15.3	(23.7)	57.2	(88.7)	664.4	(1,030.1)
2017	63.4	18.3	(28.9)	6.8	(10.7)	81.2	(128.1)	21.2	(33.4)	57.8	(91.2)	734.1	(1,157.9)

↑ **A C T U A L** ↑

↓ **P R O J E C T E D** ↓

Fiscal Year	Basic Payroll [2]	From DoD, for Normal Costs [3]		From Treasury, for Normal Costs [3]		From Treasury, for Amortization of Unfunded Liability [4]		Investment Income		Fund Disbursements [5]		Fund Balance, End of Year [6]	
2018	65.7	18.2	(27.7%)	6.8	(10.4%)	82.9	(126.1%)	40.2	(61.1%)	58.9	(89.7%)	823.3	(1,252.3%)
2019	70.8	21.0	(29.6)	7.9	(11.2)	88.0	(124.4)	45.0	(63.5)	60.9	(86.1)	924.2	(1,306.1)
2020	69.7	20.5	(29.4)	8.6	(12.3)	90.9	(130.5)	50.1	(72.0)	62.7	(90.0)	1,031.6	(1,481.1)
2021	71.5	20.8	(29.1)	8.8	(12.3)	93.1	(130.2)	55.6	(77.8)	64.4	(90.1)	1,145.4	(1,602.4)
2022	73.3	21.1	(28.8)	8.9	(12.2)	96.1	(131.2)	61.4	(83.8)	66.2	(90.4)	1,266.6	(1,729.1)
2023	74.9	21.4	(28.5)	9.1	(12.1)	99.2	(132.4)	67.6	(90.2)	68.1	(90.9)	1,395.7	(1,862.8)
2024	76.5	21.6	(28.3)	9.2	(12.1)	102.4	(133.9)	74.2	(96.9)	70.3	(91.9)	1,532.9	(2,003.3)
2025	78.1	21.9	(28.0)	9.4	(12.0)	105.8	(135.4)	81.1	(103.9)	72.4	(92.7)	1,678.6	(2,149.0)
2026	79.8	22.1	(27.7)	9.5	(11.9)	109.2	(136.9)	88.6	(111.0)	74.4	(93.2)	1,833.7	(2,298.5)
2027	81.5	22.4	(27.4)	9.7	(11.9)	-9.9	(-12.2)	90.3	(110.9)	76.6	(94.0)	1,869.6	(2,294.9)
2028	84.1	22.9	(27.2)	10.0	(11.8)	-10.2	(-12.2)	92.1	(109.4)	78.9	(93.7)	1,905.3	(2,264.3)
2029	86.9	23.4	(26.9)	10.2	(11.8)	-10.6	(-12.2)	93.8	(107.9)	81.1	(93.3)	1,941.1	(2,232.6)
2030	89.8	24.0	(26.7)	10.5	(11.7)	-10.9	(-12.1)	95.5	(106.4)	83.5	(92.9)	1,976.7	(2,200.4)
2031	92.8	24.5	(26.4)	10.8	(11.7)	-11.3	(-12.1)	97.3	(104.8)	85.8	(92.4)	2,012.3	(2,168.2)
2032	95.9	25.1	(26.2)	11.1	(11.6)	5.3	(5.5)	99.9	(104.2)	88.1	(91.9)	2,065.7	(2,154.5)
2033	99.0	25.8	(26.0)	11.5	(11.6)	22.8	(23.1)	103.4	(104.5)	90.6	(91.6)	2,138.5	(2,160.9)
2034	102.1	26.4	(25.9)	11.8	(11.5)	23.6	(23.1)	107.0	(104.8)	92.9	(91.0)	2,214.4	(2,168.1)
2035	105.5	27.1	(25.7)	12.1	(11.5)	24.4	(23.1)	110.8	(105.0)	95.1	(90.2)	2,293.7	(2,173.8)
2036	109.1	27.9	(25.6)	12.5	(11.5)	25.1	(23.1)	114.8	(105.3)	97.3	(89.2)	2,376.8	(2,179.3)
2037	112.7	28.7	(25.5)	12.9	(11.5)	13.0	(11.5)	118.4	(105.0)	99.6	(88.3)	2,450.1	(2,173.6)
2038	116.5	29.5	(25.4)	$13.3	(11.4)	11.7	(10.1)	121.9	(104.7)	101.9	(87.5)	2,524.8	(2,167.9)
2039	120.3	30.4	(25.3)	13.7	(11.4)	12.1	(10.1)	125.7	(104.5)	104.3	(86.7)	2,602.4	(2,164.1)
2040	124.1	31.3	(25.2)	14.2	(11.4)	12.5	(10.1)	129.6	(104.4)	106.7	(85.9)	2,683.3	(2,162.0)
2041	128.1	32.2	(25.2)	14.6	(11.4)	12.9	(10.1)	133.6	(104.3)	109.1	(85.2)	2,767.6	(2,160.3)
2042	132.2	33.2	(25.1)	15.1	(11.4)	13.3	(10.1)	137.8	(104.2)	111.5	(84.3)	2,855.5	(2,159.3)
2043	136.5	34.2	(25.1)	15.5	(11.4)	13.8	(10.1)	142.2	(104.2)	114.0	(83.5)	2,947.2	(2,159.3)
2044	140.9	35.3	(25.0)	16.0	(11.4)	14.2	(10.1)	146.8	(104.2)	116.5	(82.7)	3,043.0	(2,160.0)
2045	145.4	36.4	(25.0)	16.5	(11.4)	14.7	(10.1)	151.6	(104.3)	119.0	(81.8)	3,143.3	(2,161.3)

Note: Treasury Normal Cost Contributions are net of actual and expected sequestered amounts by the following fiscal years (discussed further in Appendix M):
- FY 2014: 9.8%
- FY 2015: 9.5%
- FY 2016: 9.3%
- FY 2017: 9.1%
- FY 2018: 8.9%
- FY 2019: 8.7%

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TABLE 8 FOOTNOTES

NOTE REGARDING OPEN GROUP PROJECTIONS: The 25-year open group projection in this report is based on benefit provisions, data, methods and assumptions described herein. The values are displayed in future-year dollars. They are intended to provide the user with a general directional magnitude; uncertainty increases with the length of the projection period. Actual results are heavily dependent on the underlying assumptions being realized. Benefit changes, economic conditions, and other factors are not perfectly predictable. **Economic, demographic, and political forces cannot be precisely predicted over very long periods of time**.

In addition, the fundamental purpose of OACT's valuation is to produce actuarial liability and normal cost amounts, both of which are done on a closed group basis. In performing the valuation calculations, many assumptions represent long-run average expectations.   This is appropriate for such liability and normal cost determinations. The open group projection uses many of the same long-run average assumptions as are used in the actuarial liability and normal cost calculations, but incorporates some adjustments for short-term expectations (e.g., the use of short-term economic assumptions for basic pay and COLA increases).

The projection in this publication is intentionally limited to 25 years. Additional projection years, as well as projections assuming different economic assumptions, may be available upon request.

[1] P.L. 98-94 established the Military Retirement Fund. Under the law, DoD is responsible for the normal cost payment and Treasury is responsible for the payments on the unfunded liability. P.L. 108-136 assigned Treasury the responsibility of funding the normal cost resulting from increased benefits due to Concurrent Receipt, starting in FY 2005. There are no employee contributions to the Fund.

[2] DoD-projected endstrengths are used through the end of FY 2023 and constant force strengths are used thereafter. Basic pay is only a portion of military compensation. See The Military Retirement System: Benefits in Appendix A for details. FYs 2014, 2015, 2016, 2017, 2018, and 2019 Treasury Normal Cost Payments reflect sequestered amounts of 9.8% in FY 2014, 9.5% in FY 2015, 9.3% in FY 2016, 9.1% in FY 2017, 8.9% in FY 2018, and 8.7% in FY 2019 (discussed further in Appendix M).

[3] Due to federal budget deadlines, normal cost percentages are established in advance of implementation. The percentage actually used and displayed here may vary from the one derived in the valuation as of the end of the previous year. Starting in FY 1987, NCPs have been developed separately for the full-time and part-time basic payrolls. Beginning in FY 2008, the part-time NCP has been charged against mobilized reserve pay. However, this report includes mobilized reserve pay as part of the full-time payroll from FY 2008 through FY 2010.

TABLE 8 FOOTNOTES (Continued)

[4]   Reflects amortization payments for FY 2019 and thereafter determined in the September 30, 2017, valuation. The FY 2027 - FY 2031 payments depict negative values, implying the Fund will have to pay Treasury this amount. There is no mechanism allowing this case to occur under current law. We (and the Board) are monitoring this situation.

[5]   Disbursements are on a cash basis. Beginning in December 1984, entitlements obligated for a month have been paid at the beginning of the following month. Prior to this date, entitlements were paid at the end of the month of obligation. Consequently, FY 1985 disbursements include only 11 months of payments. The FY 2011 National Defense Authorization Act allowed for retired pay to be paid on the previous business day if the first of the month falls on a weekend or holiday. This is not accounted for in the projected Fund Disbursements or Balances in order to give the projection a smooth trajectory.

[6]   This fund balance (on a book value basis) reflects cash disbursements during the year. On September 30, 2017, assets in the Fund totaled $734.1 billion.

OTHER NOTES: Mortality rates that are applied in the valuation to active/reserve duty members, retirees, and survivors, are subject to annual rates of improvement – see Appendix J. People and pay underlying the projection can be found in Appendix K. The table does not reflect future gains or losses due to short-term economic experience being different than assumed. Consequently, only payments on the total unfunded liability as of September 30, 2017, are reflected.

ANNUAL ECONOMIC ASSUMPTIONS USED IN PROJECTIONS OF PLAN ASSETS				
	Fiscal Year	Full COLA	Basic Pay	Interest
[*Actual*]	2018	2.0%	2.4%	5.0%
[*Short-Term*]	2019	2.8	2.6	5.0
[*Short-Term*]	2020	2.2	2.1	5.0
[*Short-Term*]	2021	2.2	2.1	5.0
[*Short-Term*]	2022	2.3	2.1	5.0
[*Short-Term*]	2023	2.3	2.1	5.0
[*Short-Term*]	2024	2.3	2.1	5.0
[*Short-Term*]	2025	2.3	2.1	5.0
[*Short-Term*]	2026	2.3	2.1	5.0
[*Short-Term*]	2027	2.75	2.1	5.0
[*Long-Term*]	2028+	2.75	3.25	5.0

Full COLA is equal to full cost-of-living increases to retiree and survivor annuities. Basic Pay is the rate at which the entire military pay table increases (hence excludes longevity or promotion-and-merit increases). They are applied on an across-the-board basis and typically occur each January 1st. Interest assumptions pertain to annual, aggregate Fund yield on all cash flows. The above COLA and Basic Pay assumptions are from the OMB; the interest (fund yield) is the Board of Actuaries long-term interest assumption. Long-term annual economic assumptions (used throughout the projection in the normal cost and unfunded liability calculations) are 2.75% COLA, 3.25% basic pay, and 5.0% interest.

TABLE 9

MILITARY RETIREMENT SYSTEM
PAST AND PROJECTED PAYROLL AND NORMAL COST PAYMENTS
(In Billions of Dollars and as a Proportion of Payroll)

Fiscal Year	Payroll Full-Time	Payroll Part-Time	Payroll Total	DoD Normal Cost Payments Full-Time		DoD Normal Cost Payments Part-Time		Treasury Normal Cost Payments Full-Time		Treasury Normal Cost Payments Part-Time		Normal Cost Payments Total	
1985	$30.6	$2.9	$33.5	$15.5	(50.7%)	$1.5	(50.7%)	$0.0	---	$0.0	---	$17.0	(50.7%)
1986	32.3	3.1	35.4	16.4	(50.7)	1.6	(50.7)	0.0	---	0.0	---	17.9	(50.7)
1987	33.4	3.0	36.4	17.4	(52.2)	0.8	(26.4)	0.0	---	0.0	---	18.2	(50.1)
1988	34.0	3.3	37.3	17.4	(51.2)	0.9	(26.1)	0.0	---	0.0	---	18.3	(49.0)
1989	35.0	3.6	38.6	17.6	(50.2)	0.9	(25.7)	0.0	---	0.0	---	18.5	(47.9)
1990	36.0	3.7	39.7	15.8	(43.9)	0.5	(13.4)	0.0	---	0.0	---	16.3	(41.1)
1991	38.6	3.7	42.3	16.7	(43.2)	0.5	(13.3)	0.0	---	0.0	---	17.2	(40.6)
1992	36.9	4.1	41.0	15.8	(42.7)	0.5	(13.3)	0.0	---	0.0	---	16.3	(39.8)
1993	35.1	3.8	38.9	12.8	(36.4)	0.4	(10.6)	0.0	---	0.0	---	13.2	(33.9)
1994	34.5	3.8	38.3	12.4	(36.0)	0.4	(10.6)	0.0	---	0.0	---	12.8	(33.5)
1995	33.4	3.8	37.2	11.9	(35.5)	0.4	(10.5)	0.0	---	0.0	---	12.3	(32.9)
1996	33.1	3.7	36.8	10.9	(32.9)	0.4	(9.6)	0.0	---	0.0	---	11.2	(30.6)
1997	33.2	3.7	36.9	10.8	(32.6)	0.4	(9.6)	0.0	---	0.0	---	11.2	(30.3)
1998	33.4	3.7	37.1	10.2	(30.5)	0.3	(8.8)	0.0	---	0.0	---	10.5	(28.3)
1999	33.7	3.9	37.6	10.2	(30.2)	0.3	(8.7)	0.0	---	0.0	---	10.5	(28.0)
2000	35.1	4.0	39.1	11.2	(31.8)	0.4	(9.8)	0.0	---	0.0	---	11.6	(29.5)
2001	36.7	4.2	40.9	10.9	(29.6)	0.6	(14.1)	0.0	---	0.0	---	11.5	(28.0)
2002	40.8	3.9	44.7	12.4	(30.3)	0.6	(14.4)	0.0	---	0.0	---	12.9	(28.9)
2003	47.8	4.2	52.0	13.1	(27.4)	0.6	(14.6)	0.0	---	0.0	---	13.7	(26.4)
2004	49.4	4.2	53.6	13.4	(27.1)	0.7	(16.0)	0.0	---	0.0	---	14.1	(26.2)
2005	52.0	4.3	56.3	14.3	(27.5)	0.7	(16.7)	$1.7	(3.3%)	$0.0	(0.8%)	16.8	(29.8)
2006	49.7	4.3	54.0	13.2	(26.5)	0.7	(16.7)	2.4	(4.9)	0.1	(1.4)	16.4	(30.3)
2007	51.2	5.2	56.4	13.6	(26.5)	0.9	(17.5)	2.5	(4.9)	0.1	(1.5)	17.1	(30.3)
2008	53.5	5.7	59.2	15.5	(29.0)	1.1	(19.1)	2.7	(5.0)	0.1	(1.5)	19.4	(32.7)
2009	57.1	5.9	63.0	16.8	(29.4)	1.2	(21.1)	4.0	(7.0)	0.1	(2.3)	22.2	(35.2)
2010	58.3	6.1	64.4	18.9	(32.4)	1.5	(24.5)	4.7	(8.0)	0.2	(2.8)	25.2	(39.2)
2011	56.6	10.3	66.9	18.5	(32.7)	2.5	(24.4)	4.6	(8.2)	0.3	(3.2)	26.0	(38.9)
2012	57.3	9.2	66.5	19.7	(34.3)	2.2	(24.3)	5.0	(8.8)	0.3	(3.6)	27.3	(41.0)
2013	57.1	9.2	66.3	18.3	(32.1)	2.2	(24.4)	6.4	(11.2)	0.3	(3.2)	27.3	(41.1)
2014	57.0	8.4	65.4	18.5	(32.4)	2.1	(24.5)	6.0	(11.7)	0.2	(2.9)	26.8	(40.9)
2015	56.0	8.3	64.3	18.0	(32.2)	1.9	(22.5)	6.0	(11.8)	0.2	(2.7)	26.1	(40.6)
2016	56.3	8.3	64.6	17.7	(31.4)	1.9	(23.0)	6.7	(13.1)	0.2	(2.9)	26.5	(41.0)
2017	56.4	6.9	63.3	16.3	(28.9)	1.6	(22.8)	6.6	(12.8)	0.2	(3.3)	24.6	(38.9)

↑ **A C T U A L** ↑

↓ **P R O J E C T E D** ↓

Fiscal Year	Payroll Full-Time	Payroll Part-Time	Payroll Total	DoD Normal Cost Payments Full-Time		DoD Normal Cost Payments Part-Time		Treasury Normal Cost Payments Full-Time		Treasury Normal Cost Payments Part-Time		Normal Cost Payments Total	
2018	$58.3	$7.4	$65.7	$16.6	(28.4%)	$1.7	(22.6%)	$6.6	(12.5%)	$0.2	(3.3%)	$25.1	(38.1%)
2019	61.2	9.6	70.8	18.6	(30.4)	2.4	(24.7)	7.6	(13.6)	0.3	(3.6)	28.9	(40.8)
2020	61.3	8.4	69.7	18.4	(30.1)	2.0	(24.5)	8.3	(13.5)	0.3	(3.6)	29.1	(41.7)
2021	62.9	8.6	71.5	18.7	(29.7)	2.1	(24.3)	8.5	(13.4)	0.3	(3.6)	29.6	(41.3)
2022	64.4	8.8	73.3	19.0	(29.4)	2.1	(24.0)	8.6	(13.4)	0.3	(3.6)	30.0	(41.0)
2023	65.9	9.1	74.9	19.2	(29.2)	2.2	(23.9)	8.8	(13.3)	0.3	(3.6)	30.5	(40.7)
2024	67.2	9.3	76.5	19.4	(28.9)	2.2	(23.7)	8.9	(13.2)	0.3	(3.5)	30.9	(40.3)
2025	68.6	9.5	78.1	19.6	(28.6)	2.2	(23.5)	9.0	(13.2)	0.3	(3.5)	31.2	(40.0)
2026	70.0	9.7	79.8	19.8	(28.3)	2.3	(23.3)	9.2	(13.1)	0.3	(3.5)	31.6	(39.7)
2027	71.5	10.0	81.5	20.1	(28.1)	2.3	(23.1)	9.3	(13.1)	0.3	(3.5)	32.0	(39.3)
2028	73.8	10.3	84.1	20.5	(27.8)	2.4	(23.0)	9.6	(13.0)	0.4	(3.5)	32.8	(39.0)
2029	76.2	10.7	86.9	21.0	(27.5)	2.4	(22.8)	9.9	(12.9)	0.4	(3.5)	33.6	(38.7)
2030	78.7	11.1	89.8	21.5	(27.2)	2.5	(22.6)	10.1	(12.9)	0.4	(3.5)	34.5	(38.4)
2031	81.3	11.5	92.8	22.0	(27.0)	2.6	(22.5)	10.4	(12.8)	0.4	(3.5)	35.4	(38.1)
2032	84.0	11.9	95.9	22.5	(26.8)	2.7	(22.3)	10.7	(12.8)	0.4	(3.5)	36.3	(37.8)
2033	86.6	12.3	99.0	23.0	(26.6)	2.7	(22.2)	11.0	(12.7)	0.4	(3.4)	37.2	(37.6)
2034	89.4	12.7	102.1	23.6	(26.4)	2.8	(22.0)	11.3	(12.7)	0.4	(3.4)	38.2	(37.4)
2035	92.4	13.2	105.5	24.2	(26.3)	2.9	(21.9)	11.7	(12.7)	0.5	(3.4)	39.3	(37.2)
2036	95.5	13.6	109.1	24.9	(26.1)	3.0	(21.7)	12.1	(12.6)	0.5	(3.4)	40.4	(37.1)
2037	98.7	14.1	112.7	25.7	(26.0)	3.0	(21.6)	12.4	(12.6)	0.5	(3.4)	41.6	(36.9)
2038	102.0	14.5	116.5	26.4	(25.9)	3.1	(21.5)	12.8	(12.6)	0.5	(3.4)	42.9	(36.8)
2039	105.3	15.0	120.3	27.2	(25.9)	3.2	(21.3)	13.2	(12.6)	0.5	(3.4)	44.2	(36.7)
2040	108.6	15.5	124.1	28.0	(25.8)	3.3	(21.2)	13.6	(12.6)	0.5	(3.4)	45.5	(36.6)
2041	112.1	16.0	128.1	28.9	(25.7)	3.4	(21.1)	14.1	(12.5)	0.5	(3.4)	46.8	(36.6)
2042	115.8	16.5	132.2	29.8	(25.7)	3.5	(20.9)	14.5	(12.5)	0.6	(3.4)	48.3	(36.5)
2043	119.5	17.0	136.5	30.7	(25.7)	3.5	(20.8)	15.0	(12.5)	0.6	(3.4)	49.8	(36.5)
2044	123.3	17.6	140.9	31.6	(25.7)	3.6	(20.7)	15.4	(12.5)	0.6	(3.4)	51.3	(36.4)
2045	127.3	18.1	145.4	32.6	(25.6)	3.7	(20.6)	15.9	(12.5)	0.6	(3.3)	52.9	(36.4)

Note: Treasury Normal Cost Contributions are net of actual and expected sequestered amounts as discussed in Appendix M.

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TABLE 10

MILITARY RETIREMENT SYSTEM
PAST AND PROJECTED UNFUNDED LIABILITY PAYMENTS ON OCTOBER 1
($ in billions)

Calendar Year	Original UFL	Assumption Changes	Benefit Changes	Actuarial Experience	Total
1984	$9.500	$.000	$.000	$.000	$9.500
1985	10.500	0.000	0.000	0.000	10.500
1986	11.042	0.000	0.000	-0.518	10.524
1987	11.679	0.000	-0.113	-1.281	10.285
1988	12.003	0.135	-0.112	-2.244	9.782
1989	16.300	-2.116	-0.132	-3.456	10.596
1990	17.237	-2.237	-0.140	-4.078	10.782
1991	18.228	-2.366	-0.148	-4.508	11.206
1992	22.621	-4.625	-0.171	-5.552	12.273
1993	23.865	-4.880	-0.180	-6.897	11.908
1994	25.177	-5.148	-0.189	-8.370	11.470
1995	27.746	-6.619	-0.079	-10.349	10.699
1996	33.456	-6.917	-0.042	-11.346	15.151
1997	36.227	-8.529	0.048	-12.627	15.119
1998	37.676	-8.870	0.050	-13.606	15.250
1999	39.183	-9.201	0.052	-14.732	15.302
2000	42.098	-9.984	0.335	-16.360	16.089
2001	43.571	-9.862	0.472	-17.134	17.047
2002	45.096	-10.059	0.661	-17.770	17.928
2003	46.674	-10.741	0.977	-18.721	18.189
2004	46.857	-10.959	4.627	-19.167	21.358
2005	48.614	-11.337	6.081	-20.178	23.180
2006	50.437	-11.238	6.313	-19.464	26.048
2007	66.711	-7.642	6.430	-19.312	46.187
2008	69.213	-5.076	7.026	-20.038	51.125
2009	70.379	-1.241	7.100	-17.619	58.619
2010	73.018	-1.012	7.367	-17.969	61.404
2011	75.757	0.171	7.643	-18.820	64.751
2012	78.598	0.386	7.930	-19.181	67.733
2013	81.373	3.150	8.211	-19.849	72.885
2014	84.221	2.594	8.498	-19.751	75.562
2015	87.169	3.770	8.796	-20.446	79.289
2016	90.024	4.459	7.724	-21.015	81.192
2017	92.950	3.736	7.904	-21.713	82.877

↑ **A C T U A L** ↑

↓ **P R O J E C T E D** ↓

Calendar Year	Original UFL	Assumption Changes	Benefit Changes	Actuarial Experience	Total
2018	94.971	6.383	8.214	-21.572	87.996
2019	98.057	6.590	8.481	-22.206	90.922
2020	101.244	6.804	8.757	-23.745	93.060
2021	104.535	7.025	9.041	-24.516	96.085
2022	107.932	7.254	9.335	-25.313	99.208
2023	111.440	7.489	9.639	-26.136	102.432
2024	115.062	7.733	9.952	-26.985	105.762
2025	118.802	7.984	10.276	-27.862	109.200
2026	0.000	8.244	10.609	-28.767	-9.914
2027	0.000	8.512	10.954	-29.703	-10.237
2028	0.000	8.788	11.310	-30.668	-10.570
2029	0.000	9.074	11.678	-31.664	-10.912
2030	0.000	9.369	12.057	-32.694	-11.268
2031	0.000	9.673	12.449	-16.827	5.295
2032	0.000	9.987	12.854	0.000	22.841
2033	0.000	10.312	13.272	0.000	23.584
2034	0.000	10.647	13.703	0.000	24.350
2035	0.000	10.993	14.149	0.000	25.142
2036	0.000	11.351	1.602	0.000	12.953
2037	0.000	11.719	0.000	0.000	11.719
2038	0.000	12.100	0.000	0.000	12.100
2039	0.000	12.494	0.000	0.000	12.494
2040	0.000	12.900	0.000	0.000	12.900
2041	0.000	13.319	0.000	0.000	13.319
2042	0.000	13.752	0.000	0.000	13.752
2043	0.000	14.199	0.000	0.000	14.199
2044	0.000	14.660	0.000	0.000	14.660
2045	0.000	14.348	0.000	0.000	14.348

Notes: Actuarial Experience includes impact of sequestered Treasury Normal Cost payments.
This page replaces Table 10 in the 2017 MRF Valuation Report published in December 2018; it has corrections to errors in the later years of the projection.

DoD Office of the Actuary

TABLE 11

MILITARY RETIREMENT SYSTEM
PAST AND PROJECTED UNFUNDED LIABILITY BALANCE ON SEPTEMBER 30 (Before Payment)
($ in billions)

Calendar Year	Original UFL	Assumption Changes	Benefit Changes	Actuarial Experience	Total
1984	$528.700	$.000	$.000	$.000	$528.700
1985	553.500	0.000	0.000	-13.800	539.700
1986	578.800	0.000	-3.000	-34.200	541.600
1987	605.200	3.600	-2.998	-59.500	546.302
1988	632.700	-50.062	-3.076	-81.180	498.382
1989	664.173	-53.711	-3.172	-94.562	512.728
1990	693.224	-55.207	-3.253	-102.283	532.481
1991	723.306	-97.578	-3.331	-111.879	510.518
1992	757.959	-102.353	-3.421	-139.327	512.858
1993	790.488	-105.057	-3.494	-167.942	513.995
1994	824.120	-130.691	-0.968	-201.052	491.409
1995	852.872	-134.017	-0.832	-217.255	500.768
1996	880.822	-159.859	0.897	-231.424	490.436
1997	902.444	-162.883	1.000	-244.673	495.888
1998	922.521	-164.057	1.014	-259.976	499.503
1999	942.360	-169.827	6.583	-277.940	501.176
2000	959.626	-164.942	9.414	-284.168	519.931
2001	974.873	-162.970	13.075	-285.393	539.585
2002	989.509	-170.593	19.216	-293.105	545.027
2003	1,003.439	-172.248	94.231	-297.115	628.308
2004	1,016.562	-171.288	125.272	-304.415	666.132
2005	1,030.312	-165.769	128.261	-290.020	702.784
2006	1,043.054	-126.439	131.332	-282.660	765.287
2007	1,052.174	-89.221	140.140	-279.068	824.025
2008	1,044.591	-27.990	142.047	-254.441	904.207
2009	1,031.462	-19.974	142.785	-245.726	908.548
2010	1,016.346	2.415	143.487	-258.786	903.461
2011	997.569	8.208	143.947	-252.478	897.246
2012	974.816	68.621	144.141	-254.041	933.537
2013	945.510	58.240	143.703	-262.357	885.095
2014	911.665	81.894	142.944	-268.738	867.765
2015	872.953	96.068	127.811	-280.383	816.450
2016	827.038	80.674	124.563	-289.710	742.564
2017	775.707	140.441	131.072	-279.349	767.871

↑ **A C T U A L** ↑

↓ **P R O J E C T E D** ↓

Calendar Year	Original UFL	Assumption Changes	Benefit Changes	Actuarial Experience	Total
2018	716.895	143.540	129.327	-269.764	719.997
2019	653.020	144.015	127.168	-260.602	663.601
2020	582.711	144.296	124.622	-250.315	601.313
2021	505.540	144.367	121.658	-237.899	533.666
2022	421.056	144.209	118.248	-224.052	459.460
2023	328.780	143.802	114.358	-208.676	378.265
2024	228.207	143.129	109.955	-191.667	289.624
2025	118.802	142.166	105.004	-172.916	193.055
2026	0.000	140.891	99.464	-152.307	88.048
2027	0.000	139.279	93.298	-129.717	102.860
2028	0.000	137.306	86.461	-105.014	118.752
2029	0.000	134.943	78.908	-78.064	135.788
2030	0.000	132.163	70.592	-48.720	154.035
2031	0.000	128.934	61.462	-16.827	173.568
2032	0.000	125.224	51.463	0.000	176.687
2033	0.000	120.999	40.540	0.000	161.538
2034	0.000	116.221	28.631	0.000	144.852
2035	0.000	110.853	15.675	0.000	126.527
2036	0.000	104.853	1.602	0.000	106.454
2037	0.000	98.177	0.000	0.000	98.177
2038	0.000	90.780	0.000	0.000	90.780
2039	0.000	82.614	0.000	0.000	82.614
2040	0.000	73.627	0.000	0.000	73.627
2041	0.000	63.763	0.000	0.000	63.763
2042	0.000	52.966	0.000	0.000	52.966
2043	0.000	41.175	0.000	0.000	41.175
2044	0.000	28.325	0.000	0.000	28.325
2045	0.000	14.348	0.000	0.000	14.348

Notes: Actuarial Experience includes impact of sequestered Treasury Normal Cost payments.
This page replaces Table 11 in the 2017 MRF Valuation Report published in December 2018; it has corrections to errors in the later years of the projection.

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The Military Retirement Fund Transaction Process

The description of deficit, debt, and funding impact contained in this section are applicable under the current practices of the federal government regarding budget accounting and tax policy. These practices do not provide for increases in taxes to fund the Military Retirement System beyond what is required to pay benefits to retirees and survivors each year, but do result in increases in the national debt.

A nonrevolving trust fund was created inside the Unified Budget of the federal government for the monies of the Military Retirement System. This fund has three sources of income: (1) normal cost payments made by DoD, (2) unfunded liability and Concurrent Receipt normal cost payments made by Treasury, and (3) interest earnings on investments in government securities made by Treasury and the payment of the par values of these securities at maturity. All three of these items are intragovernmental transfers consisting of debits from one government account and credits to another.

The Fund has two types of payouts: (1) payments to retirees and survivors of retirees and (2) purchases of U.S. Treasury securities. The purchase of a Treasury security is also an intragovernmental transfer, while a payment to a retiree or a survivor is not.

Figure 2 on the following page depicts this process. The only transactions in a particular year that directly affect the deficit of the Unified Budget are those that pass in or out of the government, such as tax collections ("in") and retiree or survivor payments ("out"). The intragovernmental transfers are debits and credits within the federal budget, with no direct effect on the deficit. The following examples illustrate the process:

- If DoD debits $25 billion in normal cost payments and the Fund credits the $25 billion, the net direct federal budget deficit effect is zero.

- If the Fund purchases $60 billion in securities (debit) and the Treasury sells $60 billion in securities (credit), the net direct federal budget deficit effect is zero.

- If the Treasury pays $20 billion interest (debit) and the Fund earns $20 billion interest (credit), the net direct federal budget deficit effect is zero.

- Disregarding all other government programs, if the government collects $45 billion in tax revenues (credit) and pays $50 billion to retirees (debit), the net direct federal budget deficit effect is $5 billion.

FIGURE 2

MILITARY RETIREMENT SYSTEM
UNIFIED BUDGET

TAXES

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DOD NORMAL          INTRAGOVERNMENTAL TRANSFER
COST PAYMENTS       ───────────────────────────►

TREASURY            INTRAGOVERNMENTAL TRANSFER
PAYMENTS            ───────────────────────────►      MILITARY
                                                       RETIREMENT
TREASURY                                               FUND
PAYMENTS
OF INTEREST         INTRAGOVERNMENTAL TRANSFER
PLUS PAR           ───────────────────────────►
VALUE AT
MATURITY

TREASURY            INTRAGOVERNMENTAL TRANSFER
SECURITIES         ◄───────────────────────────
```

OUTLAYS
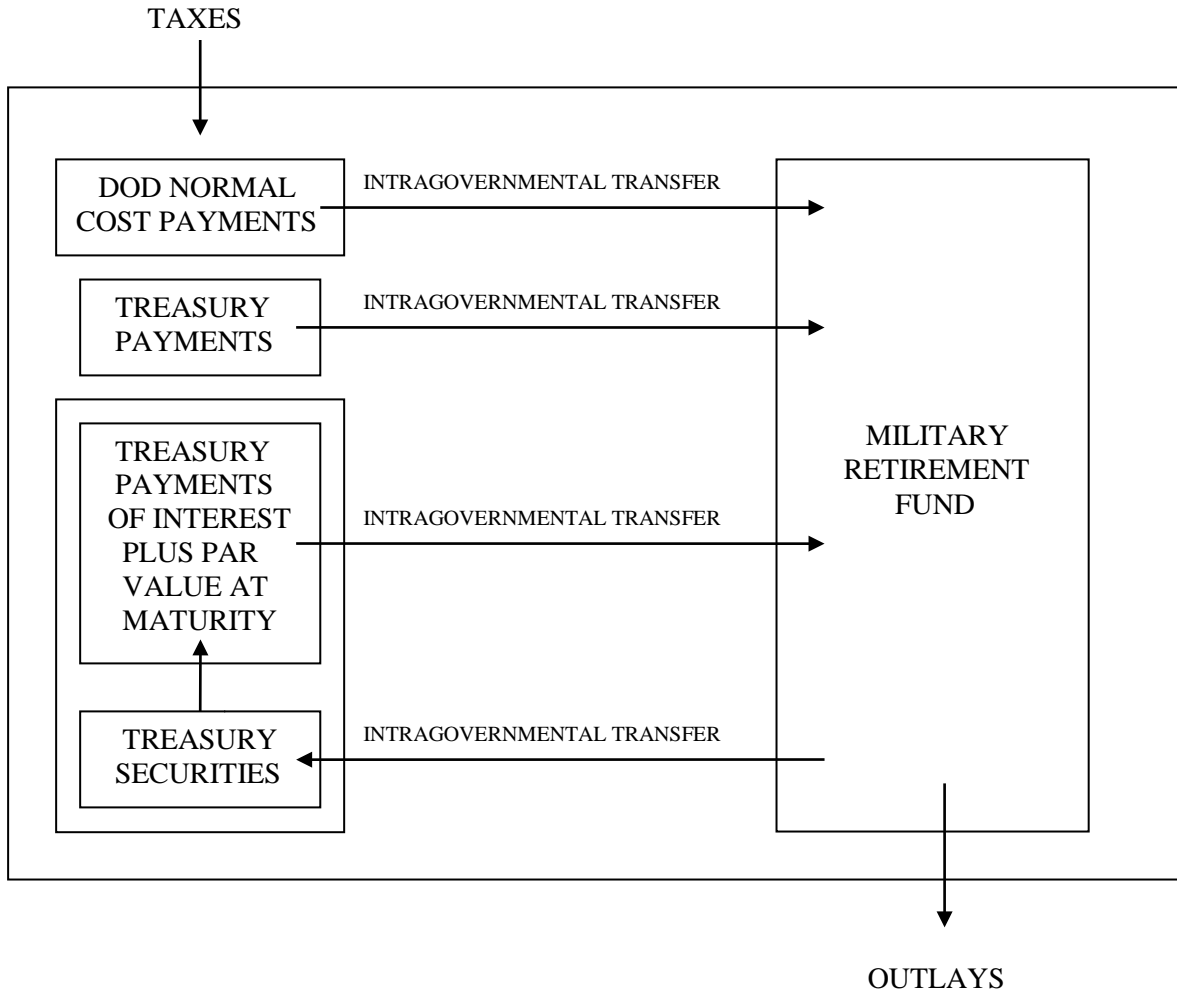
  All of the intragovernmental transfers in Figure 2 will always generate both a credit and an associated equal debit within the Unified Budget. Consequently, under current federal budget accounting practices, contributions to the Fund beyond what are required to pay benefits to retirees and survivors that year have no impact on the total federal deficit. Just as in the pay-as-you-go method, the only transactions that directly affect the deficit in the retirement system accounting process are payments to retirees and survivors (i.e. outlays).

  On the other hand, the purchase of securities by the Fund does increase the national debt, specifically the portion of the debt held by the government. The portion held by the public will not change. However, the total debt will increase and this requires an increase in the statutory borrowing authority (debt ceiling).

Suppose that in the year 2017 the amount needed to pay retirees was $55 billion and the Military Retirement Fund had grown to $660 billion. The following transactions would take place:

- Fund redeems $55 billion in Treasury securities (credit).

- Treasury pays $55 billion to Fund (debit).

- Net federal surplus zero.

Since no budget surplus can be derived from using fund money, the government still has a need for $55 billion to pay retirees—the same need it would have under the pay-as-you-go system. Accordingly, the Fund cannot transfer liabilities from one tax year to another.

However, funding does have an effect on the DoD budget. With the normal cost payments (except for Concurrent Receipt) in the DoD budget, policymakers now consider the impact on future retirement costs when they make manpower decisions, and this could have a significant impact on future federal budgets. For example, if a decision were made today to double the size of the active duty and reserve forces, the DoD budget would automatically have an immediate increase in retirement funding obligations. Under the pay-as-you-go method, the retirement expenses would not necessarily be considered in the initial decision since they would not emerge for 20 years.

In their prior quadrennial reports to the President and Congress, the DoD Board has noted that the establishment of the Fund does not represent actual advance funding. Real advance funding could be achieved by investing the assets outside the Unified Budget, for example, in stocks or corporate bonds, or in bonds of state and local municipalities or quasi-federal government agencies (like Fannie Mae or Freddie Mac). Instead, the accrual accounting procedure now in place is essentially an internal cost accounting system. While the nation has not technically set aside money to pay the benefits of those who have served in uniform, the Fund can be viewed as earmarking future tax receipts for the benefit of military retirees. As such, the existence of the Fund promotes a measure of "psychological security" for military members.

Along these same lines, the DoD Board has frequently noted two common misconceptions about the Fund:

1) ***The Fund represents government tax receipts that have been accumulated in the past.*** Actually, the Fund represents future tax receipts that will be allocated to pay principal and interest on government bonds being held by the Fund.

2) ***The financial and actuarial status of the Fund can be measured by prospective short-term (or medium-term) cash flows.*** Rather, the entire present value of the liabilities must be compared to the sum of the Fund and prospective contributions. A year-by-year projection of cash flow is also needed to measure the Fund's ability to pay annual benefits. Comparing the past and projected dollars as a proportion of payroll (as shown in Table 8) is another key measure of sustainability.

The current financing procedure, although carried out by allocating no more tax dollars than needed to pay benefits to military retirees as they come due, has nonetheless contributed to a more accurate allocation of resources within the defense budget and to formal recognition--in the national debt--of the government's obligation to pay retirement benefits to military members and eligible survivors/annuitants. This represents more responsible fiscal practice than would obtain under a pay-as-you-go system.

The fact that costs are fully recognized in advance provides greater benefit security over the long term. Also, when there is a Fund, the system is not as dependent on obtaining the necessary appropriation from Congress each year in order to pay benefits for that year. This can provide additional benefit security in the short run.

The actuarially based costs of the retirement system are reasonable given the plan provisions, and the system is considered sustainable assuming continuing willingness of the government to pay the required costs.

APPENDIX A

THE MILITARY RETIREMENT SYSTEM: BENEFITS

THE MILITARY RETIREMENT SYSTEM: BENEFITS

As of September 30, 2017

Summary

The Military Retirement System applies to members of the Army, Navy, Marine Corps, and Air Force. However, most of the provisions also apply to retirement systems for members of the Coast Guard (administered by the Department of Homeland Security), officers of the Public Health Service (administered by the Department of Health and Human Services), and officers of the National Oceanic and Atmospheric Administration (administered by the Department of Commerce). Only those members in plans administered by the Department of Defense (DoD) are included in this report.

Generally, the system is a funded, noncontributory defined benefit plan that includes nondisability retired pay, disability retired pay, retired pay for reserve service, survivor annuity programs, and special compensation programs for certain disabled retirees. The Service Secretaries may approve immediate nondisability retired pay at any age with credit of at least 20 years of active duty service. Reserve retirees generally must be at least 60 years old and have at least 20 qualifying years of service before retired pay commences, with certain exceptions. Public Law (P.L.) 110-181 allows for a day-for-day reduction (in 90 day blocks) in the reserve retirement eligibility age from age 60 (to an age no lower than 50) for every 3 months served in a contingency operation or national emergency, for service after enactment. There is no vesting of benefits before retirement.

There are distinct nondisability benefit formulas related to four populations within the Military Retirement System. A summary is displayed in Tables B-1 and B-2 (see Appendix B).

1) *Final Pay*: Military personnel who first became members of a uniformed service before September 8, 1980, have retired pay equal to final basic pay times a multiplier. The multiplier is equal to 2.5 percent times years of service.

2) *High-3 (HI-3)*: If the retiree first became a member of a uniformed service on or after September 8, 1980, the average of the highest 36 months of basic pay is used instead of final basic pay.

3) *Career Status Bonus (CSB)/Redux*: Those who first became a member of a uniformed service on or after August 1, 1986, may choose between a High-3 and CSB/Redux retirement. Those who elect CSB/Redux receive the Career Status Bonus outlined below, also have retired pay computed on a base of the average of their highest 36 months of basic pay, but are subject to a multiplier penalty if they retire with less than 30 years of service; however, at age 62, their retired pay is recomputed without the penalty. Members make their election during the fifteenth year of service and may receive the Career Status Bonus of $30,000 in either a lump-sum or installments. Those who elect CSB/Redux generally must remain continuously on active duty until they complete 20 years of active duty service or forfeit a portion of the $30,000 (exceptions include death and disability retirement). The National Defense Authorization Act for FY 2016 (NDAA 2016, P.L. 114-92) sunsets the CSB/Redux benefit tier by not allowing any CSB elections after December 31, 2017, and repeals all aspects of the Bipartisan Budget Act (BBA) 2013.

4) ***Blended Retirement System (BRS)***: Members who first become a member of a uniformed service <u>after December 31, 2017</u>, will be under the new Blended Retirement System (BRS) which was enacted in NDAA 2016 and takes effect January 1, 2018. Members who first entered the military before January 1, 2018, and who have served for fewer than 12 years (or for reservists, who have fewer than 4,320 points) as of December 31, 2017, will have the option to "opt-in" to BRS via an irrevocable election during a one-year (calendar year 2018) open season or remain in the High-3 system. Members who have served 12 or more years as of December 31, 2017, are not permitted to opt-in to BRS and will receive benefits based on their current plan. As a result of NDAA 2016, members with 12 or more but fewer than 15 years of service as of December 31, 2017, will not have the opportunity to opt-in to BRS or to elect the CSB and will automatically remain in the High-3 system[1]. The BRS lowers the nondisabled retired pay multiplier from 2.5 percent per year to 2.0 percent and includes automatic and matching government contributions to member Thrift Savings Plan (TSP) accounts and a mandatory mid-career continuation bonus if the member agrees to serve additional time. The BRS also provides members the choice of receiving a portion (either 25 percent or 50 percent) of their retired pay entitlement from when the member is eligible to begin receiving retired pay to normal Social Security retirement age (usually 67) as a discounted lump sum instead of an annuity. For additional information, see Table B-1 or refer to the DoD Office of Military Compensation website (http://militarypay.defense.gov/).

Retired pay and survivor annuity benefits are automatically adjusted annually to protect the purchasing power of initial retired pay. The benefits associated with members first entering the armed services before August 1, 1986, or those entering on or after that date who do not take the CSB, have their benefits adjusted annually by the percentage increase in the average Consumer Price Index (CPI). Refer to the section "Cost-of-Living Increases" in this appendix for more information on the CPI. Receiving a benefit adjustment based on the percentage increase in the CPI is commonly referred to as full CPI protection. Benefits associated with members entering on or after August 1, 1986, who elect the $30,000 CSB bonus payment are annually increased by the percentage change in the CPI minus 1 percent (except when the change in the CPI is less than or equal to 1 percent), but at the military member's age 62, or when the member would have been age 62 for a survivor annuity, the benefits are restored to the amount that would have been payable had full CPI protection been in effect. This restoral is in combination with the elimination of the multiplier penalty for retiring with less than 30 years of service. However, after this restoral, partial indexing (CPI minus 1 percent) continues for future retired pay and survivor annuity payments.

The FY 2011 NDAA (P.L. 111-383) required "amounts of retired pay and retainer pay due a retired member of the uniformed services shall be paid on the first day of each month beginning after the month in which the right to such pay accrues." This means that when the first day of the month falls on a non-business day (weekend/holiday), the pay must be paid the preceding business day. This legislation did not apply to survivor annuitant pay and Combat-Related Special Compensation. This results in retirees receiving 13 payments in some fiscal years and 11 payments in others, with 12 payments occurring in a typical fiscal year. Note that

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[1] Because of breaks in service and technical differences in the definition of qualifying years of service under BRS compared to CSB/Redux, it's not possible to precisely define this group based solely on dates of entry, but generally it will include members who joined the service after December 31, 2002, and on or before December 31, 2005.

annual fiscal year amounts shown throughout this report represent 12 monthly payments without regard to the 2011 NDAA. Comments regarding this law are also noted in the Table 8 footnotes in the main text.

Nondisability Retirement From Active Service

The current system allows voluntary retirement upon completion of at least 20 years of service at any age, subject to Service Secretary approval. The military retiree receives immediate retired pay calculated as (base pay) times (a multiplier). Base pay is equal to terminal basic pay if the retiree first became a member of a uniformed service before September 8, 1980. It is equal to the average of the highest 36 months of basic pay for all other members. Refer to the prior section for a description of the four benefit tiers of nondisability retirement.

As of September 2017, 1.47 million nondisability retirees from active duty and full-time reserves were receiving an annualized retired pay entitlement totaling $45.6 billion. Included in this number are a reported 68,109 nondisabled retirees who elected CSB/Redux.

Disability Retirement

A military member in an active component or on active duty for more than 30 days who is found unfit for duty is entitled to disability retired pay if the disability:

(1) based upon accepted medical principles, is of a permanent nature and stable;
(2) is incurred while entitled to basic pay (or while on authorized absence in a status not entitled to basic pay);
(3) is neither the result of the member's intentional misconduct nor willful neglect;
(4) was not incurred during a period of unauthorized absence; and
(5) either:
    (a) the member has at least 20 years of service; or
    (b) the disability is rated at least 30 percent under the Department of Veterans Affairs Schedule of Rating Disabilities (VASRD) and one of the following conditions is met:
      (i) the disability was not noted at the time of the member's entrance on active duty (unless clear and unmistakable evidence demonstrates that the disability existed before the member's entrance on active duty and was not aggravated by active military service);
      (ii) the disability is the proximate result of performing active duty;
      (iii) the disability incurred in the line of duty in time of war or national emergency; or
      (iv) the disability was incurred in the line of duty after September 14, 1978.

Under certain conditions generally similar to the above, members on active duty for 30 days or less or on inactive-duty training are also entitled to disability retired pay for disabilities incurred or aggravated in the line of duty.

In disability retirement, the member may elect to receive retired pay equal to either:
(1) the accrued nondisability retirement benefit regardless of eligibility to retire; or
(2) base pay multiplied by the rated percent of disability.

Except for members with a multiplier under (1) that is greater than 75 percent (which will equate to different years of service depending on whether the member is under BRS), the benefit cannot be more than 75 percent of base pay. Only the excess of (1) over (2) is subject to federal income taxes if the member had service on or before September 24, 1975. If not a member of a uniformed service on September 24, 1975, disability retired pay is tax-exempt only for those disabilities that are combat or hazardous duty related. Base pay is equal to final basic pay if the retiree first became a member of a uniformed service before September 8, 1980; otherwise, base pay is equal to the average of the highest 36 months of basic pay.

Members whose disabilities may not be permanent are placed on a temporary-disability retired list and receive disability retirement pay just as if they were permanently disabled. However, they must be physically examined every 18 months for any change in disability. A final determination must be made within five years, except that for retirees placed on this list after December, 31, 2016 the final determination must be made within three years[2]. The temporary disability pay is calculated like the permanent disability retired pay, except that it can be no less than 50 percent of base pay.

Members who elected the CSB/Redux retirement option, but who retire for disability, are not subject to the reduced CSB/Redux retired pay multiplier and are awarded retired pay based on the disability retired rules outlined above. However, such members continue to be subject to the reduced CPI (with age 62 restoral) as Career Status Bonus recipients. Members who are under BRS and who retire for disability do not have the option of receiving a portion of retired pay as a discounted lump sum.

Past Congressional action has been directed to the care of disabled retirees and veterans. P.L. 110-181 established the Physical Disability Board of Review (PDBR). The PDBR has the authority to reexamine the files of veterans medically separated with ratings under 30 percent between September 11, 2001, and December 31, 2009, and potentially offer disability retirements. The PDBR is expected to review files for approximately 77,000 veterans.

As of September 2017, 119,000 disability retirees were receiving an annualized retired pay entitlement totaling $1.61 billion. Included in this number are a reported 3,614 disability retirees who elected CSB/Redux.

Reserve Retirement

Members of the Reserve Components may retire after 20 qualifying years of creditable service. However, reserve retired pay is not payable until age 60 unless the member performs certain types of active duty or active service specified in NDAA 2008 (P.L. 110-181), in which case the age is reduced below 60 by three months for every 90 days of such service within any two consecutive fiscal years. However, the age cannot be reduced below 50, and eligibility for subsidized retiree health benefits remains at age 60 even if the eligibility age for retired pay is reduced. For members not under BRS, retired pay is computed as retired pay base times 2.5 percent times years of service. For members under BRS (as explained below) the 2.5 percent multiplier is reduced to 2.0 percent. If the reservist was first a member of a uniformed service

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[2] The 2017 National Defense Authorization Act lowered the maximum length on the temporary-disability retired list from 5 years to 3 years, with grandfathering for those currently on the list.

before September 8, 1980, retired pay base is defined as the active duty basic pay in effect for the retiree's grade and years of service at the time that retired pay begins. If the reservist first became a member of the armed services on or after September 8, 1980, retired pay base is the average basic pay for the member's grade in the highest 36 months computed as if he/she was on active duty for the entire period preceding the age at which retired pay commences. The years of service are determined by using a point system, where 360 points convert to a year of service. Typically, one point is awarded for one day of active duty service (e.g. active duty training) or one inactive duty training (IDT) drill attendance. Reservists may perform two IDT periods in one day thereby receiving two retirement points per day. In addition, 15 points are awarded for completion of one year's membership in an active reserve status. A creditable year of service is one in which the member earned at least 50 points. A member generally cannot retire with less than 20 creditable years, although points earned in non-creditable years are used in the retirement calculation. Beginning with years of service that include October 30, 2007, non-active duty points are limited in any year to no more than 130. Lesser limitations have applied in the past.

Reservists who first became a member on or before December 31, 2017, and had fewer than 4,320 points (equating to 360 points per year multiplied by 12 years of service) as of that date are eligible to opt-in to BRS. Reservists who first become a member of the uniformed service after December 31, 2017, are automatically under BRS. For reserve retirement under BRS, the discounted lump sum option covers the period from the date the member first became eligible to receive retired pay (i.e., 60 or earlier if certain qualifying service is performed) to normal Social Security retirement age (usually 67).

As of September 2017, 409,000 reserve retirees were receiving an annualized retired pay entitlement totaling $6.4 billion.

Survivor Benefits

Legislation originating in 1953 provided optional survivor benefits. It was later referred to as the Retired Servicemen's Family Protection Plan (RSFPP). The plan proved to be expensive to the participants and inadequate since the survivor annuities were never adjusted for inflation and could not be more than 50 percent of retired pay. RSFPP was designed to be self-supporting in the sense that the present value of the reductions to retired pay equaled the present value of the survivor annuities.

On September 21, 1972, RSFPP was replaced by the Survivor Benefit Plan (SBP) for new retirees. RSFPP still covers those servicemen retired before 1972 who did not convert to the new plan or who retained RSFPP in conjunction with SBP. RSFPP continues to pay survivor annuities.

Retired pay is reduced, before taxes, for the member's cost of SBP. Total SBP costs are shared by the government and the retiree, so the reductions in retired pay are only a portion of the total cost of the SBP program.

The SBP survivor annuity is 55 percent of the member's base amount. The base amount is elected by the member, but cannot be less than $300 or more than the member's full gross monthly retired pay, with one exception. If the member elects CSB/Redux and is subject to a

penalty for service under 30 years in the calculation of retired pay, the maximum base amount is equal to the full retired pay without the penalty. However, the annuity for a survivor of a CSB/Redux retiree is subject to the reduced CPI.

When the plan started in 1972, benefits for those 62 and older were reduced by the amount of Social Security for which the survivor would be eligible based on the member's military pay. In 1985, that reduction formula was changed so all annuitants 62 and over received a reduced flat rate of 35 percent of the member's base. Beginning October 1, 2005, the age 62 reduced rate was phased out in 5 percent increments. On April 1, 2008, the survivor benefit reduction at age 62 was fully eliminated and the rate of 55 percent of the member's elected base became standard for all survivors, regardless of age.

During FY 1987, SBP's treatment of survivor remarriages changed. Prior to the change, a surviving spouse remarrying before age 60 had the survivor annuity suspended. The change lowered the age to 55. If the remarriage ends in divorce or death, the annuity is reinstated.

Members who die on active duty are generally assumed to have retired with full disability on the day they died and to have elected full SBP coverage for spouses, former spouses, and/or children. If it is more beneficial for the survivors to have elected child only because of Dependency and Indemnity Compensation (DIC) offsets, the family has the option to make that election instead. If the death does not occur in the line of duty, the SBP benefit is based on the member's years of service, rather than assuming a full disability retirement. Insurable interest elections may be applicable in some cases. These benefits have been improved and expanded over the history of the program.

The surviving spouse (or dependent children, if there is no surviving spouse or if the spouse subsequently dies) of a reservist who dies in the line of duty while performing IDT service is entitled to an SBP annuity. For payments prior to December 23, 2016, the annuity is based on the reservist's years of service. Due to NDAA 2017, effective December 23, 2016 reservists who die in the line of duty while performing IDT receive an SBP annuity equivalent to what they would have received if they had died in the line of duty on active duty (i.e., the annuity assumes the reservist retired with full disability and elected full SBP on the date of death).

SBP annuities generally are reduced by any VA survivor benefits (Dependency and Indemnity Compensation (DIC)), and all premiums relating to the reductions are returned to the survivor. The FY 2008 NDAA enacted, and subsequent legislation extended, a temporary Special Survivor Indemnity Allowance (SSIA) that pays a monthly amount ($50 in FY 2009 grading up to $310 in FY 2017 and FY 2018) to survivors with a DIC offset. Prior to NDAA 2018 the authority for the allowance ended in May 2018; the NDAA 2018 made it a permanent benefit with annual COLA increases.

As a result of the "Sharp Case" ruling, the SBP benefit of survivors with entitlement to both DIC and SBP who remarry after age 57 is not reduced by DIC benefits received.

As with retired pay, SBP annuities and premiums are increased annually with cost-of-living adjustments (COLAs). These COLAs are either full or partial CPI increases, depending on the benefit formula covering the member. If a member who elected the

CSB/Redux retirement option dies before age 62, the survivor is subject to partial COLAs and his/her annuity is increased on what would have been the member's 62nd birthday to the amount that would have been payable had full COLAs been in effect. Partial COLAs continue annually thereafter.

For reserve retirees, the retired pay reductions applicable under SBP apply for survivor coverage after a reservist turns 60 (or earlier if they have certain active service) and begins to receive retired pay. Reserve Component Survivor Benefit Program (RCSBP) provides annuities to survivors of reservists who die before age 60 (or earlier if they have certain active service), provided they attained 20 years of qualified service and elected to participate in the program (or were within their 90-day election window after receiving their "20-year letter"). However, if the death occurs either on active or inactive duty as described above, the survivor receives an annuity under SBP. The added cost of RCSBP coverage is borne completely by reservists through deductions from future retired pay.

Beginning October 1, 2008, a paid-up provision eliminated the reduction in retired pay for premiums for SBP and RSFPP coverage for participants age 70 or older whose retired pay has been reduced for at least 360 months.

On June 26, 2013, the U.S. Supreme Court ruled to overturn the Defense of Marriage Act (DOMA). While not a change to Title 10 U.S. military benefits per se, the ruling has the effect of allowing legal spouses of same-sex marriages to be eligible to receive SBP benefits.

SBP premiums for members who elect lump sums under BRS will be equivalent to what they would have been without the lump sum, and consequently, the survivors' annuities will be equivalent to what they would have been without the lump sum. The maximum base amount will be equal to unreduced retired pay (i.e., ignoring the lump sum), premiums will be deducted only from monthly retired pay received, and SBP benefits will commence upon the retiree's death.

As of September 2017, 325,000 survivors of military members were receiving an annualized annuity and/or SSIA entitlements totaling $3.9 billion. Included in these totals, there are 67,000 SSIA survivors receiving $0.2 billion (approximately 24,000 receive survivor pay as well).

Temporary Early Retirement Authority (TERA)

The FY 1993 NDAA (P.L. 102-484) granted temporary authority for the military services to offer early retirements to members with more than 15 but less than 20 years of service. The retired pay was calculated in the usual way except that there was a reduction of 1 percent for every year below 20 years of service. Part or all of this reduction can be restored at age 62 if the retired member works in a qualified public service job during the period from the date of retirement to the date on which the retiree would have completed 20 years of service. Unlike members who leave military service before 20 years with voluntary separation incentives or special separation benefits, these early retirees are generally treated like regular military retirees for the purposes of other retirement benefits. This authority originally expired on September 1, 2002.

The FY 2012 NDAA (P.L. 112-81) reinstated TERA, from January 2012 through December 2018, but without the qualified public service provision. The FY 2017 NDAA further extended TERA through December 2025.

As of September 2017, 68,000 TERA retirees were receiving an annualized retired pay entitlement totaling $1.2 billion.

Cost-of-Living Increases

All nondisability retirement, disability retirement, and most survivor annuities are adjusted annually for inflation. Cost-of-living adjustments (COLAs) are automatically scheduled to occur every 12 months, on December 1st, to be reflected in checks issued at the beginning of January.

The "full" COLA effective December 1 is computed by calculating the percentage increase in the average CPI of the third quarter of the prior calendar year to the third quarter of the current calendar year. The increase is based on the Urban Wage Earner and Clerical Worker Consumer Price Index (CPI-W) and is rounded to the nearest tenth of one percent. Recent retirees/annuitants receive a prorated COLA depending on their date of retirement/eligibility.

The benefits of retirees (and most survivors) are increased annually with the full COLA, except for those first entering a uniformed service on or after August 1, 1986, who elect CSB/Redux. Their benefits are increased annually with a partial COLA equal to the full COLA minus 1 percent (except if the full COLA is less than or equal to 1 percent). A one-time restoral is given to a partial COLA recipient on the first day of the month after the retiree's 62nd birthday. At this time, retired pay (or the survivor benefit if the retiree is deceased) is increased to the amount that would have been payable had full COLAs been in effect. Annual partial COLAs continue after this restoral. Note that the FY 2016 NDAA sunsets the CSB/Redux benefit tier by not allowing any CSB elections after December 31, 2017.

Relationship with Veterans Administration Benefits

The Department of Veterans Affairs (VA) provides compensation for Service-connected and certain non-Service-connected disabilities. These VA benefits can be in place of or in combination with DoD retired pay, but through December 31, 2003, were not fully additive. Since VA benefits are exempt from federal income taxes, it is often to the advantage of a member to elect them. Through 2003, retired pay earned from DoD for military service was offset by any payment received from VA for a VA-rated disability. Beginning with the FY 2004 NDAA (P.L. 108-136), a series of legislation has been enacted that increasingly reduces or eliminates the offset to military retired pay due to receipt of VA disability compensation. Members with a combined VA disability rating of 50% or greater who have at least 20 years of service have their offset eliminated under the Concurrent Retirement and Disability Pay (CRDP) program. Members whose disability meets certain combat-related criteria can elect to receive payments against the offset under the Combat Related Special Compensation (CRSC) program.

Under CRSC, members are not required to have at least 20 years of service (per P.L. 110-181), and are not required to have at least a 50% VA disability rating. Although CRSC amounts are calculated based on retired pay lost due to offset and are paid from the Military Retirement Fund, CRSC is not technically considered retired pay. CRSC payments are tax exempt. A member may not participate in both the CRDP and CRSC programs simultaneously, but may change from one to the other during an annual "open season."

For members who elect lump sums under BRS and qualify for VA disability compensation: (1) if the member is not eligible for CRDP or CRSC, the VA will withhold disability payments until the amount withheld equals the lump sum amount, after which VA disability payments, as an offset to retired pay, may be paid; (2) if the member is eligible for CRDP, no withholding of VA disability payments is required, and the retiree may receive VA disability compensation and retired pay without offset; and (3) if eligible for CRSC, the procedures for withholding VA disability payments are more complicated and relate to the portion of the total VA entitlement considered combat-related.

VA benefits also offset (or reduce) survivor pay through the Dependency and Indemnity Compensation (DIC) program. DIC benefits are payable to survivors of veterans who die from Service-connected causes. Although SBP annuities are generally reduced by the amount of any DIC benefit, all SBP premiums relating to the reduction in benefits are returned to the survivor. The FY 2008 NDAA enacted, and subsequent legislation extended, a temporary Special Survivor Indemnity Allowance (SSIA) that pays a monthly amount ($50 in FY 2009 grading up to $310 in FY 2017 and FY 2018) to survivors with a DIC offset. Prior to NDAA 2018 the authority for the allowance ended in May 2018; the NDAA 2018 made it a permanent benefit with annual COLA increases. As a result of the "Sharp Case" ruling, the SBP benefit of widows with entitlement to both DIC and SBP who remarry after age 57 is not reduced by DIC benefits received.

As of September 2017, there were 577,000 CRDP members and 93,000 CRSC members. These members were paid an additional monthly amount of $941 million and $89 million, respectively. As of September 2017, there were 67,000 survivors receiving annualized SSIA benefits of $248 million.

Interrelationship with Other Federal Service

For military retirement purposes, no credit is given for other federal service, except where cross-service transferability is allowed. Military service is generally creditable toward the federal civilian retirement systems if military retired pay is waived. However, a deposit (equal to a percentage of post-1956 basic pay) must be made to the Civil Service Retirement and Disability Fund in order to receive credit. Military service is not generally creditable under both systems (but is for reservists and certain disability retirees). Military retirees may qualify separately for Civil Service retirement and receive concurrent pay from both systems.

Relationship of Retired Pay to Military Compensation

Basic pay is the only element of military compensation upon which nondisability retired pay is based and entitlement is determined. Basic pay is the principal element of military compensation that all members receive, but it is not representative of salary levels in the public and private sectors for comparative purposes. Reasonable comparisons can be made to regular

military compensation (RMC). RMC is the sum of (1) basic pay, (2) the housing allowance, which varies by grade, location, and dependency status, (3) the subsistence allowance and, (4) the tax advantages accruing to the housing and subsistence allowances because they are not subject to federal income tax. Basic pay represents approximately 69 percent of RMC for all retirement eligible members. For the 20-year retiree, basic pay is approximately 67 percent of RMC. Consequently, a member retired with 20-years of service and entitled to 50 percent of basic pay, only receives 33 percent of RMC. Further, such 20-year retirees (except for those who first entered service prior to September 8, 1980) receive a percentage (50 percent, or 40 percent for those under CSB/Redux or BRS) of their high 36-month average of basic pay, typically less than final basic pay. For a 30-year retiree, basic pay is approximately 72 percent of RMC and such members if entitled to 75 percent of basic pay, would only receive 54 percent of RMC. Again, note that most members currently retiring with 30 years will actually receive a percentage (75 percent, or 60 percent for those under BRS) of their high 36-month average, rather than of their final basic pay. P.L. 109-364 allows certain members, who retire on or after January 1, 2007 with sufficient years of service (greater than 37.5 years under BRS and 30 years under the other benefit formulas) to retire with entitlements exceeding 75 percent of their high 36-month average of basic pay. These relationships should be considered when military retired pay is compared to compensation under other retirement systems.

Social Security Benefits

Many military members and their families receive monthly benefits indexed to the CPI from Social Security. As full participants in the Social Security system, military personnel are in general entitled to the same benefits and are subject to the same eligibility criteria and rules as other employees. Details concerning the benefits are covered in other publications.

Beginning in 1946, Congress enacted a series of amendments to the Social Security Act that extended some benefits to military personnel and their survivors. These "gratuitous" benefits were reimbursed out of the general fund of the U.S. Treasury. The Servicemen's and Veterans' Survivor Benefits Act brought members of the military into the contributory Social Security system effective January 1, 1957.

For the Old Age, Survivors, and Disability Insurance (OASDI) program, military members must contribute the employee portion of the OASDI payroll tax, with the federal government contributing the matching employer contribution. Only the basic pay of a military member constitutes wages for Social Security purposes. One feature of OASDI unique to military personnel grants a noncontributory wage credit of (i) $300 for each quarter between 1956 and 1978 in which such personnel received military wages and (ii) up to $1,200 per year after 1977 ($100 of credit for each $300 of wages up to a maximum credit of $1,200). The purpose of this credit is to take into account elements of compensation such as quarters and subsistence not included in wages for Social Security benefit calculation purposes. Under the 1983 Social Security amendments, the cost of the additional benefits resulting from the noncontributory wage credits for past service was met by a lump sum payment from general revenues, while the cost for future service will be met by payment of combined employer-employee tax on such credits as the service occurs. Payments for these wage credits ended in 2002.

Members of the military are also required to pay the Hospital Insurance (HI) payroll tax, with the federal government contributing the matching employer contribution. Medicare eligibility occurs at age 65, or earlier if the employee is disabled.

Performance Measures

In September 2017, the Fund made disbursements to approximately 2.3 million retirees and survivors.

There are many ways to measure the funding progress and performance of a pension plan. Table A-1 shows a few common measures, specifically 1) Percent Funded, 2) Asset-to-Annuitant Liability Ratio, and 3) Effective Fund Yield. The table footnotes show the associated derivation of each performance measure. Note that for a variety of reasons including investment and other constraints, the Fund's results for these "performance measures" cannot be reasonably compared to many other pension systems.

TABLE A-1

MILITARY RETIREMENT FUND PERFORMANCE MEASURES
($ in billions)

End of Fiscal Year	Accrued Liability (1)	Assets (2)	Annuitant Liability On Roll (3)	Unfunded Accrued Liability (4)	Percent Funded (5)	Asset-to-Annuitant Liability Ratio (6)	Fund Effective Yield (7)
1984	$528.7	$.0	$310.0	$528.7	0.0%	---	---
1985	551.5	11.8	322.7	539.7	2.1	3.7%	14.3%
1986	566.2	24.6	321.4	541.6	4.3	7.7	11.8
1987	585.2	38.9	326.3	546.3	6.6	11.9	11.0
1988	551.8	53.4	329.4	498.4	9.7	16.2	10.5
1989	580.3	67.6	345.8	512.7	11.6	19.5	10.1
1990	612.9	80.4	367.5	532.5	13.1	21.9	9.9
1991	604.2	93.7	372.9	510.5	15.5	25.1	9.8
1992	619.0	106.1	392.7	512.9	17.1	27.0	9.5
1993	629.9	115.9	409.3	514.0	18.4	28.3	9.1
1994	615.6	124.2	409.9	491.4	20.2	30.3	8.7
1995	631.8	131.0	431.3	500.8	20.7	30.4	8.6
1996	625.8	135.3	432.2	490.5	21.6	31.3	8.6
1997	639.2	143.3	444.9	495.9	22.4	32.2	8.5
1998	649.4	149.9	452.9	499.5	23.1	33.1	8.4
1999	657.2	156.0	442.7	501.2	23.7	35.2	8.1
2000	682.6	162.7	459.8	519.9	23.8	35.4	8.0
2001	708.8	169.2	487.3	539.6	23.9	34.7	8.0
2002	721.6	176.5	467.2	545.1	24.5	37.8	7.2
2003	810.9	182.6	519.8	628.3	22.5	35.1	5.5
2004	854.1	188.0	556.3	666.1	22.0	33.8	5.4
2005	900.6	197.9	592.2	702.7	22.0	33.4	5.5
2006	973.7	208.4	636.3	765.3	21.4	32.8	5.9
2007	1,042.3	218.2	677.3	824.1	20.9	32.2	4.7
2008	1,157.3	253.1	750.6	904.2	21.9	33.7	6.2
2009	1,186.9	278.4	751.8	908.5	23.5	37.0	1.0
2010	1,225.2	321.7	768.0	903.5	26.3	41.9	3.2
2011	1,273.3	376.1	807.3	897.2	29.5	46.6	4.9
2012	1,361.5	428.0	854.6	933.5	31.4	50.1	2.9
2013	1,368.6	483.5	869.5	885.1	35.3	55.6	3.1
2014	1,412.8	545.0	911.3	867.8	38.6	59.8	3.2
2015	1,417.0	600.6	919.2	816.4	42.4	65.3	1.8
2016	1,406.9	664.4	914.1	742.6	47.2	72.7	2.3
2017	1,502.0	734.1	974.0	767.9	48.9	75.4	2.9

NOTES:
    (1) From Table 6A, Item 3 in main text.
    (2) From Table 6A, Item 4 in main text.
    (3) From Table 6A, Item 1.a in main text.
    (4) = (1) - (2)
    (5) = (2) / (1) x 100
    (6) = (2) / (3) x 100
    (7) Discussed in Appendix D.

APPENDIX B

THE MILITARY RETIREMENT SYSTEM: HISTORY

THE MILITARY RETIREMENT SYSTEM: HISTORY[1]

The history of the Uniformed Services Military Retirement System in the United States extends back to the early days of the country. The history detailed in this appendix provides the user with a useful context when evaluating the status of the current system. The extensive legislative history has been an interplay of the separate retired pay plan motivations. When available, the Public Law (P.L.) reference is provided. Over the course of its history, the Military Retirement System has been scrutinized by numerous committees, commissions, and groups. Since the end of World War II, a number of military compensation studies have been conducted under the general sponsorship of the Department of Defense, the President, and Congress, including: Hook, Strauss, Cordiner, Gorham/Randall, Quadrennial Review of Military Compensation, Gates, Military Compensation and Retirement Modernization Commission, etc. These studies continue to the present day – see *Blended Retirement System* (BRS). Much discussion typically occurs as a result of the study findings. It should be noted that while there may be superficial resemblance between the Military Retirement System (MRS) and other retirement systems, there exist substantial differences, including between the MRS and the retirement plant of federal civil servants. Of significance, MRS retired members are subject to active duty recall.

History of Retired Pay – Active Duty and Disability

The legislative history of the nondisability (regular service) and disability retired pay have been a collaborative effort of lawmakers. The two programs are highly correlated given the possible end states of a regular service career. Before discussing the regular service retired pay history, below are the motivations driving the two distinct retirement types:

1) The principal motivations guiding the nondisability retired pay evolution of the Military Retirement System have been to ensure that (1) continued service in the armed forces is competitive with the alternatives; (2) promotion opportunities are kept open for young and able members; (3) some measure of economic security is made available to members after retirement from a military career; (4) a pool of experienced personnel is available for recall in times of war or national emergency. Much of the history to be discussed focuses on officers. The legislative history for enlisted personnel is much shorter. The objectives can be achieved for the enlisted force by an administrative policy of "judicious non-acceptance of reenlistments."

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[1] Much of the information in this appendix can be found in *Military Compensation Background Papers*, Seventh Edition (November 2011), Department of Defense – Under Secretary of Defense for Personnel and Readiness. For a more in-depth discussion of the early history of military pensions, refer to *History of Military Pension Legislation in the United States*, William H. Glasson, New York, N.Y. 1900, Digitized by Google.

2) The guiding motivation behind <u>disability</u> retired pay is to authorize continuing payments to members separated from active service due to physical disability causes in service for their country. Members should not be left to cope with the effects of these disabilities on their own. A measure of economic security will be provided for duties exposing members to wartime hazards and career military service. Early reports showed rationale for separation other than physical disability as well: "An officer may possess a strong mind and a robust frame, yet, if his moral perception of right or wrong be so blunted and debased as to render him unreliable, he could hardly be ranked as the capable officer."

Provisions for the maintenance of disabled military members date to colonial days. Not surprisingly, the English pension law is a precursor to the American colonial pension legislation. The pilgrims at Plymouth provided in 1636 that any man sent forth as a soldier and returned maimed should be maintained by the colony during his life. In order to obtain enlistments in military expeditions against the Indians the colonies promised to care for those who were disabled and had no means of earning a livelihood as well as providing aid for the indigent families of those fallen in conflict. Some of these precedents were continued in the first national pension law of August 26, 1776, which promised half pay for life, or during disability, to the disabled. After the Revolutionary War, a full disability pension for a noncommissioned officer or private soldier was fixed at five dollars per month, with commissioned officers being paid at one-half of their monthly pay. Initially, the States administered disability pensions. However, in 1790, the Secretary of War became the principal pension administrator. In 1805, disability pensions were extended to those who received wounds in military service who subsequently became disabled.

Pensions based on service by itself were more controversial. Payments of half pay for life had been promised in 1780 by Congress for officers who served to the end of the War. However, the resulting claims were initially settled for less than full value and with a considerable amount of controversy. With the number of veterans declining and the treasury increasing, Congress became more generous. In 1818, an act was passed providing relief to Revolutionary War veterans in need. By 1832, it became full pay for life, regardless of need. In 1836, widows were included. This same pattern was followed for Service pensions for subsequent wars, with each war treated separately.

In 1849, the Bureau of Pensions was transferred to the newly established Department of the Interior, where it was to remain until the Veterans Administration (VA) was created in 1930. In 1855, authorization was given for involuntary separation with partial pay of Navy officers adjudged incapable, but not necessarily disabled. The outbreak of the Civil War brought further changes when it became necessary to retire older officers no longer fit for field duty. The vehicle was the act of August 3, 1861, the first major nondisability retirement act, which provided for the voluntary retirement of regular officers of all branches of Service after 40 years of duty, at the discretion of the President. Subsequent acts in 1861 and 1862 provided for involuntary retirements for age or years of service.

The 1861 act also established a military disability retirement system that covered the regular officers of all branches of Service. Army and Marine Corps officers were to be paid an amount equal to their "pay proper" plus four rations. Navy officers were paid slightly more. The act of March 2, 1867, authorized disability retirement for enlisted personnel of the Navy and Marine Corps.

Congress established two enduring retirement principles while reducing forces to a peacetime basis in 1870. The first permitted voluntary retirement of officers after 30 years of service upon approval by the President, and the second eliminated the ration commutation by fixing retired pay at 75 percent of the officer's pay. The 75 percent applied to Army and Marine Corps officers, both disabled and nondisabled, and was extended to the Navy in 1873.

In 1885, the first nondisability retirement law for Army and Marine Corps enlistees was enacted. Paralleling the officer retirement laws, it provided for voluntary retirement at 30 years of service with 75 percent of pay of the grade in which retired, plus an allowance in lieu of fuel, quarters, and food. The law was extended to the Navy in 1899.

By the middle of World War I, the limit on the number of officers who could be placed on the retired list was causing stagnating promotion in the Navy. To alleviate the problem, Congress established selection boards for promotion to Rear Admiral, Captain, and Commanders on the basis of age-in-grade in 1916 (P.L. 64-241). Service-in-grade replaced age-in-grade in 1926 (P.L. 69-413). Those officers not selected for promotion were retired at 2 ½ percent of pay per year of service, not to exceed 75 percent of pay. This was the first recognition of length of service as well as grade in the computation of retired pay.

The act of 1916 (P.L. 64-241) also created the Fleet Naval Reserve, to provide a pool of experienced personnel who could be recalled to active duty in an emergency. While technically different than retirement, the practical effect was that it was possible for enlistees of the Navy and Marine Corps to "retire" with as little as 16 years of service (raised to 20 in 1925) and become entitled to "retainer pay."

By 1938 (P.L. 75-706), the Navy was again experiencing stagnating promotion caused by the large influx of officers throughout World War I. Almost all of these officers were in the same age and years of service groups. To remedy the situation, Congress extended the selection board process to all grades above Lieutenant (junior grade); set limits on years of service for Lieutenant Commanders through Captains; and provided for voluntary retirement at 20 years of service at the discretion of the President.

Following World War II, allegations of unfairness, inequity, and inefficiency in the existing disability retirement system became extensive. A new system for disability retirement was created by the Career Compensation Act of 1949 (P.L. 81-351). Under this system, all disabilities had to be rated under the standard schedule of rating disabilities in use by the VA, and the resultant ratings became a factor in disability retired pay entitlement and taxability. The new system covered officer and enlisted personnel of both the regular and reserve components, and it authorized temporary as well as permanent disability retirements. The disability retirement

system remains basically unchanged from the way it was enacted in 1949. Much legislation has been passed recently, as well as additional process improvements, in an attempt to modernize the disability system.

Meanwhile, the Officer Personnel Act of 1947 (P.L. 80-381) brought the Army and Air Force under a selection process similar to the Navy system. It also provided that those officers who failed promotion and were not eligible to retire would receive severance pay of two months per year of service, but not exceeding two years' pay.

Standardized nondisability retirement laws for all Services were brought about by the Army and Air Force Vitalization and Retirement Equalization Act of 1948 (P.L. 80-810). The act established 20 years as the minimum requirement for voluntary retirement, thereby placing the Army and Air Force on a par with the Navy. It also provided for the removal of substandard officers with severance pay equal to one month's pay per year of service, but not exceeding one year's pay. This law resulted, for the first time in history, in uniform voluntary retirement authority among the officers of all branches of service.

P.L. 96-513 changed the retired pay formula for persons who first became a service member after September 7, 1980. For this group, the 2 ½ percent times years of service is multiplied by the average of the highest 36 months of pay, rather than by final pay. This is sometimes referred to as the High-3 (HI-3) formula, where the highest 36 months of pay generally occurs within the highest 3 years of average annual pay. This first major change to retired pay computation since 1948 was endorsed in findings by various committees and commissions.

P.L. 99-348, enacted July 1, 1986, made extensive changes in retired pay formula for persons entering service after July 31, 1986. These persons are credited with 2 percent for each of the first twenty years of service, 3 ½ percent for each of the next 10 years, and 2 ½ percent thereafter. At the member's age 62, the annuity is recomputed to equal the annuity that would have been in effect if a level 2 ½ percent had been used for each year of service. In addition, the cost-of-living adjustment for this group no longer keeps up with inflation, as described later. This is referred to as the Redux benefit formula.

P.L. 106-65, enacted October 1, 1999, enhanced benefits for military members previously covered by the Redux benefit formula (those who entered service on or after August 1, 1986) by converting these members to the HI-3 formula. At the 15 year-of-service mark, these (full-time) members now have the choice of: (1) remaining in HI-3, or (2) electing the Career Status Bonus, which is not paid out of the Military Retirement Fund, and converting to the Redux benefit formula. Those who elect the bonus must commit to remaining continuously in service until completing 20 years or forfeit a portion of the $30,000. Part-time reservists previously covered by Redux do not have the option of electing the bonus, and so remain under the HI-3 benefit formula. This is referred to as the Career Status Bonus (CSB)/Redux benefit formula. The four different retirement systems currently in effect for members of the uniformed services are summarized in Table B-1.

P.L. 108-136, enacted November 23, 2003, provides a phase-out of the offset to military retired pay due to receipt of VA disability compensation for members whose combined disability rating is 50% or greater, effective January 1, 2004. Members retired under disability provisions must have at least 20 years of service. P.L. 108-136 also expands eligibility under the Combat Related Special Compensation program to include qualified retirees at any combined percentage rating for certain combat-related disabilities compensated by the VA. Through 2003, retired pay earned from DoD for military service was offset by any payment received from Veterans Affairs for a VA-rated disability. These VA benefits were in place of or in combination with DoD retired pay but were not fully additive. Thus the law is commonly referred to as Concurrent Receipt.

Subsequent to P.L. 108-136, a series of legislation has been enacted that increasingly reduces or eliminates the offset to military retired pay due to receipt of VA disability compensation. This is described further in Appendix A.

P.L. 109-364, enacted October 17, 2006, eliminated the 75 percent multiplier cap for nondisability retirements with sufficient years of service for members retiring after December 31, 2006, and P.L. 111-383, enacted January 7, 2011, removed the cap for disability retirements after the date of enactment. A member can now retire with a retired pay multiplier greater than 100 percent if their years of service are high enough. The various percentage multipliers by year of service and benefit system are shown in Table B-2. P.L. 109-364 also removed a reduction to the rate of basic pay used in the computation of retired pay for general and flag officers (those with pay grades of O-7 through O-10) retiring after September 30, 2006.

P.L. 113-67 (commonly referred to as the *Bipartisan Budget Act of 2013, or BBA 2013*), enacted December 26, 2013, reduces the annual cost-of-living adjustment (COLA) by one percent (e.g., 2% instead of 3%) for "working-age" (i.e., members younger than age 62), non-disabled military retirees, with restoral at age 62 and full COLA thereafter. The changes apply only to those entering military service on or after January 1, 2014 (although those entering on or after that date who elect CSB/Redux are covered by the COLA provisions for CSB/Redux electors). Subsequent legislation exempts medically disabled retirees and their survivors, as well as survivors of members who die on active duty, from the COLA reduction enacted in P.L. 113-67. P.L. 113-291 amended the effective date of the legislative provision, applying only to those entering military service on or after January 1, 2016.

P.L. 114-92 established the "Blended Retirement System (BRS)," a major reform to military compensation. The BRS lowers the nondisabled retired pay multiplier from 2.50% per year to 2.00% and allows for multiple retired pay distribution options. The BRS provides members (except for those who retire on disability) the choice of receiving a portion (either 25 percent or 50 percent) of their retired pay entitlement from when the member is eligible to begin receiving retired pay to normal Social Security retirement age (usually 67) as a discounted lump sum instead of an annuity. The newly established compensation system is supplemented with a Thrift Savings Plan (TSP) account government match and a mandatory mid-career continuation bonus. The changes apply to all members first entering service after December 31, 2017. Members with fewer than 12 completed years of service as of December 31, 2017, have the

option to fully participate in the BRS via an irrevocable election during a one year (calendar year 2018) open season. Additionally, P.L. 114-92 sunsets CSB/Redux and repeals all aspects of BBA 2013, as amended.

History of Retired Pay – Reserve Duty

The motivation behind the reserve duty retirement (non-regular service) is to establish a nondisability retirement system to authorize retired pay for service in the reserve components. This provides an incentive for qualified personnel to retain membership and continue training in these components, providing a pool of skilled, trained, and readily available manpower to assist active duty forces in times of national emergency.

Title III of the Army and Air Force Vitalization and Retirement Equalization Act of 1948 (P.L. 80-810) created a nondisability retirement program for reserve personnel. The above motivation was explained as part of the House Report accompanying the legislation. The reserve retirement system remained basically unchanged from the original 1948 legislation until 1993. Those modifications made over that time were more corrective than substantive.

The National Defense Authorization Act for Fiscal Year 1993 (P.L. 102-484) adopted two provisions intended to induce Selected Reserves members to apply for transfer to the retired reserve through temporary special retirement mechanisms. Subsequent legislation authorizes further downsizing of the military during the mid-1990's, which was extended until October 1, 2001.

P.L. 107-314 permanently reduced the required reserve service eligibility years for retired pay from eight years to six years. This law also authorized an additional 10 percent in retired pay, not to exceed 75 percent, for enlisted members (active or reserve) credited with extraordinary heroism in the line of duty during their career.

P.L. 110-181, enacted January 28, 2008, reduces the retirement age for a reserve retirement below age 60 by three months for each aggregate of 90 days of certain active service performed (after the date of enactment) within any two (2) consecutive fiscal years with a limit of 10 years. Eligibility for subsidized retiree health benefits remains at age 60 even if the eligibility age for retired pay is reduced.

P.L. 114-92, BRS, described in the previous section, also applies to Reserves with some differences, e.g., the eligibility threshold for opting in to BRS for Reserves is based on creditable points.

Adjustments – Cost-of-Living

Cost-of-living adjustments provide a mechanism for adjusting retired pay entitlements to compensate for the effects of inflation. The ideal system is one that protects the initial value of pay to insure that members who retire from the military do not have the purchasing power of their pay eroded by inflation.

Prior to 1958, retired pay was generally increased in direct proportion to changes in active duty pay. The practice was discontinued with the act of May 1958 (P.L. 85-422), when it was realized that a single 6 percent cost-of-living increase would cost only $35 million, as opposed to $65 million for linking the retired pay to active duty pay. The 6 percent approximated the increase in the cost of living since 1955 when retired pay was last increased. In 1963, a permanent system of increasing retired pay (P.L. 88-132) based on a formula geared to increases in the cost-of-living was adopted. In 1965, the adjustment mechanism was modified slightly (P.L. 89-132). This system granted cost-of-living increases whenever the Consumer Price Index (CPI) went up at least 3 percent and remained up for three months. The benefit increase was equal to the percentage rise in the CPI. In 1969 (P.L. 91-179), an additional 1 percent was added to compensate for the fact that five months elapsed between the time that the index increased 3 percent and the time that benefits increased.

Effective March 1977, cost-of-living adjustments (COLAs) were scheduled to occur every six months, on March 1 and September 1. This would be reflected in checks issued those months and the additional 1 percent was eliminated (P.L. 94-440). The cost-of-living increase, effective March 1, was computed by calculating the percentage increase (adjusted to the nearest tenth of a percent) in the CPI from the previous June to the previous December. Similarly, the cost-of-living increase effective September 1 was obtained by calculating the percentage increase in the June CPI over the CPI from the previous December.

In August 1981 (P.L. 97-35), once-a-year cost-of-living increases were implemented by eliminating the September increase. Full annual cost-of-living increases were given in March of each year based on the percentage increase in the CPI between the two previous Decembers.

In August 1982, P.L. 97-253 created a temporary deviation to the calculation and timing of the cost-of-living increase. Consequently, in FY 1983, the increase was delayed until April and the full increase of 3.9 percent was given only to survivors, disabled persons and nondisabled persons over age 61. Nondisabled retirees under age 62 received 3.3 percent instead of 3.9 percent.

P.L. 98-270, enacted in April 1984, eliminated the FY 1984 increase and modified the permanent law. Under the modified system, the COLA equals the percentage increase in the average of the CPIs for July, August, and September over the averaged indexes for the same three months of the prior year. These increases become effective for entitlements earned in December. P.L. 98-369 directed that entitlements for a particular month should be paid at the beginning of the subsequent month rather than at the end of the month of entitlement and became effective with the December 1984 adjustment. P.L. 111-383 required amounts of retired and retainer pay (excluding survivor annuitant pay and Combat Related Special Compensation) due a retired member of the uniformed services shall be paid on the first day of each month beginning after the month in which the right to such pay accrues; unless the first falls on a non-business day, then the payment is made on the preceding business day.

P.L. 99-348, enacted July 1, 1986, changed the cost-of-living increase for members entering the service after July 31, 1986. Their retiree and survivor benefits are increased

annually by the full cost-of-living adjustment minus 1 percent (except if the full adjustment is less than or equal to 1 percent). A one-time catch-up is given on the first day of the month after the *retiree's* 62nd birthday. At this time, the retiree benefit (or survivor benefit if the retiree is deceased) is increased to the amount that would have been payable had full adjustments been made. Annual partial increases continue after this catch-up. For persons entering the service prior to August 1, 1986, full COLAs are still applied to the retiree and survivor benefits. P.L. 106-65 called for full COLAs to be applied to the retiree and survivor benefits of post-July 31, 1986, entrants who decline the CSB/Redux and retire under the HI-3 benefit formula. Retired pay cost-of-living increases from 1958 to the present time are shown in Table B-3. Additional discussion regarding cost-of-living increases can be found in Appendix D.

P.L. 113-67 (*Bipartisan Budget Act of 2013, or BBA 2013*) reduces the annual COLA by one percent (e.g., 2% instead of 3%) for "working-age" (i.e., members younger than age 62), non-disabled military retirees, with restoral at age 62 and full COLA thereafter. The changes apply only to those entering military service on or after January 1, 2014 (although those entering on or after that date who elect CSB/Redux are covered by the COLA provisions for CSB/Redux electors described in the previous paragraph). Subsequent legislation exempts medically disabled retirees and their survivors, as well as survivors of members who die on active duty, from the COLA reduction enacted in P.L. 113-67. P.L. 113-291 amended the effective date of the legislative provision, applying only to those entering military service on or after January 1, 2016. As stated earlier, P.L. 114-92 repeals the COLA changes enacted by BBA 2013, as amended.

Adjustments – Basic Pay

Basic pay scale increases are analogous to retired pay cost-of-living increases for the current active duty and drilling reserve population. These increases are typically credited and paid at the beginning of the calendar year. The annual basic pay scale increases are designed to establish a crude comparability with the private sector and American economy in general.

The Act of 1790 provided funds for "militia employed in the service of the United States" payable to "the troops of the United States." Although the components of the pay system, basic pay plus allowances, have changed throughout its history, the system itself has been remarkably enduring. However, the proliferation of special allowances has caused confusion and complexity surrounding compensation.

The Career Compensation Act of 1949 (P.L. 81-351) revamped the military compensation structure to provide pay that was equitable to personnel yet responsive to the needs of the United States in attracting and retaining the necessary personnel following World War II. The Uniformed Services Pay Act of 1958 (P.L. 85-422) was the beginning of regular basic pay adjustments intended to make personnel pay more competitive.

In the Act of 1967 (P.L. 90-207) Congress adopted new basic pay rate adjustment mechanisms. The adjustments were to be a "comparable increase" to the general schedule compensation for federal classified employees (Civil Service employees). This legislation

resulted in a more systematic procedure for increasing basic pay rates as opposed to the prior methods which were solely dependent on Congressional discretion. The military-civilian pay adjustment remains loosely linked through present day.

The Department of Defense Authorization Act of 1981 (P.L. 96-342) granted personnel substantial basic pay adjustments with the intent of further convergence between military and civilian wages. The legislation also allowed the President greater flexibility in adjusting military compensation by allocating greater increases to "career" members. In the years that followed, Congress expressed dissatisfaction with the pay adjustment mechanisms shown in the military-civilian link. The Senate proposed linking military pay to the Employment Cost Index (ECI) as a method to correct the military-civilian pay inequity. This discussion continued for some years.

Beginning in 2000 (P.L. 106-65), legislative change responded to the military-civilian pay inequity by tying basic pay increases to the ECI plus an additional 0.5 percent for the five years that follow (through FY 2006). After FY 2006, the increases are tied directly to ECI; however, covenants are embedded within the law which gives the President the authority to propose an alternate adjustment. Subsequent legislation used targeted basic pay scale increases to be granted for specific pay grades and ranks in order to meet the necessary retention and recruitment needs. Basic pay scale increases from 1958 to the present time are shown in Table B-4. Additional discussion regarding basic pay scale increases can be found in Appendix D.

Funding of Retirement Benefits

Prior to 1935, the Navy had a pension fund which provided payments to persons retired for disability whenever there was a sufficient amount in the fund. The income to the fund consisted of the government's share of the proceeds from the sale of enemy or pirate ships captured by the Navy, and from interest received on fund investments. This fund was abolished in 1935, and the Military Retirement System moved to an unfunded or "pay-as-you-go" basis. P.L. 98-94 (currently Chapter 74 of Title 10, U.S.C.), signed in September 1983, established a Military Retirement Fund starting October 1, 1984. Under this accrual accounting system, funds are allocated for the individual services via the Department of Defense annually by Congress. These funds are transferred to the Military Retirement Fund in an amount sufficient, along with the Treasury contributions resulting from P.L. 108-136 and interest earnings, to cover the expected retirement costs associated with the current active duty force. This system helps to apprise all stakeholders of the total costs of manpower decisions made each year.

As explained by Congress (House Report No. 98-107 – Committee on Armed Services – p. 225), the reasons for adoption of the Department of Defense Military Retirement Fund were as follows:

> "Most retirement plans in the private sector are funded, either partially or fully, and the trend--as a result of the Employee Retirement and Income Security Act (ERISA)--is toward full funding. Security of a retirement plan, *i.e.*, the probability that promised benefits will be paid, is generally related to the method of funding. Full funding provides greater security than partial funding.

Of course, the security of payments from the Federal government is not generally related to the method of funding. From the Federal government's perspective, the issue of funding is primarily a matter of timing. Should funds be raised by taxing and borrowing when the obligation becomes due, or should funds be set aside through taxing and borrowing when the obligation is incurred?"

This funding law stated that DoD will make normal cost payments into the Fund and the Treasury Department will make payments from general revenues to amortize the unfunded liability. P.L. 99-661, enacted in November 1986, mandated that two separate normal cost percentages (NCPs) be used to compute the normal cost payment of the Military Retirement System. One NCP is for active-duty personnel and full-time reservists and the second NCP is for drilling reservists (part-time). These normal cost payments are designed to be sufficient to pay for the future retirement benefits for a cohort of new entrants. The unfunded liability exists primarily because such payments were not made in the past, although deviations of actual compared to expected experience increase or decrease the unfunded liability over time.

P.L. 108-136, enacted November 2003, required the Department of Treasury to pay the normal cost arising from the increased benefits due to Concurrent Receipt at the beginning of each fiscal year. Beginning with FY 2005, Treasury includes the annual normal cost payment along with the unfunded liability payment in the October 1st contribution.

The original funding law also established an independent three-member DoD Retirement Board of Actuaries, appointed by the President (changed to the Secretary of Defense as part of the 2008 National Defense Authorization Act (P.L. 110-181)). House Report No. 98-107 – Committee on Armed Services – p. 227, states:

"Care must be exercised to minimize the ability to manipulate the interest rate. The committee recommends that an independent Board of Actuaries be established and that they, alone, be charged with the responsibility for determining the interest rate and other actuarial assumptions in accordance with generally accepted actuarial principles and practices."

The Board is required to approve methods and assumptions for determining the normal cost and unfunded liability; to review valuations of the Military Retirement System; to determine the method of amortizing unfunded liabilities; to annually report to the Secretary of Defense; and to report to the President and Congress on the status of the Fund not less than every four years. P.L. 110-181 renamed the Board the "DoD Board of Actuaries," and added oversight of other funds deemed to be necessary by the Secretary of Defense.

TABLE B-1

MILITARY RETIREMENT SYSTEM PROPERTIES
(FOR NONDISABILITY RETIREMENT FROM ACTIVE DUTY)

Benefit System	Final Pay	High-3 (HI-3)	Career Status Bonus (CSB)/Redux	Blended Retirement System (BRS)
Applies to Members Who Joined a Uniformed Service:	• before September 8, 1980	• on or after September 8, 1980 and before August 1, 1986 • on or after August 1, 1986 and before January 1, 2003 who do not elect to accept the Career Status Bonus (CSB) at the 15-year anniversary • on or after January 1, 2003 and before January 1, 2006 • on or after January 1, 2006 and before January 1, 2018 who do not elect to participate in BRS	• on or after August 1, 1986 and before January 1, 2003 who elect to accept the Career Status Bonus (CSB) with additional 5-year service obligation	• on or after January 1, 2018 • on or after January 1, 2006 and before January 1, 2018 who elect to participate in BRS
Retired Pay Computation Basis	Final basic pay rate	Highest 36 months of basic pay rate	Highest 36 months of basic pay rate	Highest 36 months of basic pay rate
Multiplier	2.5% per year of service	2.5% per year of service	2.5% per year of service less 1% for each year of service less than 30 (restored at age 62)	2.0% per year of service
Cost-of-Living Adjustment Mechanism	Full CPI-W	Full CPI-W	Full CPI-W minus 1% (one-time catch-up at age 62)	Full CPI-W
Additional Benefit(s)	---	---	• $30,000 Career Status Bonus (CSB) payable at 15-year anniversary upon assumption of 5-year obligation to remain on continuous active duty	• Choice of receiving a portion (either 25% or 50%) of the retired pay entitlement from retirement age to normal Social Security retirement age (usually 67) as a discounted lump sum instead of an annuity • Automatic and matching Government contributions to Thrift Savings Plan (TSP) account • Mandatory mid-career continuation bonus if member agrees to serve additional time

Notes: - Due to breaks in service and technical differences in the definition of qualifying years of service under different benefit systems, in some cases above it's not possible
to precisely define which benefit systems cover the appropriate members based solely on dates of entry. The above table does not cover every possibility.
- For additional up-to-date information, refer to the DoD Office of Military Compensation website (http://militarypay.defense.gov/).

TABLE B-2

MILITARY RETIREMENT SYSTEM MULTIPLIERS
(FOR NONDISABILITY RETIREMENT FROM ACTIVE DUTY)

Years of Service	Final Pay/HI-3 Multiplier	CSB/Redux Multiplier Before Age 62	CSB/Redux Multiplier After Age 62	BRS Multiplier
20	50.0 %	40.0 %	50.0 %	40.0 %
21	52.5	43.5	52.5	42.0
22	55.0	47.0	55.0	44.0
23	57.5	50.5	57.5	46.0
24	60.0	54.0	60.0	48.0
25	62.5	57.5	62.5	50.0
26	65.0	61.0	65.0	52.0
27	67.5	64.5	67.5	54.0
28	70.0	68.0	70.0	56.0
29	72.5	71.5	72.5	58.0
30	75.0	75.0	75.0	60.0
31	77.5	77.5	77.5	62.0
32	80.0	80.0	80.0	64.0
33	82.5	82.5	82.5	66.0
34	85.0	85.0	85.0	68.0
35	87.5	87.5	87.5	70.0
36	90.0	90.0	90.0	72.0
37	92.5	92.5	92.5	74.0
38	95.0	95.0	95.0	76.0
39	97.5	97.5	97.5	78.0
40	100.0	100.0	100.0	80.0
41	102.5	102.5	102.5	82.0
42	105.0	105.0	105.0	84.0
43	107.5	107.5	107.5	86.0
44	110.0	110.0	110.0	88.0
45	112.5	112.5	112.5	90.0
46	115.0	115.0	115.0	92.0
47	117.5	117.5	117.5	94.0
48	120.0	120.0	120.0	96.0
49	122.5	122.5	122.5	98.0
50	125.0	125.0	125.0	100.0
51	127.5	127.5	127.5	102.0
:	:	:	:	:

DoD Office of the Actuary

TABLE B-3

MILITARY RETIRED PAY COST-OF-LIVING INCREASES
(JUNE 1958 TO PRESENT)

Date of Increase		Percentage Increase		Cumulative % From Date of Increase
6/1/58		6.0%		809.1%
10/1/63		5.0%		757.6%
9/1/65		4.4%		716.8%
12/1/66		3.7%		682.4%
4/1/68		3.9%		654.5%
2/1/69		4.0%		626.1%
11/1/69		5.3%		598.2%
8/1/70		5.6%		563.1%
6/1/71		4.5%		527.9%
7/1/72	one percent over	4.8%		500.9%
7/1/73	inflation was	6.1%		473.4%
1/1/74	added during	5.5%		440.4%
7/1/74	these years	6.3%		412.2%
1/1/75		7.3%		381.9%
8/1/75		5.1%		349.1%
3/1/76		5.4%		327.3%
3/1/77		4.8%		305.4%
9/1/77		4.3%		286.8%
3/1/78		2.4%		270.9%
9/1/78	twice-a-year	4.9%		262.2%
3/1/79	increases	3.9%		245.3%
9/1/79		6.9%		232.3%
3/1/80		6.0%		210.9%
9/1/80		7.7%		193.3%
3/1/81	once-a-year	4.4%		172.3%
3/1/82	increases	8.7%		160.8%
4/1/83	(Dec to Dec)	3.9%	(1)	139.9%
12/1/84		3.5%	(2)	130.9%
12/1/85		0.0%	(3)	123.1%
12/1/86	once-a-year	1.3%		123.1%
12/1/87	increases (3rd	4.2%		120.3%
12/1/88	qtr to 3rd qtr)	4.0%		111.4%
12/1/89		4.7%		103.3%
12/1/90		5.4%		94.1%
12/1/91		3.7%		84.2%
12/1/92		3.0%		77.6%
3/1/94		2.6%	(4)	72.4%
3/1/95		2.8%	(5)	68.1%
3/1/96		2.6%	(6)	63.5%
12/1/96		2.9%		59.4%
12/1/97		2.1%		54.9%
12/1/98		1.3%		51.7%
12/1/99		2.4%		49.7%
12/1/00		3.5%		46.2%
12/1/01		2.6%		41.3%
12/1/02		1.4%		37.7%
12/1/03		2.1%		35.8%
12/1/04		2.7%		33.0%
12/1/05		4.1%		29.5%
12/1/06		3.3%		24.4%
12/1/07		2.3%		20.4%
12/1/08		5.8%		17.7%
12/1/09		0.0%		11.3%
12/1/10		0.0%		11.3%
12/1/11		3.6%		11.3%
12/1/12		1.7%		7.4%
12/1/13		1.5%		5.6%
12/1/14		1.7%		4.0%
12/1/15		0.0%		2.3%
12/1/16		0.3%		2.3%
12/1/17		2.0%		2.0%

(1) Nondisabled retirees under age 62 received 3.3%.
(2) Starting December 1984, entitlements earned in a particular month are paid at the beginning of the next month
(3) A cost-of-living adjustment of 3.1%, scheduled for 12/1/85, was suspended as a consequence of P.L. 99-177.
(4) Disabled retirees and survivors received 2.6% on 12/1/93.
(5) Disabled retirees and survivors received 2.8% on 12/1/94.
(6) Disabled retirees and survivors received 2.6% on 12/1/95.

DoD Office of the Actuary

TABLE B-4

MILITARY BASIC PAY SCALE INCREASES
(JUNE 1958 TO PRESENT)

Date of Increase	Percentage Increase		Cumulative % From Date of Increase
6/1/58	8.3%		1391.0%
10/1/63	14.2%		1276.8%
9/1/64	2.3%		1105.6%
9/1/65	10.4%		1078.5%
7/1/66	3.2%		967.4%
10/1/67	5.6%		934.3%
7/1/68	6.9%		879.5%
7/1/69	12.6%		816.3%
1/1/70	8.1%		713.7%
1/1/71	7.9%		652.8%
11/14/71	11.6%		597.7%
1/1/72	7.2%		525.1%
10/1/72	6.7%		483.1%
10/1/73	6.2%		446.5%
10/1/74	5.5%		414.6%
10/1/75	5.0%		387.8%
10/1/76	3.6%		364.6%
10/1/77	6.2%		348.4%
10/1/78	5.5%		322.2%
10/1/79	7.0%		300.2%
10/1/80	11.7%		274.0%
10/1/81	14.3%	(1)	234.9%
10/1/82	4.0%	(2)	193.0%
1/1/84	4.0%	(2)	181.7%
1/1/85	4.0%		170.9%
10/1/85	3.0%		160.5%
1/1/87	3.0%		152.9%
1/1/88	2.0%		145.5%
1/1/89	4.1%		140.7%
1/1/90	3.6%		131.2%
1/1/91	4.1%		123.2%
1/1/92	4.2%		114.4%
1/1/93	3.7%		105.7%
1/1/94	2.2%		98.4%
1/1/95	2.6%		94.1%
1/1/96	2.4%		89.2%
1/1/97	3.0%		84.8%
1/1/98	2.8%		79.4%
1/1/99	3.6%		74.5%
1/1/00	4.8%	(3)	68.4%
1/1/01	3.7%	(3)	60.7%
1/1/02	4.6%	(3)	55.0%
1/1/03	4.1%	(3)	48.2%
1/1/04	3.7%	(3)	42.3%
1/1/05	3.5%		37.3%
1/1/06	3.1%		32.6%
1/1/07	2.2%	(3)	28.6%
1/1/08	3.5%		25.9%
1/1/09	3.9%		21.6%
1/1/10	3.4%		17.0%
1/1/11	1.4%		13.2%
1/1/12	1.6%		11.6%
1/1/13	1.7%		9.9%
1/1/14	1.0%		8.0%
1/1/15	1.0%		7.0%
1/1/16	1.3%	(4)	5.9%
1/1/17	2.1%		4.6%
1/1/18	2.4%		2.4%

(1) Basic pay increases for enlisted personnel ranged from 10% for E-1; 10.7% for E-2, E-3; 13% for E-4; 16.5% for E-5, E-6; and 17% for E-7, E-8, E-9. For officers, the increase was 14.3%.

(2) Except for E-1 with less than 4 months service.

(3) The increases do not include additional targeted pay increases.

(4) Pay increase for general and flag officers (O-7s through 0-10s) is 0%.

APPENDIX C

VALUATION DATA

VALUATION DATA NOTES

The following are relevant notes to the valuation data displayed in this appendix:

- These population- and pay-related data represent the appropriate beginning counts ("inputs") to Closed Group and Open Group projections.

- Valuation input data were extracted from files maintained by the Defense Manpower Data Center (DMDC). Data on individual retirees and survivors came from official files submitted by the Defense Finance and Accounting Service (DFAS). Active data were obtained from the Active Duty Military Personnel (ADMP) Master File, and reserve data were obtained from the Reserve Component Common Personnel Data System Master File, the official source for all component strengths and statistics, respectively.

- Active Duty and Selected Reserve personnel data were not further adjusted to match the official end strength totals supplied by the DoD Comptroller. They were each within about 0.1% of aggregate end strength totals.

- The DoD Office of the Actuary (OACT) reviews the data for reasonableness and consistency, but does not audit the data and relies on the file suppliers for its accuracy and comprehensiveness.

- Table-specific notes are included at the bottom of the valuation data tables.

DoD Officers Active Duty Personnel by Years of Service and Age for FY 2017 Valuation

Years of Active Service (YAS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Total
16	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	0	0	0	0
17	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	0	0	0	0
18	1	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	0	0	1
19	0	1	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	0	1
20	2	5	1	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	8
21	33	10	3	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	47
22	2,134	53	15	1	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	2,206
23	4,232	2,291	78	4	11	6	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	6,639
24	2,118	4,272	2,301	20	18	22	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,864
25	855	2,207	4,326	2,097	76	37	79	25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,703
26	645	880	2,407	4,165	2,037	94	57	50	24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,360
27	705	765	944	2,269	4,021	1,953	117	75	64	39	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,953
28	449	787	732	898	2,118	3,751	1,669	149	76	88	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,780
29	335	509	709	700	903	1,900	3,237	1,482	134	115	152	91	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,271
30	234	410	487	716	774	890	1,740	2,786	1,391	161	160	259	147	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,157
31	202	254	388	481	766	718	896	1,630	2,694	1,339	209	224	318	184	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,306
32	165	215	271	383	501	702	736	885	1,475	2,523	1,431	241	312	463	243	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,551
33	108	144	174	261	377	510	677	733	832	1,275	2,444	1,345	311	449	524	322	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,492
34	103	125	138	188	242	336	456	654	619	683	1,220	2,242	1,181	385	466	576	325	6	0	0	0	0	0	0	0	0	0	0	0	0	0	9,943
35	74	80	123	151	199	238	369	482	601	559	642	1,143	2,061	1,214	433	452	650	375	5	0	0	0	0	0	0	0	0	0	0	0	0	9,851
36	48	80	97	98	144	215	252	352	412	541	547	597	1,073	1,889	1,161	366	442	683	406	4	0	0	0	0	0	0	0	0	0	0	0	9,406
37	35	41	68	93	108	130	188	238	324	367	554	543	598	1,123	1,786	1,172	381	490	664	428	2	0	0	0	0	0	0	0	0	0	0	9,335
38	28	28	42	49	102	129	145	207	243	264	363	454	579	742	1,188	1,675	1,081	459	537	784	360	0	0	0	0	0	0	0	0	0	0	9,461
39	16	36	33	49	64	79	116	154	150	214	270	344	418	556	670	1,042	1,648	1,124	358	505	617	230	1	0	0	0	0	0	0	0	0	8,696
40	28	28	22	39	45	64	93	112	133	155	161	245	294	469	561	685	1,014	1,631	1,059	380	463	459	182	2	0	0	0	0	0	0	0	8,324
41	26	30	25	26	36	47	65	84	90	103	134	203	270	321	448	504	630	997	1,486	1,102	370	408	367	146	0	0	0	0	0	0	0	7,920
42	18	17	22	29	38	52	58	69	67	93	109	132	196	266	342	450	476	564	967	1,568	922	342	329	341	154	2	0	0	0	0	0	7,623
43	17	18	21	35	29	32	52	85	67	75	104	124	135	216	279	342	440	478	547	1,050	1,160	794	249	294	316	134	0	0	0	0	0	7,095
44	11	11	14	18	26	19	32	51	56	65	88	104	122	174	206	275	316	396	476	617	699	991	701	232	304	308	123	0	0	0	0	6,435
45	3	17	17	18	24	31	34	43	47	61	68	94	105	156	159	230	250	291	396	495	462	655	921	613	234	265	255	145	1	0	0	6,079
46	3	6	7	16	17	31	33	45	50	46	59	84	123	104	152	193	213	236	278	399	392	425	543	890	641	229	197	276	142	1	0	5,831
47	9	5	6	10	18	32	35	43	33	62	58	67	89	119	129	168	168	216	279	276	292	351	361	563	855	560	186	186	265	127	1	5,573
48	5	3	3	10	11	22	27	32	40	47	48	72	70	107	132	143	136	163	185	241	203	228	241	303	481	618	450	152	164	190	95	4,623
49	1	3	8	2	11	10	15	19	34	35	37	51	62	72	110	131	127	150	132	192	157	158	179	206	252	384	499	355	109	132	199	3,834
50	2	4	3	6	7	8	9	17	31	32	39	39	45	61	61	103	128	110	134	151	130	123	121	117	182	198	323	400	285	96	215	3,188
51	3	5	2	6	5	6	11	16	26	28	32	29	42	48	67	92	94	92	105	105	80	75	87	109	120	155	185	233	374	235	207	2,675
52	3	3	1	3	3	8	13	10	11	27	18	26	39	42	48	38	50	85	89	89	76	60	79	72	93	115	116	114	231	247	296	2,104
53	0	2	1	5	0	3	10	9	14	14	26	27	26	38	53	43	60	60	67	67	66	52	59	56	57	72	82	103	94	145	322	1,656
54	0	0	1	0	2	6	8	18	10	9	16	15	20	27	38	43	32	39	49	65	41	39	49	43	28	46	59	68	82	80	268	1,203
55	1	1	0	0	2	2	4	10	10	12	8	14	15	21	28	24	32	39	56	63	31	36	28	29	47	33	40	44	54	69	212	968
56	0	2	1	2	0	6	2	6	7	5	9	13	5	15	26	15	36	29	43	34	15	33	26	22	22	24	40	30	38	45	171	724
57	0	0	0	0	0	3	1	1	5	8	5	10	11	11	14	12	11	30	32	23	23	17	22	16	29	20	22	16	24	30	140	543
58	0	0	0	0	0	1	1	2	3	2	8	6	12	12	10	9	18	22	18	18	10	13	12	12	16	28	13	19	16	15	123	411
59	0	0	0	0	2	2	0	1	3	4	5	5	8	7	5	12	7	13	23	22	14	17	15	9	16	18	14	11	16	12	85	350
60+	0	2	0	1	0	2	3	3	3	3	5	8	5	13	17	13	15	19	21	25	20	19	18	15	21	17	18	30	28	21	112	481
Total	12,653	13,340	13,493	12,942	12,746	12,102	11,291	10,577	9,782	9,054	9,090	8,852	8,686	9,315	9,358	9,134	8,786	8,797	8,411	8,720	6,607	5,526	4,592	4,090	3,869	3,229	2,623	2,184	1,926	1,448	2,447	245,671

Notes: Age is age nearest birthday as of the end of the fiscal year.

Average Age: 35.5   Average YAS: 11.0

DoD Enlisted Active Duty Personnel by Years of Service and Age for FY 2017 Valuation

Years of Active Service (YAS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Total
16	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	0	0	0	0
17	70	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	0	0	70
18	15,761	41	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	0	15,802
19	40,226	12,641	27	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	52,894
20	29,803	33,828	11,053	7	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	74,691
21	17,414	26,550	30,588	8,812	8	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	83,372
22	11,774	16,038	24,411	25,188	6,627	7	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	84,046
23	9,020	10,971	14,799	20,607	19,327	4,049	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78,775
24	7,063	8,390	10,059	13,043	17,330	12,856	2,704	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71,449
25	5,315	6,647	7,629	9,140	11,588	12,817	8,986	2,202	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64,330
26	4,013	5,091	6,063	6,903	8,338	8,881	9,294	7,122	2,241	22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57,970
27	2,842	3,737	4,597	5,622	6,452	6,393	6,511	8,122	6,295	2,542	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53,141
28	2,104	2,640	3,376	4,124	4,977	4,935	4,739	6,094	6,268	6,242	2,353	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47,873
29	1,517	1,747	2,213	2,987	3,727	4,086	3,766	4,584	4,700	5,424	5,817	2,336	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42,921
30	1,122	1,364	1,710	2,124	2,661	3,120	3,143	3,783	3,739	4,015	4,973	5,819	1,962	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39,548
31	789	940	1,173	1,581	1,983	2,270	2,342	3,057	2,908	3,132	3,746	5,287	5,248	2,265	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,727
32	635	653	799	1,127	1,417	1,731	1,848	2,437	2,396	2,541	2,929	4,010	4,712	5,779	2,327	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35,352
33	500	520	599	690	975	1,258	1,341	1,724	1,944	1,948	2,340	2,917	3,000	5,096	5,554	2,360	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32,779
34	416	406	440	482	709	885	1,073	1,378	1,348	1,448	1,838	2,231	2,352	3,510	4,468	5,258	2,544	22	0	0	0	0	0	0	0	0	0	0	0	0	0	30,810
35	350	320	376	402	502	619	785	1,080	1,072	1,154	1,388	1,818	1,862	2,678	3,195	3,954	5,296	2,694	18	0	0	0	0	0	0	0	0	0	0	0	0	29,563
36	118	280	271	343	400	437	518	780	824	889	1,101	1,330	1,456	1,985	2,320	2,682	3,890	5,230	2,367	12	0	0	0	0	0	0	0	0	0	0	0	27,234
37	37	119	256	257	327	332	386	593	587	700	772	1,040	1,131	1,587	1,716	2,005	2,572	3,799	5,120	2,292	11	0	0	0	0	0	0	0	0	0	0	25,639
38	37	60	96	235	245	279	316	440	424	546	618	771	837	1,201	1,355	1,607	1,856	2,525	3,823	5,080	1,348	4	0	0	0	0	0	0	0	0	0	23,704
39	40	43	27	75	201	211	247	356	355	358	474	602	658	923	1,078	1,207	1,385	1,734	2,428	3,936	2,891	861	4	0	0	0	0	0	0	0	0	20,094
40	20	45	23	31	80	213	196	307	264	289	320	447	512	717	832	922	983	1,270	1,691	2,528	2,264	1,958	621	0	0	0	0	0	0	0	0	16,554
41	12	26	31	25	43	89	197	214	219	219	301	345	378	559	573	698	818	951	1,259	1,787	1,475	1,661	1,438	499	401	2	0	0	0	0	0	13,821
42	5	14	22	32	34	54	144	223	164	192	201	270	296	417	465	597	667	755	910	1,267	917	1,037	1,205	1,180	863	322	0	0	0	0	0	11,472
43	3	4	10	22	24	44	98	137	154	173	219	208	262	342	407	427	512	559	767	956	709	750	779	983	702	669	180	0	0	0	0	9,735
44	2	12	3	16	25	35	92	122	115	142	175	202	201	284	326	372	390	444	563	746	491	499	524	611	473	569	424	176	2	0	0	7,950
45	1	3	10	17	17	38	74	98	114	100	166	175	208	238	269	271	341	360	453	535	416	405	390	426	318	365	333	392	206	0	0	6,772
46	0	1	13	13	15	20	69	92	94	105	137	167	199	252	227	255	282	315	420	453	289	323	301	266	222	241	209	317	373	150	0	5,923
47	0	0	9	8	15	20	56	77	83	78	131	131	170	195	226	271	264	265	334	400	258	259	214	253	135	173	126	181	284	261	0	5,233
48	2	5	1	10	22	19	46	58	78	77	98	104	102	193	193	225	231	259	259	294	200	183	166	165	126	139	91	114	147	197	71	4,227
49	0	2	3	3	12	10	22	55	61	48	80	79	81	98	193	171	173	191	221	243	153	140	115	102	83	86	85	77	83	197	96	3,168
50	1	2	6	6	5	8	16	28	46	48	66	58	67	66	101	164	185	169	185	201	109	101	81	91	49	75	53	55	58	100	90	2,435
51	0	2	5	4	5	3	12	22	17	49	60	65	56	67	84	98	116	142	158	183	91	99	71	63	53	39	33	35	57	54	72	1,892
52	0	2	3	3	6	5	5	13	19	28	43	23	34	59	62	89	114	121	138	174	80	58	59	35	41	38	27	32	40	40	57	1,487
53	0	0	4	1	4	5	5	6	6	18	27	32	40	43	68	69	81	104	131	130	59	66	46	48	26	31	24	35	29	28	41	1,247
54	1	1	0	0	3	2	9	6	15	13	11	17	27	42	46	51	72	74	73	120	48	33	31	37	22	18	10	24	34	34	25	931
55	0	0	0	0	2	5	2	3	6	9	14	12	31	31	49	40	52	55	77	54	45	37	30	28	22	18	6	19	21	21	22	711
56	0	0	0	3	1	2	5	5	3	3	11	6	16	18	23	34	35	46	35	41	23	29	19	18	14	9	7	7	11	11	14	451
57	0	0	1	3	0	2	2	0	7	5	4	4	13	8	20	23	35	28	39	24	18	17	19	13	17	5	9	6	9	6	11	355
58	0	0	0	0	0	1	2	2	2	3	4	3	3	6	17	9	25	16	30	20	12	7	9	17	7	11	13	6	4	2	5	252
59	0	0	0	0	3	0	1	0	3	3	1	2	1	4	7	7	13	12	11	17	8	6	3	3	3	7	2	4	10	2	5	141
60+	0	0	0	0	0	0	2	1	0	3	1	2	1	1	5	7	8	11	11	17	8	5	2	2	3	0	0	2	0	0	5	122
Total	151,015	133,147	120,703	103,953	88,111	65,745	49,057	45,231	36,578	32,567	30,450	30,535	25,937	28,715	26,214	23,902	22,956	22,152	21,524	21,513	11,926	8,541	6,125	4,842	3,566	2,803	1,628	1,448	1,332	917	511	1,123,643

Notes: Age is age nearest birthday as of the end of the fiscal year.

Average Age: 28.0   Average YAS: 6.4

All DoD Active Duty Personnel by Years of Service and Age for FY 2017 Valuation

Years of Active Service (YAS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Total
16	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	0	0	0	0
17	70	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	0	0	70
18	15,761	42	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	0	15,803
19	40,226	12,642	27	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	52,895
20	29,805	33,833	11,054	7	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	74,699
21	17,446	26,560	30,591	8,813	8	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	83,419
22	13,908	16,091	24,426	25,192	6,627	7	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	86,252
23	13,252	13,262	14,877	20,627	19,339	4,056	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85,414
24	9,181	12,662	12,359	13,132	17,348	12,879	2,748	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80,313
25	6,170	8,854	11,955	11,238	11,663	12,854	9,064	2,227	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74,033
26	4,658	5,970	8,470	11,068	10,375	8,975	9,351	7,172	2,266	23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68,330
27	3,547	4,502	5,540	7,891	10,472	8,345	6,629	8,197	6,360	2,581	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64,094
28	2,553	3,427	4,108	5,022	7,095	8,686	6,408	6,243	6,344	6,331	2,415	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58,653
29	1,852	2,256	2,922	3,687	4,630	5,986	7,004	6,066	4,835	5,539	5,968	2,427	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53,192
30	1,356	1,774	2,197	2,840	3,435	4,010	4,883	6,569	5,130	4,176	5,133	6,078	2,109	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49,705
31	991	1,194	1,560	2,062	2,749	2,988	3,239	4,687	5,603	4,471	3,955	5,511	5,566	2,449	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47,033
32	801	868	1,071	1,510	1,918	2,434	2,584	3,322	3,871	5,064	4,360	4,251	5,024	6,242	2,570	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45,903
33	608	664	773	952	1,352	1,768	2,017	2,457	2,776	3,223	4,784	4,261	3,311	5,545	6,078	2,682	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,271
34	520	531	578	671	951	1,221	1,529	2,032	1,967	2,131	3,057	4,472	3,534	3,895	4,933	5,834	2,869	28	0	0	0	0	0	0	0	0	0	0	0	0	0	40,753
35	424	401	499	553	701	858	1,153	1,561	1,673	1,713	2,030	2,961	3,923	3,892	3,628	4,406	5,946	3,070	23	0	0	0	0	0	0	0	0	0	0	0	0	39,414
36	166	361	368	441	544	653	771	1,132	1,236	1,430	1,648	1,927	2,529	3,874	3,481	3,048	4,331	5,913	2,773	16	0	0	0	0	0	0	0	0	0	0	0	36,640
37	72	160	324	350	436	463	574	830	911	1,067	1,326	1,583	1,730	2,710	3,502	3,177	2,952	4,289	5,785	2,720	13	0	0	0	0	0	0	0	0	0	0	34,974
38	65	88	138	284	347	408	461	648	666	810	981	1,225	1,416	1,943	2,543	3,282	2,937	2,984	4,360	5,865	1,709	4	0	0	0	0	0	0	0	0	0	33,165
39	56	79	60	124	265	290	363	510	505	572	744	947	1,076	1,479	1,749	2,249	3,034	2,859	2,786	4,441	3,508	1,091	1	0	0	0	0	0	0	0	0	28,790
40	48	73	45	71	125	277	289	419	397	444	481	693	806	1,186	1,392	1,607	1,997	2,900	2,750	2,908	2,727	2,418	803	2	0	0	0	0	0	0	0	24,858
41	38	56	56	51	79	136	263	298	309	322	435	549	648	880	1,021	1,203	1,448	1,949	2,746	2,890	1,846	2,069	1,805	645	0	0	0	0	0	0	0	21,741
42	23	31	44	61	73	107	203	292	231	285	310	401	492	682	807	1,047	1,143	1,319	1,877	2,835	1,840	1,379	1,534	1,521	555	4	0	0	0	0	0	19,095
43	20	22	31	57	53	76	150	222	221	248	323	332	397	558	686	769	952	1,037	1,314	2,007	1,869	1,544	1,028	1,277	1,179	456	0	0	0	0	0	16,830
44	13	23	17	34	51	54	124	173	171	207	263	306	323	458	532	647	706	840	1,040	1,363	1,190	1,491	1,225	843	1,006	977	303	2	0	0	0	14,385
45	4	8	27	35	41	69	108	142	162	161	234	269	313	394	429	501	591	651	849	1,030	878	1,060	1,311	1,039	707	835	679	321	3	0	0	12,851
46	3	7	20	29	32	51	102	137	145	151	196	251	323	355	378	447	495	551	697	851	682	748	844	1,157	959	594	530	668	348	1	0	11,754
47	9	5	15	18	33	52	91	120	117	140	189	199	259	315	356	439	432	482	613	676	550	610	575	816	1,078	802	395	503	638	277	1	10,806
48	7	8	4	20	23	41	73	90	118	124	146	176	172	305	325	368	367	422	444	535	403	411	407	468	616	791	576	333	448	451	166	8,850
49	1	5	11	5	23	20	37	74	95	83	117	130	143	171	304	303	300	341	353	435	310	298	294	308	378	523	590	469	256	329	295	7,002
50	3	6	4	12	12	16	25	45	77	80	105	97	112	161	162	267	313	279	319	352	239	224	202	208	265	284	408	477	368	196	305	5,623
51	3	7	7	10	10	9	23	39	43	77	92	94	98	115	151	191	210	235	263	288	171	174	159	172	169	230	238	288	433	289	279	4,567
52	3	3	4	6	9	13	18	23	30	55	61	49	73	101	110	127	164	206	228	264	156	118	138	107	146	155	150	146	289	287	353	3,591
53	0	5	5	1	7	8	15	16	25	32	53	60	67	81	122	112	141	164	198	185	89	118	106	104	98	111	83	92	134	173	363	2,903
54	1	0	1	1	5	8	17	24	24	22	27	32	47	69	84	94	103	112	122	117	76	72	80	80	54	77	50	92	111	114	293	2,134
55	0	2	0	0	4	7	6	11	16	21	22	26	42	52	78	64	84	94	133	117	51	73	58	57	69	51	46	63	72	90	234	1,679
56	0	2	1	5	2	8	7	11	10	8	20	19	21	33	49	50	71	74	78	75	39	62	46	40	36	33	29	37	49	56	185	1,175
57	0	0	0	3	0	5	5	4	12	13	9	14	25	18	35	36	47	59	71	47	42	34	41	29	46	39	22	21	33	41	151	898
58	0	0	0	0	0	4	3	2	6	5	12	9	8	13	31	31	43	38	48	38	22	20	21	29	26	25	20	25	20	21	125	663
59	0	0	0	0	2	2	2	4	3	7	6	7	11	13	27	21	20	25	34	39	22	23	18	12	23	20	22	15	17	14	90	491
60+	0	2	0	1	5	2	5	0	4	4	6	10	6	22	22	22	23	30	33	0	28	24	20	17	24	22	0	32	38	23	117	603
Total	163,668	146,487	134,196	116,895	100,856	77,847	60,348	55,807	46,360	41,621	39,541	39,387	34,623	38,030	35,572	33,036	31,741	30,949	29,935	30,233	18,533	14,066	10,717	8,932	7,435	6,032	4,251	3,633	3,258	2,365	2,958	1,369,314

Notes: Age is age nearest birthday as of the end of the fiscal year.

Average Age: 29.5   Average YAS: 7.3

DoD Officers Average Monthly Active Duty Basic Pay by Active Years of Service and Age for FY 2017 Valuation

Years of Active Service (YAS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Avg
16	$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	$0	$0	$0	$0
17	$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	$0	$0	$0	$0
18	$0	$3,108	$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	$0	$3,038
19	$0	$3,038	$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	$0	$3,104
20	$3,073	$3,055	$3,365	$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	$3,130
21	$3,112	$3,085	$3,335	$3,452	$3,820	$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	$3,125
22	$3,121	$3,176	$3,335	$3,790	$4,068	$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	$3,146
23	$3,125	$3,156	$3,650	$4,259	$3,820	$3,510	$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	$3,427
24	$3,147	$3,216	$4,042	$4,259	$4,068	$3,510	$3,144	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,992
25	$3,209	$3,372	$4,120	$4,683	$4,746	$4,378	$3,435	$3,910	$3,910	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,547
26	$3,524	$4,242	$4,215	$4,794	$5,390	$5,152	$5,736	$5,780	$4,528	$4,855	$4,704	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,934
27	$3,757	$4,575	$4,343	$4,806	$5,382	$5,744	$5,887	$5,844	$4,901	$4,485	$4,739	$4,748	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,169
28	$3,737	$3,811	$4,900	$4,905	$5,273	$5,755	$5,871	$5,113	$5,391	$4,795	$4,739	$4,849	$5,086	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,331
29	$3,804	$3,856	$4,924	$4,947	$5,273	$5,558	$5,896	$5,724	$5,391	$4,698	$4,924	$4,849	$5,086	$4,828	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,443
30	$3,862	$3,885	$5,145	$4,947	$5,319	$5,441	$5,721	$5,785	$5,993	$5,309	$4,924	$4,849	$5,086	$4,828	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,600
31	$3,966	$4,491	$4,570	$5,034	$5,393	$5,482	$5,662	$5,785	$6,020	$6,029	$6,660	$6,694	$7,087	$5,195	$5,227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,784
32	$4,024	$4,646	$4,814	$5,056	$5,357	$5,494	$6,032	$6,003	$6,026	$6,095	$6,503	$5,416	$7,032	$5,278	$5,487	$6,524	$4,955	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,042
33	$3,916	$4,379	$4,881	$5,138	$5,393	$5,534	$5,887	$5,844	$6,056	$6,127	$6,622	$6,720	$7,084	$5,416	$5,568	$5,654	$6,222	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,255
34	$4,118	$4,380	$4,900	$5,273	$5,477	$5,551	$5,871	$5,924	$6,179	$6,339	$6,568	$6,833	$7,233	$5,690	$5,782	$5,789	$6,052	$5,772	$6,106	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,458
35	$4,216	$4,940	$5,145	$5,333	$5,595	$5,628	$5,896	$6,015	$6,257	$6,339	$6,539	$6,766	$7,176	$6,946	$5,979	$5,885	$6,052	$6,162	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,643
36	$4,436	$4,826	$4,570	$5,383	$5,621	$5,808	$6,031	$6,083	$6,262	$6,440	$6,660	$6,694	$7,087	$7,172	$7,231	$6,193	$6,176	$6,222	$6,492	$6,617	$7,532	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,836
37	$4,301	$4,933	$4,814	$5,325	$5,865	$5,983	$6,032	$6,063	$6,026	$6,095	$6,790	$6,821	$7,032	$7,089	$7,396	$7,354	$6,486	$6,314	$6,533	$6,629	$6,838	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,030
38	$4,460	$4,978	$4,881	$5,598	$5,687	$5,930	$6,017	$6,227	$6,491	$6,538	$6,802	$6,921	$7,084	$7,071	$7,318	$7,536	$7,685	$6,681	$6,720	$6,666	$6,838	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,282
39	$3,985	$4,923	$5,200	$5,487	$6,035	$5,921	$6,267	$6,260	$6,602	$6,677	$6,858	$6,946	$7,233	$7,071	$7,287	$7,536	$7,929	$7,917	$6,922	$6,964	$6,985	$7,195	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,486
40	$4,561	$5,183	$5,303	$5,852	$5,825	$6,080	$6,363	$6,320	$6,523	$6,730	$6,959	$6,982	$7,254	$7,194	$7,402	$7,512	$7,851	$8,096	$8,143	$6,964	$6,985	$7,076	$7,195	$8,575	$0	$0	$0	$0	$0	$0	$0	$7,674
41	$4,115	$4,826	$5,248	$5,581	$5,918	$6,056	$6,215	$6,371	$6,722	$6,697	$6,925	$7,002	$7,220	$7,235	$7,473	$7,556	$7,767	$8,043	$8,392	$8,193	$7,224	$7,103	$7,277	$7,332	$7,588	$8,575	$0	$0	$0	$0	$0	$7,852
42	$4,201	$4,933	$5,506	$5,963	$6,329	$6,117	$6,230	$6,383	$6,688	$6,856	$7,143	$7,076	$7,301	$7,322	$7,504	$7,612	$7,859	$7,946	$8,289	$8,423	$8,477	$7,360	$7,310	$7,401	$7,574	$7,700	$8,140	$8,225	$0	$0	$0	$8,004
43	$4,622	$4,978	$5,200	$5,803	$6,329	$6,113	$6,452	$6,478	$6,695	$6,878	$7,030	$7,165	$7,433	$7,300	$7,532	$7,746	$7,938	$8,073	$8,143	$8,371	$8,687	$8,728	$7,621	$7,454	$7,678	$7,736	$10,660	$8,838	$8,579	$0	$0	$8,248
44	$4,476	$4,923	$4,924	$5,745	$6,261	$6,624	$6,213	$6,604	$6,776	$6,911	$7,152	$7,438	$7,454	$7,452	$7,662	$7,690	$7,950	$8,138	$8,336	$8,247	$8,650	$9,004	$9,439	$7,819	$7,678	$7,736	$9,927	$10,743	$9,060	$8,863	$9,206	$8,490
45	$4,927	$5,183	$5,496	$6,352	$6,261	$6,999	$6,546	$6,587	$6,724	$7,018	$7,128	$7,331	$7,527	$7,476	$7,714	$7,798	$7,967	$8,115	$8,392	$8,449	$8,537	$8,897	$9,619	$9,510	$8,108	$7,967	$8,140	$10,905	$10,937	$9,213	$9,280	$8,711
46	$5,073	$4,718	$5,531	$6,653	$6,415	$6,156	$6,791	$6,688	$6,636	$7,001	$7,356	$7,592	$7,699	$7,620	$7,706	$7,894	$8,112	$8,154	$8,341	$8,514	$8,749	$8,760	$9,463	$9,847	$9,695	$8,296	$8,159	$8,275	$11,041	$11,135	$9,642	$8,898
47	$4,638	$5,760	$5,954	$6,257	$6,525	$6,622	$6,389	$6,500	$6,905	$7,014	$7,283	$7,627	$7,725	$7,655	$7,849	$8,093	$8,219	$8,242	$8,490	$8,426	$8,944	$8,896	$9,305	$9,723	$10,041	$9,869	$8,487	$8,407	$8,397	$11,311	$10,550	$9,095
48	$3,824	$6,317	$6,253	$6,485	$6,006	$6,650	$6,719	$6,730	$6,903	$7,149	$7,263	$7,517	$8,060	$7,736	$8,266	$8,061	$8,442	$8,335	$8,524	$8,468	$8,773	$9,159	$9,483	$9,520	$9,894	$10,296	$10,374	$8,838	$8,579	$8,572	$12,643	$9,326
49	$5,070	$6,600	$7,087	$6,200	$7,187	$6,510	$7,185	$7,158	$7,158	$6,851	$7,580	$8,082	$8,045	$7,882	$8,382	$8,439	$8,571	$8,439	$8,568	$8,760	$8,898	$9,004	$9,431	$9,507	$9,679	$10,090	$10,660	$10,743	$9,060	$8,863	$9,206	$9,516
50	$4,428	$5,360	$5,530	$6,545	$6,827	$6,999	$6,779	$7,071	$6,887	$7,221	$7,496	$8,071	$7,850	$8,289	$8,199	$8,206	$8,635	$8,530	$8,820	$8,873	$8,932	$9,282	$9,462	$9,688	$9,687	$9,992	$10,521	$10,905	$10,937	$9,213	$9,280	$9,758
51	$8,311	$5,545	$6,779	$6,432	$7,591	$7,795	$7,833	$7,120	$7,294	$7,277	$7,629	$7,893	$7,950	$8,092	$8,425	$8,409	$8,548	$8,490	$8,901	$9,152	$9,026	$9,313	$9,353	$10,005	$9,925	$10,379	$10,441	$10,731	$11,041	$11,135	$11,896	$9,873
52	$4,833	$7,195	$6,742	$6,083	$7,544	$7,208	$7,472	$7,472	$7,538	$7,549	$7,697	$7,673	$8,246	$8,284	$8,195	$8,149	$8,461	$8,726	$9,093	$8,717	$9,124	$9,303	$9,462	$10,104	$10,322	$10,106	$10,259	$10,669	$10,443	$11,311	$12,637	$9,793
53	$0	$4,518	$7,739	$7,703	$8,745	$5,886	$6,890	$7,135	$6,823	$8,090	$7,880	$7,594	$8,213	$8,069	$8,565	$8,226	$8,571	$8,817	$9,029	$8,830	$8,936	$9,499	$9,554	$10,402	$9,556	$10,107	$10,529	$10,414	$10,564	$11,124	$12,643	$9,826
54	$0	$0	$6,601	$0	$8,564	$8,208	$7,978	$7,131	$7,116	$7,494	$7,867	$7,775	$8,029	$7,899	$8,219	$8,430	$8,409	$8,820	$8,518	$8,518	$9,140	$9,422	$9,713	$9,718	$10,289	$9,779	$9,927	$10,392	$10,387	$10,864	$11,641	$10,002
55	$4,713	$7,195	$6,742	$0	$5,992	$6,591	$6,717	$7,847	$7,245	$7,183	$7,786	$8,309	$8,401	$8,676	$8,599	$8,951	$8,730	$8,571	$8,639	$8,940	$9,175	$9,332	$10,222	$9,966	$9,887	$9,907	$10,490	$10,988	$11,315	$10,900	$12,001	$10,019
56	$0	$9,280	$5,456	$6,590	$6,659	$7,278	$9,159	$7,268	$8,016	$6,885	$8,021	$8,594	$7,290	$9,515	$9,153	$8,549	$8,437	$8,907	$8,597	$9,417	$9,122	$9,723	$9,332	$9,566	$9,828	$10,375	$10,125	$10,364	$10,293	$11,277	$11,896	$10,256
57	$0	$0	$0	$0	$7,016	$7,964	$8,154	$6,083	$8,654	$7,195	$7,695	$8,854	$7,901	$9,597	$8,487	$9,597	$8,461	$9,079	$8,915	$9,181	$9,522	$9,052	$9,462	$10,104	$10,322	$10,106	$10,259	$10,669	$10,443	$10,822	$12,637	$10,356
58	$0	$0	$0	$0	$11,220	$6,438	$11,600	$8,154	$6,742	$9,296	$7,771	$7,547	$8,153	$8,153	$8,581	$7,994	$9,067	$8,647	$8,986	$8,709	$9,392	$9,973	$9,743	$10,402	$9,556	$10,107	$10,529	$10,096	$10,564	$10,389	$12,643	$10,172
59	$0	$0	$0	$0	$11,220	$6,659	$6,239	$11,600	$6,429	$9,296	$7,418	$8,616	$7,565	$8,787	$9,148	$9,086	$8,478	$8,647	$9,030	$8,815	$9,321	$9,401	$9,674	$9,718	$10,289	$9,997	$9,927	$10,290	$10,387	$10,591	$12,659	$10,172
60+	$0	$5,628	$6,742	$10,296	$11,130	$6,659	$7,442	$7,968	$8,408	$7,628	$7,855	$9,501	$9,338	$8,447	$8,261	$8,668	$9,086	$9,502	$9,026	$9,224	$9,430	$9,667	$9,793	$9,966	$10,617	$10,779	$9,837	$10,664	$11,315	$10,935	$12,423	$10,324
Avg	$3,316	$3,443	$4,271	$4,835	$5,404	$5,547	$5,774	$5,856	$6,113	$6,204	$6,580	$6,721	$6,964	$6,919	$7,158	$7,295	$7,571	$7,707	$7,966	$8,020	$8,229	$8,473	$8,969	$9,150	$9,314	$9,471	$9,799	$9,923	$10,064	$10,214	$11,003	$6,477

Notes: Basic pay figures reflect the January, 2018, increase of 2.4%.
Age is age nearest birthday as of the end of the fiscal year.

DoD Enlisted Average Monthly Active Duty Basic Pay by Active Years of Service and Age for FY 2017 Valuation

Years of Active Service (YAS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Avg
16	$1,678	$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	$0	$0	$0
17	$1,678	$1,920	$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	$0	$1,678
18	$1,715	$1,920	$2,205	$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	$1,716
19	$1,749	$1,911	$2,205	$2,405	$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	$1,788
20	$1,795	$1,926	$2,148	$2,405	$2,597	$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	$1,906
21	$1,809	$1,944	$2,160	$2,349	$2,547	$2,629	$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	$2,038
22	$1,830	$1,956	$2,178	$2,360	$2,562	$2,629	$2,925	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,170
23	$1,862	$1,967	$2,186	$2,374	$2,573	$2,637	$2,925	$2,958	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,280
24	$1,886	$1,986	$2,200	$2,379	$0	$2,640	$2,876	$2,958	$3,290	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,369
25	$1,896	$1,999	$2,218	$2,395	$0	$0	$2,876	$2,928	$3,290	$3,274	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,458
26	$1,910	$2,023	$2,235	$2,412	$2,592	$2,653	$2,878	$2,926	$3,208	$3,274	$3,291	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,556
27	$1,925	$2,042	$2,255	$2,433	$2,615	$2,670	$2,887	$2,941	$3,206	$3,273	$3,397	$3,498	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,679
28	$1,928	$2,061	$2,276	$2,455	$2,636	$2,702	$2,912	$2,958	$3,214	$3,272	$3,455	$3,498	$3,830	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,807
29	$1,955	$2,081	$2,311	$2,481	$2,660	$2,726	$2,935	$2,976	$3,231	$3,277	$3,464	$3,518	$3,830	$3,831	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,941
30	$1,967	$2,075	$2,324	$2,496	$2,680	$2,747	$2,965	$3,000	$3,249	$3,290	$3,464	$3,518	$3,748	$3,831	$3,842	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,063
31	$1,955	$2,107	$2,336	$2,508	$2,699	$2,760	$2,972	$3,024	$3,274	$3,314	$3,472	$3,520	$3,749	$3,820	$3,842	$4,158	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,211
32	$1,988	$2,116	$2,352	$2,541	$2,708	$2,799	$3,010	$3,046	$3,307	$3,357	$3,508	$3,548	$3,758	$3,823	$4,008	$4,158	$4,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,371
33	$2,006	$2,125	$2,424	$2,570	$2,735	$2,819	$3,046	$3,082	$3,332	$3,384	$3,537	$3,582	$3,782	$3,831	$3,997	$4,109	$4,333	$4,264	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,525
34	$2,012	$2,191	$2,414	$2,578	$2,812	$2,888	$3,059	$3,136	$3,364	$3,429	$3,581	$3,616	$3,815	$3,858	$4,000	$4,094	$4,258	$4,264	$4,534	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,673
35	$1,977	$2,207	$2,434	$2,647	$2,826	$2,902	$3,112	$3,158	$3,409	$3,475	$3,635	$3,656	$3,865	$3,897	$4,034	$4,101	$4,244	$4,310	$4,534	$4,681	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,813
36	$2,036	$2,196	$2,421	$2,627	$2,841	$2,937	$3,114	$3,169	$3,412	$3,511	$3,667	$3,732	$3,891	$3,920	$4,054	$4,129	$4,257	$4,307	$4,531	$4,534	$4,919	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,953
37	$2,143	$2,222	$2,404	$2,667	$2,798	$2,959	$3,129	$3,232	$3,455	$3,533	$3,703	$3,746	$3,953	$3,954	$4,095	$4,149	$4,280	$4,311	$4,502	$4,568	$4,919	$5,024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,094
38	$2,106	$2,592	$2,610	$2,584	$2,817	$3,022	$3,178	$3,207	$3,476	$3,543	$3,728	$3,781	$3,968	$3,992	$4,127	$4,165	$4,289	$4,338	$4,488	$4,554	$4,853	$5,024	$5,301	$0	$0	$0	$0	$0	$0	$0	$0	$4,212
39	$2,105	$2,344	$3,039	$2,891	$2,803	$2,978	$3,215	$3,218	$3,523	$3,588	$3,760	$3,800	$4,015	$4,039	$4,153	$4,224	$4,307	$4,337	$4,500	$4,536	$4,847	$5,024	$5,301	$5,431	$0	$0	$0	$0	$0	$0	$0	$4,317
40	$2,094	$2,536	$2,930	$3,318	$3,032	$2,978	$3,225	$3,199	$3,517	$3,601	$3,769	$3,852	$4,018	$4,039	$4,162	$4,232	$4,309	$4,374	$4,508	$4,524	$4,868	$4,982	$5,301	$5,431	$5,775	$0	$0	$0	$0	$0	$0	$4,412
41	$2,392	$2,624	$2,943	$3,336	$3,598	$3,233	$3,115	$3,215	$3,590	$3,666	$3,814	$3,877	$4,030	$4,050	$4,197	$4,278	$4,382	$4,381	$4,520	$4,558	$4,870	$4,993	$5,317	$5,431	$5,775	$6,079	$0	$0	$0	$0	$0	$4,537
42	$2,827	$2,660	$2,982	$3,562	$3,475	$3,482	$3,229	$3,230	$3,532	$3,635	$3,754	$3,977	$4,091	$4,085	$4,246	$4,326	$4,363	$4,428	$4,511	$4,558	$4,882	$4,992	$5,276	$5,406	$5,775	$6,079	$6,589	$0	$0	$0	$0	$4,633
43	$3,074	$3,250	$3,322	$3,455	$3,571	$3,456	$3,234	$3,290	$3,437	$3,672	$3,904	$3,950	$4,111	$4,119	$4,336	$4,310	$4,456	$4,460	$4,579	$4,576	$4,876	$5,011	$5,254	$5,412	$5,846	$6,024	$6,589	$6,939	$0	$0	$0	$4,761
44	$2,925	$2,951	$2,951	$3,701	$3,499	$3,645	$3,342	$3,301	$3,501	$3,601	$3,819	$3,955	$4,185	$4,263	$4,408	$4,412	$4,511	$4,569	$4,572	$4,615	$4,926	$5,013	$5,287	$5,440	$5,847	$5,994	$6,589	$6,939	$6,939	$0	$0	$4,869
45	$0	$2,864	$3,502	$3,651	$3,724	$3,371	$3,356	$3,242	$3,621	$3,788	$3,969	$4,188	$4,221	$4,253	$4,481	$4,542	$4,494	$4,626	$4,660	$4,654	$5,023	$5,063	$5,316	$5,449	$5,792	$5,994	$6,657	$6,939	$6,939	$0	$0	$5,004
46	$0	$3,172	$3,803	$3,798	$3,792	$3,942	$3,386	$3,540	$3,740	$3,728	$4,093	$3,895	$4,136	$4,331	$4,539	$4,713	$4,719	$4,700	$4,786	$4,707	$4,870	$5,055	$5,153	$5,373	$5,496	$5,831	$5,961	$6,663	$6,762	$6,798	$6,941	$5,125
47	$0	$3,535	$4,115	$4,234	$3,388	$4,515	$3,314	$3,324	$3,796	$3,854	$3,754	$4,195	$4,261	$4,364	$4,572	$4,326	$4,806	$4,864	$4,795	$4,729	$4,882	$5,056	$5,122	$5,395	$5,509	$5,770	$6,006	$6,574	$6,755	$6,802	$6,941	$5,208
48	$3,149	$3,780	$6,939	$3,737	$3,890	$4,502	$4,711	$4,482	$3,680	$4,013	$4,056	$4,358	$4,426	$4,368	$4,697	$4,310	$4,725	$4,933	$4,890	$4,800	$4,876	$5,041	$5,173	$5,368	$5,581	$5,839	$5,977	$6,614	$6,788	$6,807	$6,966	$5,258
49	$3,311	$3,118	$3,576	$4,705	$3,890	$5,666	$4,711	$4,592	$3,854	$4,919	$4,056	$4,571	$4,392	$4,889	$4,856	$4,697	$4,725	$5,270	$5,010	$4,936	$5,306	$5,178	$5,173	$5,382	$5,604	$5,714	$6,035	$6,658	$6,643	$6,786	$7,275	$5,306
50	$0	$3,617	$3,311	$3,914	$3,844	$0	$6,249	$4,791	$3,799	$4,052	$4,120	$4,303	$4,783	$4,806	$4,685	$4,774	$4,814	$4,983	$4,969	$4,995	$5,266	$5,380	$5,377	$5,316	$5,538	$5,836	$5,942	$6,670	$6,864	$6,708	$7,005	$5,294
51	$0	$3,218	$3,772	$4,629	$3,643	$3,942	$4,444	$4,220	$4,224	$3,898	$4,031	$4,619	$4,590	$4,434	$4,934	$4,801	$4,805	$4,982	$5,039	$5,035	$5,081	$5,377	$5,454	$5,617	$5,828	$5,978	$5,978	$6,698	$6,734	$6,727	$6,990	$5,260
52	$0	$3,535	$4,276	$3,799	$5,529	$4,515	$4,711	$4,770	$4,326	$4,195	$4,151	$4,447	$4,538	$4,625	$4,898	$5,062	$5,099	$5,270	$5,228	$5,042	$5,282	$5,131	$5,477	$5,628	$5,944	$6,021	$6,580	$6,515	$6,660	$7,063	$7,262	$5,304
53	$3,311	$4,276	$0	$6,030	$4,212	$5,058	$4,711	$4,482	$4,314	$4,617	$4,247	$4,571	$4,493	$4,889	$4,900	$5,430	$5,362	$5,292	$5,107	$5,009	$5,306	$5,861	$5,515	$5,636	$6,118	$5,930	$6,522	$6,934	$6,786	$7,063	$7,421	$5,362
54	$0	$3,889	$0	$0	$5,058	$6,556	$5,265	$4,592	$5,021	$4,919	$5,032	$5,088	$4,734	$4,880	$4,900	$5,430	$5,310	$5,220	$5,197	$5,211	$5,306	$5,553	$5,451	$5,780	$5,512	$5,466	$6,700	$6,700	$6,983	$6,939	$7,395	$5,437
55	$0	$0	$0	$5,069	$6,288	$7,178	$6,249	$4,791	$6,084	$4,260	$5,135	$4,912	$4,681	$4,715	$4,842	$5,182	$5,099	$5,308	$5,423	$5,564	$5,310	$5,799	$5,567	$5,575	$5,717	$5,873	$5,942	$6,782	$6,826	$7,040	$7,196	$5,456
56	$0	$0	$4,554	$5,069	$0	$6,417	$5,385	$5,387	$5,174	$4,120	$5,984	$5,046	$4,955	$4,598	$4,951	$5,240	$5,267	$5,284	$5,440	$5,354	$5,611	$5,109	$5,514	$5,873	$6,069	$5,817	$7,142	$6,855	$7,035	$6,368	$7,368	$5,477
57	$0	$0	$0	$0	$7,650	$4,456	$4,711	$0	$5,799	$4,788	$5,494	$4,035	$5,358	$5,206	$4,963	$5,042	$5,073	$5,543	$4,963	$5,288	$5,534	$5,861	$5,477	$5,328	$5,802	$5,283	$6,945	$6,934	$6,969	$7,070	$7,286	$5,455
58	$0	$0	$0	$0	$6,556	$5,116	$6,041	$6,233	$5,662	$4,631	$4,418	$5,961	$5,008	$4,543	$5,302	$5,430	$5,310	$5,220	$5,197	$5,211	$5,306	$5,553	$5,393	$5,636	$5,402	$5,930	$6,232	$7,075	$6,302	$7,063	$7,096	$5,475
59	$0	$3,944	$0	$0	$0	$0	$6,041	$0	$6,455	$5,032	$6,041	$4,618	$5,756	$5,067	$5,156	$5,748	$4,941	$4,941	$5,059	$5,413	$4,984	$5,533	$5,393	$6,041	$5,512	$5,466	$6,522	$7,075	$5,922	$6,983	$5,256	$5,366
60+	$3,944	$5,291	$0	$5,961	$6,058	$0	$5,070	$6,415	$0	$4,848	$8,033	$4,984	$6,041	$4,618	$4,832	$5,246	$5,075	$5,333	$5,172	$5,564	$5,310	$5,643	$5,666	$5,291	$5,821	$6,519	$6,460	$6,782	$6,445	$7,486	$6,889	$5,592
Avg	$1,805	$1,962	$2,197	$2,397	$2,596	$2,690	$2,932	$3,002	$3,278	$3,350	$3,543	$3,614	$3,844	$3,914	$4,091	$4,192	$4,331	$4,391	$4,557	$4,591	$4,904	$5,042	$5,315	$5,455	$5,823	$5,992	$6,630	$6,749	$6,784	$6,975	$7,214	$2,876

Notes: Basic pay figures reflect the January, 2018, increase of 2.4%.
Age is age nearest birthday as of the end of the fiscal year.

All DoD Average Monthly Active Duty Basic Pay by Active Years of Service and Age for FY 2017 Valuation

Years of Active Service (YAS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Avg
16	$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	$0	$0	$0	$0
17	$1,678	$1,948	$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	$0	$1,678
18	$1,715	$1,912	$2,205	$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	$1,716
19	$1,749	$1,926	$2,148	$2,405	$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	$1,788
20	$1,795	$2,205	$2,597	$2,629	$2,645	$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	$1,906
21	$1,812	$2,160	$2,349	$2,597	$2,547	$2,629	$2,925	$2,958	$3,220	$3,343	$3,291	$3,498	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,038
22	$2,028	$1,960	$2,179	$2,360	$2,547	$2,272	$2,792	$2,958	$3,220	$3,291	$3,442	$3,654	$3,825	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,195
23	$2,265	$2,401	$2,543	$2,375	$2,564	$2,639	$2,880	$2,958	$3,235	$3,290	$3,489	$3,654	$3,853	$3,931	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,347
24	$2,177	$2,341	$2,543	$2,392	$2,564	$2,639	$2,880	$2,958	$3,291	$3,290	$3,486	$4,572	$3,953	$3,959	$4,132	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,485
25	$2,078	$2,906	$2,822	$2,587	$2,645	$2,940	$2,881	$2,940	$3,993	$3,367	$3,510	$3,575	$3,841	$4,019	$4,266	$4,284	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,659
26	$2,134	$2,805	$2,891	$3,139	$3,680	$2,676	$3,716	$3,984	$2,935	$3,716	$3,572	$3,579	$3,825	$3,923	$4,503	$4,705	$4,955	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,858
27	$2,289	$2,589	$2,976	$3,112	$3,456	$3,327	$3,786	$3,774	$2,927	$3,786	$3,442	$3,654	$3,953	$3,931	$4,148	$4,294	$4,995	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,064
28	$2,246	$2,645	$2,976	$3,275	$3,170	$3,923	$3,999	$3,906	$3,235	$3,999	$3,486	$4,572	$3,953	$3,959	$4,132	$4,261	$4,565	$4,955	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,241
29	$2,289	$2,846	$3,006	$3,310	$3,170	$3,923	$4,002	$4,039	$3,291	$3,898	$3,510	$4,572	$5,605	$4,888	$4,168	$4,261	$4,540	$4,995	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,402
30	$2,294	$2,819	$3,100	$3,114	$3,274	$3,345	$3,947	$4,181	$3,993	$3,367	$3,510	$4,857	$5,605	$4,848	$4,266	$4,284	$4,442	$4,536	$4,991	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,549
31	$2,364	$2,891	$3,173	$3,237	$3,575	$3,414	$3,716	$3,984	$4,599	$4,619	$3,572	$3,579	$5,247	$5,506	$5,114	$4,377	$4,452	$4,529	$4,818	$5,055	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,734
32	$2,409	$2,637	$3,002	$3,370	$3,562	$3,577	$3,786	$4,343	$4,343	$4,721	$4,491	$3,654	$5,018	$5,253	$4,148	$4,565	$4,565	$4,540	$4,735	$4,892	$5,321	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,926
33	$2,346	$2,613	$3,413	$3,106	$3,668	$3,602	$3,999	$3,906	$4,149	$4,469	$5,113	$4,572	$5,242	$3,959	$4,132	$5,886	$5,540	$4,698	$4,763	$4,836	$5,272	$5,024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,136
34	$2,431	$2,697	$3,006	$3,310	$3,170	$5,249	$3,998	$4,034	$4,250	$4,303	$4,553	$5,229	$5,246	$5,164	$4,168	$6,219	$6,275	$6,508	$4,812	$4,787	$5,211	$5,456	$7,195	$0	$0	$0	$0	$0	$0	$0	$0	$4,303
35	$2,369	$2,656	$3,100	$4,735	$3,611	$3,659	$4,002	$4,039	$4,432	$4,410	$4,553	$4,857	$5,199	$5,287	$4,266	$5,631	$6,107	$6,467	$5,908	$4,842	$5,227	$5,364	$5,735	$8,575	$0	$0	$0	$0	$0	$0	$0	$4,474
36	$2,732	$2,708	$3,173	$3,237	$3,575	$3,884	$4,069	$4,075	$4,362	$4,619	$4,660	$4,649	$5,247	$5,506	$5,114	$5,653	$5,854	$6,255	$6,616	$5,945	$5,342	$5,409	$5,716	$5,861	$6,278	$7,327	$0	$0	$0	$0	$0	$4,643
37	$3,195	$2,846	$3,002	$3,370	$3,562	$3,811	$4,078	$4,043	$4,452	$4,547	$4,993	$4,801	$5,018	$5,253	$5,627	$5,738	$5,819	$5,932	$6,458	$6,696	$6,684	$5,578	$5,828	$5,854	$6,309	$6,517	$7,057	$0	$0	$0	$0	$4,826
38	$3,122	$3,187	$3,413	$3,106	$3,658	$3,941	$4,069	$4,173	$4,575	$4,520	$4,866	$4,945	$5,242	$5,168	$5,617	$5,886	$6,065	$6,125	$6,062	$6,563	$7,241	$6,923	$7,663	$5,882	$6,400	$6,543	$6,939	$7,403	$0	$0	$0	$5,016
39	$2,643	$3,462	$4,093	$4,735	$3,580	$3,777	$4,235	$4,032	$4,523	$4,690	$4,884	$4,961	$5,199	$5,287	$5,466	$5,631	$5,963	$6,184	$6,399	$6,476	$7,113	$7,668	$8,339	$7,844	$6,560	$6,622	$7,214	$7,403	$7,249	$0	$0	$5,212
40	$3,533	$3,805	$3,973	$4,482	$4,657	$4,212	$3,888	$4,101	$4,499	$4,632	$4,770	$5,036	$5,358	$5,211	$5,634	$5,653	$5,854	$6,255	$6,616	$6,490	$7,181	$7,202	$8,004	$8,846	$8,413	$8,862	$9,606	$9,966	$10,462	$10,361	$0	$5,442
41	$3,571	$3,909	$4,245	$4,707	$4,742	$4,778	$4,094	$3,972	$4,443	$4,683	$4,944	$4,993	$5,370	$5,345	$5,627	$5,738	$5,819	$5,932	$6,458	$6,696	$7,120	$7,294	$7,848	$8,417	$9,161	$8,707	$9,432	$9,863	$10,238	$10,704	$9,280	$5,680
42	$3,901	$4,667	$4,598	$4,902	$5,088	$4,583	$4,343	$4,510	$4,425	$4,643	$4,912	$5,151	$5,238	$5,350	$5,634	$5,837	$6,065	$6,125	$6,062	$6,563	$7,241	$7,385	$7,805	$8,132	$9,005	$9,351	$9,414	$9,425	$9,475	$10,467	$8,141	$5,918
43	$4,390	$4,317	$4,763	$4,785	$5,217	$4,557	$4,085	$4,274	$4,575	$4,642	$4,930	$5,139	$5,419	$5,472	$5,665	$5,804	$6,049	$6,250	$6,296	$6,259	$7,113	$7,498	$7,847	$7,884	$7,833	$8,315	$9,350	$9,431	$9,526	$10,467	$8,550	$6,128
44	$4,239	$0	$4,763	$5,048	$5,217	$4,840	$4,368	$4,269	$4,533	$5,009	$4,885	$5,282	$5,327	$5,529	$5,683	$6,034	$5,963	$6,184	$6,399	$6,476	$6,871	$7,432	$8,339	$7,844	$6,560	$6,622	$9,662	$9,721	$9,703	$10,708	$11,279	$6,381
45	$3,706	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,100	$6,373	$6,380	$6,583	$6,660	$7,257	$7,520	$7,824	$7,868	$8,480	$8,764	$9,718	$10,253	$9,984	$10,708	$11,550	$6,653
46	$5,073	$4,049	$5,388	$5,716	$5,644	$6,544	$6,094	$6,073	$6,073	$4,718	$5,075	$5,617	$6,030	$5,962	$6,478	$6,550	$6,474	$6,362	$6,577	$6,534	$7,181	$7,202	$8,004	$8,846	$8,413	$8,862	$7,057	$7,387	$7,428	$9,280	$9,028	$6,904
47	$4,638	$4,738	$4,856	$5,373	$6,205	$6,180	$6,792	$6,455	$6,517	$5,267	$5,091	$6,141	$6,140	$5,730	$6,042	$5,917	$6,132	$6,381	$6,474	$6,236	$7,120	$7,294	$7,848	$8,417	$9,161	$8,707	$7,475	$7,367	$7,465	$7,645	$10,020	$7,111
48	$2,731	$5,229	$6,422	$5,116	$4,601	$5,456	$6,562	$6,501	$5,862	$5,098	$5,108	$5,651	$5,908	$6,548	$6,018	$6,219	$6,102	$6,246	$6,403	$6,453	$6,919	$7,385	$7,805	$8,132	$9,005	$9,012	$9,551	$9,725	$7,756	$7,643	$10,840	$7,262
49	$5,070	$4,783	$5,147	$5,246	$5,596	$5,249	$6,562	$6,501	$5,028	$5,202	$5,111	$5,943	$6,015	$6,313	$6,011	$6,100	$6,373	$6,428	$6,338	$6,585	$7,060	$7,255	$7,847	$7,868	$8,358	$8,764	$9,718	$10,253	$9,984	$7,728	$11,279	$7,507
50	$2,952	$4,783	$4,980	$5,246	$6,141	$5,605	$5,223	$5,136	$5,030	$5,328	$5,365	$5,812	$6,015	$6,313	$6,011	$6,100	$6,373	$6,380	$6,583	$6,660	$7,257	$7,520	$7,824	$7,868	$8,480	$8,764	$9,718	$10,253	$9,984	$8,087	$11,550	$7,688
51	$8,311	$4,893	$4,645	$5,716	$5,644	$6,544	$6,094	$5,457	$6,073	$5,115	$5,270	$5,617	$6,030	$5,962	$6,478	$6,550	$6,474	$6,362	$6,577	$6,534	$6,922	$7,072	$7,604	$8,396	$8,734	$8,942	$9,606	$9,966	$10,462	$10,361	$9,028	$7,895
52	$4,833	$2,704	$1,731	$4,947	$6,205	$6,180	$6,792	$6,455	$6,991	$5,803	$6,412	$5,964	$6,144	$6,140	$6,334	$5,980	$6,106	$6,388	$6,583	$6,451	$7,151	$7,492	$7,886	$8,464	$8,558	$9,094	$9,432	$9,863	$10,238	$10,704	$10,020	$7,981
53	$0	$7,739	$5,147	$0	$6,177	$5,023	$6,168	$5,979	$6,073	$6,143	$6,011	$7,039	$5,970	$6,368	$6,475	$6,318	$6,734	$6,573	$6,378	$6,861	$7,256	$7,045	$7,788	$7,719	$8,229	$8,645	$9,414	$9,425	$9,475	$10,467	$10,840	$7,890
54	$0	$1,361	$6,147	$0	$6,141	$7,583	$6,562	$6,501	$5,862	$5,980	$6,722	$7,493	$7,074	$6,050	$6,843	$5,676	$6,669	$6,890	$6,648	$7,344	$7,147	$7,498	$7,871	$7,884	$7,833	$8,315	$9,350	$9,431	$9,526	$9,708	$11,279	$7,911
55	$4,713	$3,654	$6,742	$5,048	$6,141	$7,009	$6,562	$7,022	$6,816	$5,930	$6,110	$6,755	$6,023	$6,324	$6,220	$6,604	$6,467	$6,649	$6,773	$7,092	$6,891	$7,546	$7,825	$7,580	$8,561	$8,485	$9,662	$9,721	$9,703	$10,708	$11,550	$8,077
56	$0	$9,280	$5,456	$5,683	$3,310	$6,533	$7,224	$6,421	$7,166	$5,848	$6,907	$7,475	$5,520	$6,781	$7,152	$6,261	$6,857	$6,683	$7,171	$7,181	$7,011	$7,541	$7,728	$7,909	$8,366	$9,134	$9,736	$9,648	$9,521	$10,444	$11,476	$8,275
57	$0	$4,783	$6,422	$4,947	$6,205	$7,272	$6,573	$7,554	$6,991	$7,083	$6,412	$6,712	$6,704	$6,854	$6,653	$6,612	$5,885	$7,072	$6,914	$7,188	$7,773	$7,334	$7,837	$7,970	$8,647	$9,146	$9,461	$9,818	$9,492	$9,817	$12,248	$8,358
58	$0	$0	$6,147	$5,310	$6,177	$7,583	$7,277	$8,154	$6,689	$6,657	$6,698	$7,039	$5,872	$6,690	$6,487	$6,189	$6,876	$7,449	$6,636	$6,861	$7,188	$8,542	$7,946	$7,620	$7,973	$8,933	$8,771	$9,341	$9,712	$9,420	$12,554	$8,501
59	$0	$0	$0	$0	$11,220	$7,330	$6,140	$11,600	$3,214	$8,121	$7,191	$7,493	$7,074	$7,095	$6,843	$7,676	$6,669	$6,890	$7,761	$7,344	$7,856	$8,400	$8,966	$8,813	$8,843	$8,735	$8,912	$9,432	$10,128	$10,070	$12,249	$8,792
60+	$0	$5,628	$10,296	$5,683	$0	$6,659	$6,495	$7,630	$7,968	$6,934	$7,884	$8,614	$8,797	$7,557	$7,484	$7,482	$7,698	$7,975	$7,597	$7,747	$8,151	$8,836	$9,382	$9,402	$10,019	$10,107	$9,200	$10,352	$10,082	$10,618	$12,174	$9,366
Avg	$1,921	$2,097	$2,406	$2,667	$2,951	$3,134	$3,464	$3,543	$3,877	$3,971	$4,241	$4,312	$4,627	$4,650	$4,898	$5,050	$5,228	$5,334	$5,514	$5,580	$6,089	$6,390	$6,881	$7,147	$7,639	$7,854	$8,585	$8,658	$8,723	$8,958	$10,348	$3,522

Notes: Basic pay figures reflect the January, 2018, increase of 2.4%.
Age is age nearest birthday as of the end of the fiscal year.

DoD Officers Selected Reserve Personnel by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	Total
16	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	9	12	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	0	0	0	0	0	0	0	0	0	0	0	0	21
21	6	30	43	23	5	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	0	0	0	0	0	0	0	0	0	107
22	73	29	101	145	73	12	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	0	0	0	0	0	0	0	0	433
23	167	158	163	314	303	138	18	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	0	0	0	0	0	0	0	1,261
24	95	263	275	274	442	312	157	8	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	0	0	0	0	0	0	1,826
25	43	168	444	415	283	395	283	136	7	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	0	0	0	0	0	2,210
26	38	112	276	632	375	264	397	303	149	20	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	0	0	0	0	2,566
27	47	99	152	341	554	456	319	376	248	192	30	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	0	0	0	2,816
28	44	101	131	222	357	615	530	346	308	266	179	7	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	0	0	3,106
29	51	81	114	167	230	436	673	502	314	291	285	237	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	0	0	3,381
30	58	92	107	137	214	293	425	640	503	275	300	377	214	43	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	3,679
31	43	81	112	151	182	240	315	419	644	477	291	355	275	255	33	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	3,874
32	53	60	70	118	153	191	265	300	465	578	405	281	293	393	358	51	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	4,034
33	52	62	81	108	135	175	235	271	207	356	691	541	272	300	427	438	56	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	4,407
34	41	47								195	337	731	549	282	364	500	473	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,709
35	53	41								183	212	384	852	612	328	445	579	458	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,121
36	32	34																																									5,083
37	54	34																																									4,981
38	32	29																																									4,596
39	39	26																																									4,146
40	31	37																																									3,970
41	28	25																																									3,642
42	15	15																																									3,459
43	15	17																																									3,416
44	18	9																																									3,233
45	22	8																																									3,119
46	12	15																													28	0												3,256
47	15	17																																									3,573
48	9	9																																									3,397
49	4	8																																									3,089
50	6	6																																									2,792
51	6	6																																									2,628
52	2	5																																									2,217
53	2	3																																									1,998
54	3	1																																									1,744
55	2	2																																									1,368
56	2	3																																									1,215
57	1	5																																									951
58	0	4																																							18	28	766
59	3	2																																									618
60	2	0																																						34	14		384
61	0	0																																							2	13	177
62	2	2																																							1	8	113
63	6	6																																						16	16	8	255
Total	1,221	1,823	2,546	3,758	4,161	4,612	5,097	4,859	4,500	4,004	3,936	4,299	4,349	4,668	5,129	5,362	5,011	4,519	3,966	3,726	3,332	2,919	2,483	2,392	2,346	2,435	2,050	2,325	2,324	2,059	1,677	1,435	990	940	726	532	417	310	194	128	91	83	113,737

Average Age: 39.2

Average PEBD Years of Service: 14.8

Notes: Age is age nearest birthday as of the end of the fiscal year.

DoD Enlisted Selected Reserve Personnel by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	Total
16	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1,171	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	0	0	0	0	0	0	0	0	0	0	0	0	0	1,171
18	10,885	1,031	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	0	0	0	0	0	0	0	0	0	0	0	0	11,916
19	12,957	9,264	948	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	0	0	0	0	0	0	0	0	0	0	0	23,169
20	7,997	11,588	8,799	893	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	0	0	0	0	0	0	0	0	0	0	29,278
21	4,963	7,567	11,205	8,678	929	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	0	0	0	0	0	0	0	0	0	33,342
22	3,356	4,872	7,630	11,038	8,259	717	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	0	0	0	0	0	0	0	0	35,873
23	2,506	3,291	4,986	7,315	10,874	6,527	358	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	0	0	0	0	0	0	0	35,857
24	2,062	2,574	3,378	4,914	8,150	9,771	3,828	220	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	0	0	0	0	0	0	34,897
25	1,688	2,111	2,417	3,335	5,405	7,705	6,202	3,008	197	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	0	0	0	0	0	32,068
26	1,405	1,912	1,894	2,462	3,773	5,339	5,558	5,447	3,132	385	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	0	0	0	0	31,177
27	1,102	1,556	1,471	2,158	2,765	3,099	3,588	4,843	4,871	3,347	402	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	0	0	0	30,180
28	916	1,294	1,264	1,670	2,123	2,513	2,793	3,588	4,542	4,542	2,923	355	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	0	0	28,118
29	762	1,064	1,005	1,261	1,554	2,123	2,309	2,765	3,092	3,772	3,747	2,661	218	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	0	25,941
30	595	876	781	859	979	1,715	1,949	2,325	2,703	3,008	2,890	3,567	1,870	214	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	23,162
31	507	719	654	590	819	1,217	1,582	1,879	1,951	1,951	2,154	2,810	2,593	1,827	224	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	21,112
32	427	599	526	590	642	971	1,074	1,247	1,557	1,538	1,606	1,960	2,585	1,964	1,964	234	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	19,642
33	337	468	428	486	483	822	1,001	1,237	1,332	1,257	1,420	1,418	1,963	2,666	2,058	2,133	204	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	18,617
34	332	399	341	383	483	666	919	943	956	1,155	1,160	1,437	1,437	2,068	2,884	2,058	226	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	17,648
35	309	392	322	289	413	484	550	766	738	824	756	824	778	1,036	1,462	2,070	3,028	1,924	169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,959
36	161	184	266	233	374	368	387	496	600	997	619	641	683	862	1,053	1,364	1,949	2,511	1,478	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,169
37	90	102	300	243	282	325	352	408	520	484	505	536	495	650	813	1,062	1,299	1,710	1,991	1,298	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,636
38	100	73	153	282	255	280	286	334	397	381	391	420	414	552	629	822	903	1,137	1,443	1,811	965	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,117
39	95	75	62	141	282	236	218	264	319	345	322	346	324	405	561	640	696	823	939	1,298	1,450	698	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,610
40	72	69	61	59	120	262	224	255	145	297	267	280	258	327	455	514	587	661	700	908	1,101	1,014	492	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,311
41	19	16	41	41	64	133	232	197	250	244	232	241	251	296	340	429	471	537	520	604	751	821	738	412	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,983
42	2	3	59	67	69	67	122	218	201	208	217	206	194	247	318	390	394	417	396	472	572	584	578	644	383	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,076
43	3	2	61	51	60	52	116	162	219	179	175	210	183	235	241	336	347	333	344	415	444	435	425	524	612	384	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,536
44	0	3	10	10	55	37	94	129	159	187	149	160	167	174	240	290	290	341	297	344	405	345	349	392	472	546	273	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,937
45	3	3	0	0	9	37	88	129	145	147	179	144	148	171	238	288	298	291	307	355	319	319	288	313	371	455	459	374	31	0	0	0	0	0	0	0	0	0	0	0	0	0	5,950
46	0	2	4	4	2	17	82	109	167	132	145	166	149	178	225	274	280	280	296	317	293	265	270	238	297	360	448	561	399	34	0	0	0	0	0	0	0	0	0	0	0	0	5,989
47	0	2	2	4	3	4	65	97	117	108	125	144	141	161	201	254	260	255	264	327	328	276	255	233	272	360	381	503	609	387	23	0	0	0	0	0	0	0	0	0	0	0	6,156
48	3	1	3	1	3	0	45	69	115	112	112	115	91	167	175	233	235	242	258	262	242	236	219	215	235	274	248	321	508	584	349	38	0	0	0	0	0	0	0	0	0	0	5,721
49	0	0	1	0	0	0	18	60	59	83	88	109	115	110	163	187	213	189	224	228	244	199	190	207	183	180	223	233	355	399	549	343	25	0	0	0	0	0	0	0	0	0	5,160
50	0	0	0	0	0	0	2	26	58	58	88	74	61	66	173	213	185	175	181	229	181	189	175	155	182	143	186	185	216	288	425	505	303	39	0	0	0	0	0	0	0	0	4,764
51	0	1	0	2	0	0	1	0	19	59	62	86	64	62	119	180	192	147	179	197	168	156	159	166	120	153	137	150	181	210	302	389	361	305	128	145	178	280	162	10	0	0	4,353
52	0	2	0	0	2	3	2	1	2	1	23	32	68	56	78	133	139	183	170	185	168	142	149	142	130	140	109	118	161	155	230	288	278	408	266	90	104	155	167	99	7	0	4,026
53	0	0	0	2	2	5	1	2	2	1	23	16	23	44	80	99	115	142	154	181	157	158	123	123	127	120	120	113	141	144	186	226	216	299	352	253	93	107	107	129	78	5	3,777
54	0	0	0	1	3	3	0	0	1	3	3	5	6	15	56	69	98	125	150	154	146	148	109	111	104	111	111	116	118	148	139	175	160	209	251	337	233	57	57	65	78	62	3,446
55	0	0	0	0	0	0	0	0	1	3	3	1	1	10	21	57	63	100	113	112	140	141	100	83	78	91	94	82	91	82	116	162	146	172	173	230	307	280	26	22	26	44	3,073
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	32	32	67	90	90	127	135	105	91	64	70	74	87	64	78	88	101	108	130	145	180	178	280	162	10	0	3	2,525
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	27	27	54	50	52	90	86	69	72	50	64	52	57	38	60	66	84	80	75	97	90	104	155	167	99	7	5	1,892
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	15	12	31	35	56	51	58	55	44	44	34	34	39	43	43	46	50	59	60	73	93	107	26	129	78	44	1,449
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	11	15	20	33	28	18	23	31	31	28	28	39	14	24	15	21	43	49	57	43	57	51	65	100	3	1,170
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	2	15	9	8	6	19	5	18	19	14	14	24	21	26	20	13	23	26	25	26	22	26	3	584
61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	9	3	5	8	3	4	1	6	2	1	0	0	2	2	1	0	2	0	0	0	0	0	5	54
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
63	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	54,831	52,330	49,166	47,547	50,232	46,296	33,384	29,766	27,592	24,736	20,486	18,679	13,578	14,066	14,668	15,197	14,381	12,896	10,743	10,026	8,888	6,542	4,997	4,302	3,815	3,578	3,052	3,022	3,023	2,689	2,602	2,424	1,800	1,760	1,423	1,218	1,003	903	518	326	211	115	618,413

Average Age: 30.1 Average PEBD Years of Service: 8.2

Notes: - Age is age nearest birthday as of the end of the fiscal year.

All DoD Selected Reserve Personnel by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	Total
16	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1,171	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	0	0	0	0	0	0	0	0	0	0	0	0	0	1,171
18	10,885	1,031	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	0	0	0	0	0	0	0	0	0	0	0	0	11,916
19	12,957	9,264	948	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	0	0	0	0	0	0	0	0	0	0	0	23,169
20	8,000	11,600	8,803	895	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	0	0	0	0	0	0	0	0	0	0	29,299
21	7,597	4,901	11,248	8,701	934	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	0	0	0	0	0	0	0	0	0	33,449
22	3,429	4,901	7,731	11,183	8,332	729	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	0	0	0	0	0	0	0	0	36,306
23	2,673	5,149	5,149	7,629	11,177	6,665	376	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	0	0	0	0	0	0	0	37,118
24	2,157	3,653	3,653	5,188	8,592	10,083	3,985	228	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	0	0	0	0	0	0	36,723
25	1,731	2,279	2,861	3,750	5,688	8,100	6,521	3,144	204	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	0	0	0	0	0	34,278
26	1,443	1,874	2,188	3,094	4,148	5,603	5,955	5,750	3,281	405	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	0	0	0	0	33,743
27	1,149	1,615	1,708	2,235	3,391	4,269	4,318	5,220	5,119	3,539	432	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	0	0	0	32,996
28	960	1,395	1,395	1,693	2,515	3,380	3,303	3,934	4,356	4,808	3,102	381	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	0	0	31,224
29	813	1,145	1,119	1,271	1,900	2,559	3,015	3,015	4,356	4,808	4,057	2,898	248	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	0	29,322
30	653	968	888	996	1,475	1,847	2,140	2,589	2,828	3,144	3,090	3,945	2,084	257	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	26,841
31	550	880	766	859	1,161	1,457	1,623	2,001	2,523	2,428	2,445	3,165	2,608	2,082	257	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	24,986
32	480	653	607	708	972	1,062	1,339	1,547	1,907	2,116	2,101	2,241	2,256	2,978	2,322	285	260	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	23,676
33	389	528	498	594	777	993	1,051	1,240	1,425	1,593	1,952	1,959	1,604	2,466	3,161	2,551	1,617	2,097	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23,024
34	373	461	402	494	614	834	849	974	1,174	1,114	1,293	1,886	1,719	1,648	1,529	3,384	1,444	1,422	1,731	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,357
35	362	439	376	344	509	623	718	841	969	921	968	1,308	1,630	1,648	1,790	2,515	973	1,227	1,110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,080
36	193	451	322	305	449	464	515	660	797	767	768	865	1,134	865	1,643	1,721	2,387	3,056	1,911	153	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,252
37	144	218	353	301	361	441	482	539	652	627	674	712	729	1,090	1,613	1,687	1,617	2,097	2,452	1,702	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,617
38	132	131	191	180	317	373	381	521	531	504	513	592	607	825	1,065	1,567	1,444	1,422	1,731	2,245	1,264	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,713
39	134	99	109	93	163	300	308	355	437	425	401	462	479	606	835	1,036	1,330	1,282	1,184	1,589	1,808	972	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,756
40	103	112	80	93	163	312	300	327	374	367	345	375	399	509	674	823	973	1,227	1,110	1,146	1,366	1,329	718	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,281
41	47	99	86	72	106	172	305	275	327	293	295	332	354	436	528	677	720	879	1,019	972	968	1,016	986	612	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,625
42	17	41	78	94	99	102	179	304	265	272	275	272	277	352	388	589	595	634	678	939	921	779	772	886	581	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,535
43	16	27	43	93	94	83	164	217	285	234	228	260	250	333	352	498	530	499	552	695	848	761	619	725	699	601	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,952
44	16	20	13	39	86	75	145	178	200	241	179	207	224	241	352	414	431	492	474	516	645	750	641	577	699	843	425	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,170
45	22	17	15	29	34	70	146	172	194	184	234	197	201	228	349	390	403	409	472	512	502	543	587	591	546	688	668	594	61	0	0	0	0	0	0	0	0	0	0	0	0	0	9,049
46	12	16	24	24	22	117	120	159	215	171	179	199	198	247	321	377	372	399	403	456	473	478	542	661	544	661	844	677	62	0	0	0	0	0	0	0	0	0	0	0	0	0	9,245
47	16	19	15	15	20	84	107	139	173	166	189	181	201	216	298	348	367	339	367	458	501	428	413	457	619	564	738	978	657	35	0	0	0	0	0	0	0	0	0	0	0	0	9,729
48	16	10	19	19	18	18	84	107	149	151	122	147	159	223	244	325	309	327	338	349	360	364	348	378	449	665	500	757	898	635	66	0	0	0	0	0	0	0	0	0	0	0	9,118
49	7	8	14	8	4	18	44	87	94	122	109	142	121	151	241	260	285	256	289	326	331	283	280	306	307	365	520	565	623	830	574	48	0	0	0	0	0	0	0	0	0	0	8,249
50	7	6	10	7	0	9	32	53	87	90	109	104	90	96	223	271	251	236	235	290	255	257	257	254	288	256	351	497	502	652	774	480	0	0	0	0	0	0	0	0	0	0	7,556
51	6	7	3	5	6	15	22	16	40	73	73	101	94	84	156	235	247	205	238	299	213	215	233	257	212	267	237	330	463	476	607	150	538	510	53	0	0	0	0	0	0	0	6,981
52	6	5	2	3	4	15	15	14	18	78	78	47	33	81	109	164	193	240	228	235	214	179	204	204	188	218	203	220	332	405	429	121	406	594	398	25	0	0	0	0	0	0	6,343
53	3	3	6	2	0	11	17	15	11	19	42	36	20	71	100	129	154	185	199	223	199	212	179	193	172	180	197	212	254	306	353	74	308	439	519	361	29	37	0	0	0	0	5,775
54	3	2	2	2	1	7	11	19	14	12	12	16	13	33	87	100	123	155	140	189	189	188	149	167	154	143	165	195	217	253	251	72	282	295	358	468	344	91	44	0	0	0	5,160
55	2	5	2	3	0	0	7	19	19	10	9	6	13	26	43	82	92	123	123	151	173	173	126	119	119	142	154	142	140	162	173	243	243	262	246	310	404	327	76	30	0	0	4,441
56	2	4	0	2	1	2	6	6	8	11	8	11	10	15	21	43	56	92	88	180	158	215	126	116	106	109	99	145	113	147	142	180	172	226	212	213	242	363	200	16	0	5	3,740
57	0	0	2	1	4	6	7	8	8	12	3	4	10	15	12	26	24	76	77	66	118	105	94	94	83	78	78	105	103	101	103	121	128	118	158	136	141	202	238	137	10	9	2,843
58	0	2	2	1	4	7	6	6	5	8	10	4	6	8	10	15	22	48	48	52	75	67	74	68	63	63	63	71	62	83	82	77	69	77	97	119	130	143	130	167	113	80	2,185
59	3	0	1	0	0	4	4	6	4	2	5	4	3	9	15	13	10	25	23	66	56	57	68	57	56	56	59	59	66	69	62	74	69	33	75	96	65	91	68	91	134	72	1,748
60	2	2	1	3	2	3	4	2	3	5	4	0	0	1	5	6	4	7	6	17	13	10	9	6	5	7	12	5	29	32	62	22	28	27	24	36	45	42	44	30	40	198	888
61	2	0	2	1	2	2	2	4	3	4	3	4	2	3	4	6	7	5	6	17	11	10	9	9	5	4	7	5	4	3	5	1	6	1	2	3	9	6	4	9	2	16	231
62	0	1	0	1	2	2	4	2	1	1	3	0	1	1	3	13	7	7	15	10	7	13	13	1	4	4	12	5	8	7	6	1	4	1	2	3	3	6	4	3	9	9	132
63	0	6	3	3	0	11	11	13	13	5	3	4	0	1	4	13	12	15	8	10	8	7	9	1	5	7	8	5	11	4	6	5	6	1	2	3	7	2	2	3	72	198
Total	56,052	54,153	51,713	51,305	54,393	50,908	38,681	34,625	32,091	28,740	24,422	22,978	17,926	18,734	19,797	20,559	19,392	17,415	14,710	13,753	11,820	9,461	7,480	6,694	6,161	6,013	5,002	5,347	5,347	4,748	4,279	3,859	2,790	2,700	2,149	1,750	1,420	1,213	712	454	302	198	732,150

Average Age: 31.5 Average PEBD Years of Service: 9.3

Notes: Age is age nearest birthday as of the end of the fiscal year.

DoD Officers Average Monthly Selected Reserve Personnel Basic Pay by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	0	1	2	3	4	5	6	7	8	9	10	...	40	41	Total
16	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
17	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
18	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
19	$889	$898	$884	$884	$806	$0	$0	$0	$0	$0	$0		$0	$0	$895
20	$889	$935	$935	$0	$806	$0	$0	$0	$0	$0	$0		$0	$0	$918
21	$932	$932	$928	$945	$1,068	$1,317	$1,514	$1,573	$0	$0	$0		$0	$0	$1,037
22	$1,019	$977	$928	$1,106	$1,068	$1,244	$1,427	$1,551	$0	$0	$0		$0	$0	$1,174
23	$1,062	$1,019	$977	$1,252	$1,290	$1,375	$1,396	$1,457	$1,552	$1,504	$1,736		$0	$0	$1,292
24	$1,098	$1,065	$1,166	$1,351	$1,400	$1,424	$1,554	$1,457	$1,586	$1,486	$1,611		$0	$0	$1,385
25	$1,134	$1,104	$1,285	$1,460	$1,399	$1,510	$1,534	$1,402	$1,659	$1,625	$1,733		$0	$0	$1,453
26	$1,088	$1,133	$1,305	$1,430	$1,454	$1,516	$1,510	$1,613	$1,552	$1,504	$1,785		$0	$0	$1,447
27	$1,072	$1,075	$1,284	$1,550	$1,376	$1,376	$1,553	$1,582	$1,486	$1,481	$1,556		$0	$0	$1,432
28	$1,010	$1,076	$1,209	$1,430	$1,479	$1,304	$1,396	$1,457	$1,659	$1,537	$1,627		$0	$0	$1,433
29	$971	$991	$1,199	$1,464	$1,449	$1,386	$1,554	$1,402	$1,560	$1,491	$1,733		$0	$0	$1,501
30	$932	$975	$1,110	$1,269	$1,361	$1,480	$1,534	$1,402	$1,485	$1,607	$1,546		$0	$0	$1,516
31	$834	$898	$1,232	$1,232	$1,261	$1,494	$1,452	$1,169	$1,477	$1,489	$1,785		$0	$0	$1,558
...															
60	$799	$799	$0	$1,050	$0	$1,073	$1,075	$1,308	$1,790	$1,425	$1,547		$3,290	$2,299	$2,387
61	$862	$0	$0	$986	$937	$968	$1,115	$1,173	$1,227	$1,296	$0		$2,660	$3,015	$2,259
62	$0	$799	$919	$986	$1,000	$1,150	$1,173	$1,173	$1,173	$1,200	$1,339		$2,712	$2,151	$1,961
63	$799	$799	$924	$1,029	$1,022	$1,137	$1,188	$1,157	$1,168	$1,240	$1,271		$3,813	$3,353	$1,911
Total	$947	$975	$1,134	$1,305	$1,305	$1,313	$1,364	$1,383	$1,434	$1,449	$1,578		$2,747	$2,996	$1,754

Notes: Basic pay figures reflect the January, 2018, increase of 2.4%.
Age is age nearest birthday as of the end of the fiscal year.
Constructed using the Average Points Per Year rates displayed in Appendix H.

DoD Enlisted Average Monthly Selected Reserve Personnel Basic Pay by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	Total
16	$0
17	$515
18	$653
19	$566
20	$551
21	$580
22	$583
23	$588
24	$596
25	$613
26	$637
27	$667
28	$667
29	$707
30	$722
31	$744
32	$778
33	$798
34	$821
35	$838
36	$849
37	$864
38	$871
39	$894
40	$908
41	$936
42	$955
43	$985
44	$993
45	$1,021
46	$1,044
47	$1,070
48	$1,087
49	$1,103
50	$1,125
51	$1,128
52	$1,146
53	$1,173
54	$1,189
55	$1,240
56	$1,246
57	$1,256
58	$1,253
59	$1,265
60	$1,375
61	$941
62	$1,089
63	$1,086
Total	$756

Total row across YOS columns (0–41):

YOS	Total row value
0	$579
1	$516
2	$588
3	$597
4	$588
5	$613
6	$652
7	$693
8	$756
9	$779
10	$815
11	$823
12	$862
13	$881
14	$916
15	$918
16	$933
17	$932
18	$951
19	$973
20	$1,008
21	$1,038
22	$1,097
23	$1,156
24	$1,168
25	$1,199
26	$1,266
27	$1,285
28	$1,312
29	$1,326
30	$1,355
31	$1,369
32	$1,400
33	$1,364
34	$1,412
35	$1,392
36	$1,428
37	$1,470
38	$1,484
39	$1,533
40	$1,730
41	$1,995
Total	$756

Notes: Basic pay figures reflect the January, 2018, increase of 2.4%.
Age is age nearest birthday as of the end of the fiscal year.
Constructed using the Average Points Per Year rates displayed in Appendix H.

All DoD Average Monthly Selected Reserve Personnel Basic Pay by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	Total
16	$515	$0																																									$0
17	$668	$488	$0																																								$515
18	$597	$520	$588	$641																																							$653
19	$533	$515	$607																																								$566
20																																											$551
21	$550	$509	$594	$610	$622																																						$581
22	$554	$511	$586	$610	$616	$638	$703																																				$588
23	$586	$532	$574	$626	$618	$649	$696	$710	$758																																		$608
24	$590	$563	$626	$677	$622	$642	$704																																				$631
25	$600	$564	$666		$615	$653																																					$663
26	$566	$562	$688	$757	$649	$650	$706	$753	$810	$813	$873																																$699
27	$591	$564	$640	$736	$709	$687	$731	$758	$811	$834	$869	$841																															$734
28	$551	$565	$641	$689	$715	$739	$760	$755	$821	$834	$881		$979																														$761
29	$596	$573	$655	$691	$672	$716	$755	$824	$820	$853	$881	$912	$962	$1,021																													$793
30	$620	$574	$656	$672	$686	$737	$815	$862	$867	$853	$974																																$829
31	$482	$566	$657	$690	$693	$746	$762	$833	$896	$910	$936	$929	$967	$1,002	$1,050	$1,109	$1,081	$1,104	$1,186																								$864
32	$523	$551	$647	$656	$687	$720	$744	$848	$873	$968	$974	$950	$968	$1,004	$1,073	$1,286	$1,085	$1,102	$1,210	$1,296																								$897
33	$563	$574	$630	$630	$702	$703	$748	$856	$889	$950	$953	$1,010	$1,007	$994	$1,060	$1,367	$1,307	$1,089	$1,145	$1,210	$1,256																						$942
34	$460	$566	$676	$689	$674	$702	$792	$815	$874	$913	$930	$954	$1,110	$1,141	$1,174	$1,274	$1,422	$1,254	$1,156	$1,156	$1,213	$1,330																					$980
35	$533	$550	$641	$654	$652	$651	$794	$822	$851	$891	$960	$954	$1,083	$1,202	$1,165	$1,220	$1,329	$1,400	$1,182	$1,182	$1,207	$1,269	$1,394	$1,456																			$1,021
36	$540	$558	$613	$680	$678	$663	$762	$771	$862	$920	$924	$990	$1,037	$1,101	$1,196	$1,248	$1,255	$1,329	$1,358	$1,296	$1,239	$1,230	$1,339	$1,466	$1,504	$1,691	$1,555	$1,573	$1,689	$1,781													$1,053
37	$551	$559	$625	$698	$663	$744	$808	$808	$908	$903	$957	$967	$1,020	$1,018	$1,134	$1,211	$1,214	$1,255	$1,397	$1,210	$1,416	$1,287	$1,265	$1,400	$1,536	$1,582	$1,568	$1,598	$1,712	$1,778	$1,588	$1,621											$1,082
38	$465	$567	$630	$696	$692	$748	$714	$789	$846	$871	$957	$944	$1,012	$1,071	$1,127	$1,159	$1,207	$1,258	$1,351	$1,397	$1,545	$1,527	$1,393	$1,492	$1,676	$1,902	$1,827	$1,954	$1,679	$1,679	$1,815	$1,804	$2,242	$1,830	$1,663	$2,509	$1,979	$1,939	$1,705	$1,630			$1,097
39	$496	$580	$645	$715	$674	$702	$792	$799	$894	$913	$930	$954	$1,110	$1,141	$1,174	$1,274	$1,422	$1,254	$1,156	$1,213	$1,417	$1,656	$1,593	$1,669	$1,599	$1,720	$1,918	$1,954	$1,694	$1,600	$1,668	$1,883	$1,648	$1,743	$1,632	$1,637	$1,708	$1,651	$1,740	$1,800	$1,766	$1,688	$1,131
40	$618	$615	$651	$687	$720	$769	$789	$794	$851	$891	$960	$960	$1,083	$1,165	$1,165	$1,220	$1,329	$1,400	$1,314	$1,289	$1,403	$1,427	$1,652	$1,494	$1,494	$1,515	$1,600	$1,689	$1,932	$1,778	$1,737	$1,714	$1,865	$1,771	$1,744	$1,650	$1,726	$1,755	$2,272	$1,719	$2,206	$3,026	$1,163
41	$614	$645	$658	$678	$809	$748	$760	$771	$862	$900	$924	$990	$1,037	$1,101	$1,196	$1,248	$1,255	$1,329	$1,358	$1,239	$1,348	$1,567	$1,439	$1,692	$1,486	$1,544	$1,663	$1,590	$2,112	$2,004	$1,847	$1,633	$1,741	$1,952	$1,909	$2,179	$3,258	$2,938	$3,684	$3,269	$2,660	$2,554	$1,205
42	$839	$699	$608	$698	$707	$831	$814	$808	$908	$903	$957	$967	$1,020	$1,018	$1,124	$1,211	$1,214	$1,255	$1,509	$1,545	$1,416	$1,287	$1,400	$1,536	$1,582	$1,625	$1,551	$1,622	$1,950	$2,163	$1,867	$1,752	$1,856	$1,934	$1,889	$1,834	$1,714	$1,651	$1,740	$4,664	$2,712	$2,081	$1,240
43	$776	$868	$630	$796	$766	$777	$819	$789	$846	$871	$957	$944	$1,071	$1,018	$1,127	$1,159	$1,207	$1,258	$1,397	$1,203	$1,545	$1,656	$1,393	$1,676	$1,417	$1,919	$1,827	$1,379	$1,758	$1,900	$1,507	$1,883	$1,734	$1,901	$1,711	$1,710	$1,679	$1,679	$1,776	$1,865	$3,813	$1,975	$1,279
44	$729	$736	$997	$997	$753	$785	$714	$766	$831	$891	$874	$900	$1,012	$1,071	$1,127	$1,144	$1,210	$1,211	$1,326	$1,289	$1,403	$1,427	$1,135	$1,473	$1,473	$1,573	$1,525	$1,624	$1,793	$1,636	$1,624	$1,679	$1,734	$1,636	$1,695	$1,653	$1,822	$2,019	$1,668	$1,805	$2,017	$1,732	$1,316
45	$807	$748	$1,201	$1,201	$864	$758	$819	$829	$831	$834	$934	$960	$1,012	$1,019	$1,067	$1,057	$1,075	$1,149	$1,314	$1,403	$1,403	$1,683	$1,068	$1,494	$1,494	$1,600	$1,480	$1,689	$2,015	$1,778	$1,737	$1,714	$1,910	$1,771	$1,744	$1,991	$2,013	$2,212	$2,272	$1,719	$2,206	$3,026	$1,328
46	$831	$803	$977	$1,095	$1,123	$919	$852	$851	$824	$852	$885	$888	$981	$1,015	$1,090	$1,066	$1,084	$1,174	$1,205	$1,348	$1,348	$1,567	$1,429	$1,430	$1,486	$1,522	$1,554	$1,590	$1,592	$1,804	$1,830	$1,633	$1,715	$1,830	$1,663	$1,799	$1,763	$1,706	$1,705	$1,630			$1,355
47	$816	$814	$960	$1,139	$1,055	$855	$744	$797	$942	$865	$977	$862	$1,034	$1,012	$1,078	$1,041	$1,061	$1,122	$1,203	$1,284	$1,302	$1,487	$1,264	$1,342	$1,416	$1,749	$1,568	$1,598	$1,950	$2,163	$1,867	$1,752	$1,856	$1,934	$1,889	$1,834	$1,714	$1,651	$1,740	$1,800	$2,712	$2,081	$1,410
48	$946	$819	$930	$720	$949	$838	$883	$792	$964	$899	$953	$978	$957	$974	$1,082	$1,046	$1,047	$1,130	$1,105	$1,284	$1,203	$1,433	$1,287	$1,676	$1,576	$1,902	$1,827	$1,954	$1,668	$1,900	$1,815	$1,883	$1,648	$1,743	$1,711	$1,710	$1,708	$1,679	$1,776	$1,865	$2,017	$1,628	$1,438
49	$777	$981	$926	$821	$821	$838	$819	$799	$961	$894	$937	$953	$1,024	$1,017	$1,151	$1,084	$1,064	$1,065	$1,188	$1,205	$1,205	$1,591	$1,287	$1,509	$1,587	$1,720	$1,918	$1,954	$1,694	$1,600	$1,668	$1,804	$2,019	$1,603	$1,679	$1,710	$1,708	$1,708	$1,668	$1,805	$2,017	$1,732	$1,458
50	$728	$981	$1,090	$805	$1,278	$1,202	$1,099	$983	$1,015	$1,067	$974	$937	$1,084	$1,055	$988	$988	$1,074	$1,126	$1,068	$1,235	$1,235	$1,238	$1,361	$1,514	$1,387	$1,681	$1,600	$1,689	$1,932	$1,778	$1,737	$1,714	$1,865	$1,744	$1,744	$1,650	$1,726	$1,755	$2,272	$1,719	$2,206	$3,026	$1,509
51	$923	$730	$1,227	$1,006	$1,233	$1,070	$1,203	$1,098	$1,177	$913	$998	$941	$1,110	$1,051	$991	$1,036	$1,068	$1,122	$1,121	$1,134	$1,134	$1,213	$1,429	$1,430	$1,486	$1,544	$1,663	$1,839	$2,112	$2,004	$1,830	$1,633	$1,741	$1,952	$1,909	$2,179	$3,258	$2,938	$3,684	$3,269	$2,660	$2,554	$1,544
52	$675	$958	$533	$929	$1,032	$932	$988	$1,002	$1,002	$1,056	$1,075	$1,003	$927	$1,252	$1,160	$950	$1,134	$1,098	$1,135	$1,135	$1,239	$1,264	$1,342	$1,416	$1,488	$1,625	$1,551	$1,728	$1,950	$2,163	$1,867	$1,752	$1,856	$1,934	$1,889	$1,834	$1,714	$1,740	$1,740	$4,664	$2,712	$2,081	$1,531
53	$699	$851	$1,134	$915	$1,041	$967	$1,079	$1,327	$1,327	$1,343	$1,331	$1,415	$1,145	$1,353	$1,009	$1,026	$951	$1,009	$1,104	$1,203	$1,203	$1,192	$1,234	$1,537	$1,587	$1,720	$1,544	$1,379	$1,758	$1,900	$1,809	$1,883	$1,734	$1,603	$1,711	$1,710	$1,679	$1,679	$1,668	$1,805	$2,017	$1,732	$1,514
54	$667	$799	$985	$1,213	$1,128	$1,112	$1,141	$1,142	$1,193	$1,043	$834	$1,085	$1,049	$1,445	$1,559	$1,608	$1,673	$1,308	$1,104	$1,350	$1,350	$1,177	$1,261	$1,234	$1,587	$1,555	$1,525	$1,624	$1,793	$1,636	$1,624	$1,789	$1,734	$1,639	$1,695	$1,653	$1,822	$2,019	$1,668	$1,865	$2,017	$1,732	$1,533
55	$841	$750	$882	$1,051	$0	$1,027	$1,611	$1,308	$1,590	$1,243	$1,040	$1,317	$1,292	$1,458	$1,308	$1,542	$1,246	$1,041	$1,125	$1,235	$1,068	$1,261	$1,287	$1,405	$1,387	$1,490	$1,813	$1,586	$1,646	$1,745	$1,666	$1,714	$1,910	$1,771	$1,744	$1,650	$2,013	$2,212	$2,272	$1,719	$2,206	$3,026	$1,537
56	$703	$702	$984	$1,072	$998	$1,190	$1,077	$1,370	$1,200	$1,046	$1,034	$1,581	$1,686	$1,335	$1,330	$1,342	$1,243	$1,099	$1,183	$1,189	$1,189	$1,297	$1,138	$1,276	$1,368	$1,486	$1,753	$1,724	$1,608	$1,739	$1,847	$1,633	$1,741	$1,952	$1,909	$2,179	$3,258	$2,938	$3,684	$3,269	$2,660	$2,554	$1,576
57	$640	$766	$924	$880	$1,000	$1,065	$1,335	$1,143	$1,660	$1,042	$1,451	$853	$1,763	$1,252	$1,369	$1,414	$1,485	$1,189	$1,121	$1,260	$1,260	$1,097	$1,443	$1,296	$1,415	$1,551	$1,834	$1,622	$1,680	$1,768	$1,727	$1,745	$1,856	$1,934	$1,889	$1,834	$1,714	$1,651	$1,740	$4,664	$2,712	$2,081	$1,590
58	$0	$799	$924	$996	$1,064	$1,000	$1,177	$1,238	$1,098	$1,602	$1,606	$1,622	$1,353	$1,353	$1,594	$1,608	$1,280	$1,280	$1,557	$1,203	$1,203	$1,337	$1,218	$1,242	$1,421	$1,385	$1,576	$1,635	$1,538	$1,547	$1,507	$1,682	$1,724	$1,783	$1,783	$1,806	$1,771	$1,653	$1,776	$1,792	$1,975	$1,688	$1,594
59	$799	$799	$924	$1,115	$1,128	$1,122	$1,674	$1,141	$1,372	$1,277	$1,834	$1,685	$1,049	$1,445	$1,559	$1,608	$1,673	$1,308	$1,557	$1,350	$1,350	$1,176	$1,192	$1,192	$1,519	$1,385	$1,525	$1,624	$1,636	$1,636	$1,624	$1,711	$1,734	$1,711	$1,711	$1,710	$1,822	$2,019	$1,668	$1,805	$2,017	$1,732	$1,628
60	$799	$799	$1,024	$1,050	$1,083	$1,202	$1,611	$1,019	$1,590	$1,425	$1,271	$1,547	$1,366	$1,904	$1,432	$1,542	$1,246	$1,395	$1,246	$1,478	$1,478	$1,364	$1,364	$1,405	$1,338	$1,497	$1,813	$2,026	$1,819	$1,855	$1,669	$1,450	$1,704	$1,695	$1,744	$1,991	$2,013	$2,212	$2,272	$1,719	$2,206	$3,026	$1,813
61	$862	$0	$984	$986	$937	$968	$1,115	$1,173	$1,227	$1,296	$1,034	$1,291	$1,923	$1,589	$1,483	$1,793	$1,904	$1,969	$1,379	$1,605	$1,605	$1,514	$1,283	$1,778	$1,368	$1,833	$1,753	$1,904	$2,174	$2,482	$2,413	$2,309	$1,578	$1,359	$2,034	$2,179	$3,258	$2,938	$3,684	$3,269	$2,660	$2,554	$1,951
62	$0	$799	$919	$986	$1,000	$1,150	$1,173	$1,210	$1,173	$1,200	$1,339	$0	$1,763	$1,389	$1,426	$1,805	$1,215	$1,676	$1,864	$1,733	$1,557	$1,733	$1,233	$1,272	$2,086	$1,991	$1,834	$1,894	$2,607	$2,607	$1,853	$2,062	$2,556	$1,901	$1,754	$1,991	$1,940	$0	$4,019	$4,664	$2,712	$2,081	$1,835
63	$799	$799	$924	$1,029	$1,022	$1,137	$1,188	$1,157	$1,168	$1,240	$1,271	$1,419	$1,609	$1,389	$1,587	$1,311	$1,711	$2,013	$1,707	$2,066	$1,945	$2,125	$1,798	$2,466	$2,025	$2,801	$2,372	$2,546	$1,973	$3,069	$2,155	$2,223	$2,578	$3,092	$1,774	$1,954	$2,352	$2,629	$0	$3,287	$3,813	$3,353	$1,902
Total	$587	$531	$615	$648	$643	$677	$746	$790	$851	$872	$938	$970	$1,066	$1,087	$1,127	$1,143	$1,161	$1,208	$1,227	$1,287	$1,287	$1,339	$1,423	$1,483	$1,546	$1,616	$1,657	$1,725	$1,770	$1,804	$1,777	$1,766	$1,802	$1,762	$1,733	$1,723	$1,752	$1,763	$1,795	$1,833	$2,036	$2,415	$894

Notes: Basic pay figures reflect the January, 2018, increase of 2.4%.
Age is age nearest birthday as of the end of the fiscal year.
Constructed using the Average Points Per Year rates displayed in Appendix H.

DoD Officers Non-Selected Reserve Personnel With 20 Good Years by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	<19	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	Total
<37	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
37	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
38	0	2	25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
39	0	3	20	23	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
40	0	2	20	38	34	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96
41	0	1	15	26	46	48	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
42	0	2	33	23	29	76	66	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237
43	0	2	53	70	42	67	95	83	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	424
44	0	3	23	128	120	44	67	126	70	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	595
45	0	7	21	56	138	108	79	108	123	122	19	0	0	0	0	0	0	0	0	0	0	0	0	0	780
46	0	2	17	33	59	145	191	100	111	180	199	31	0	0	0	0	0	0	0	0	0	0	0	0	1,070
47	0	3	13	27	40	120	221	240	121	166	251	216	14	0	0	0	0	0	0	0	0	0	0	0	1,433
48	0	2	6	26	33	38	117	271	355	145	210	239	266	31	0	0	0	0	0	0	0	0	0	0	1,741
49	0	3	3	16	33	47	55	135	334	400	171	194	345	275	32	0	0	0	0	0	0	0	0	0	2,044
50	0	2	2	12	19	31	44	66	160	408	547	190	278	363	290	56	0	0	0	0	0	0	0	0	2,470
51	0	0	6	7	11	20	41	63	97	217	605	597	269	341	317	314	32	0	0	0	0	0	0	0	2,939
52	0	0	3	7	14	17	31	53	91	107	311	607	714	317	304	355	352	39	0	0	0	0	0	0	3,323
53	0	1	6	3	12	18	30	39	57	83	185	331	793	840	285	325	421	363	45	0	0	0	0	0	3,838
54	0	0	5	3	8	10	23	33	52	82	139	219	448	889	867	336	387	424	420	38	0	0	0	0	4,385
55	0	0	3	8	7	8	18	22	21	53	113	154	220	461	973	855	293	352	383	307	34	0	0	0	4,287
56	0	1	2	9	8	11	11	22	27	42	85	111	175	297	500	834	893	381	389	365	256	17	0	0	4,438
57	0	0	1	5	2	13	8	23	24	44	53	62	130	226	285	420	947	877	334	323	314	221	16	0	4,330
58	0	0	2	7	2	7	14	12	27	31	54	54	86	158	219	249	515	844	864	311	269	295	253	9	4,285
59	0	2	1	1	3	9	10	15	21	29	41	55	60	96	144	203	294	423	831	821	241	236	338	217	4,093
60	0	0	2	1	0	4	5	8	8	8	23	31	33	34	69	69	124	164	253	536	328	117	131	228	2,179
61	0	0	0	0	0	0	0	0	1	0	2	3	2	0	1	1	6	2	7	17	23	26	5	17	113
62	0	0	0	0	0	0	0	0	1	1	2	0	3	2	0	2	1	4	4	3	8	11	15	6	63
63	0	0	2	0	0	0	0	2	0	4	4	7	4	7	7	2	4	5	7	5	16	23	47	210	355
Total	0	47	285	532	668	844	1,138	1,429	1,712	2,136	3,015	3,104	3,842	4,340	4,295	4,022	4,268	3,879	3,539	2,729	1,491	947	805	687	49,755

Notes: Data taken from the actuarial valuation file created by the DoD Office of the Actuary.
Age is age nearest birthday as of the end of the fiscal year.

Average Age: 53.8   Average PEBD Years of Service: 31.7

DoD Enlisted Non-Selected Reserve Personnel With 20 Good Years by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	<19	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	Total
<37	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
37	0	81	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129
38	0	32	173	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233
39	0	24	191	285	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	527
40	0	19	165	375	300	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	887
41	0	16	99	310	467	356	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,291
42	0	11	88	196	345	579	443	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,706
43	0	7	57	131	218	523	702	545	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,224
44	0	6	54	103	157	341	591	812	451	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,579
45	0	7	37	97	132	232	425	690	851	775	101	0	0	0	0	0	0	0	0	0	0	0	0	0	3,347
46	0	6	39	74	148	194	328	540	846	1,235	1,051	109	0	0	0	0	0	0	0	0	0	0	0	0	4,571
47	0	15	43	75	131	196	309	407	633	1,049	1,585	1,184	70	0	0	0	0	0	0	0	0	0	0	0	5,697
48	0	9	28	53	89	150	247	346	441	691	1,233	1,663	1,257	110	0	0	0	0	0	0	0	0	0	0	6,318
49	0	5	22	68	87	118	177	275	370	532	880	1,284	1,916	1,392	127	0	0	0	0	0	0	0	0	0	7,253
50	0	4	28	38	78	112	180	204	288	380	597	866	1,463	1,995	1,402	257	0	0	0	0	0	0	0	0	7,894
51	0	10	22	42	72	106	166	193	260	338	519	680	1,104	1,640	1,718	1,775	181	0	0	0	0	0	0	0	8,826
52	0	5	13	42	64	106	133	179	229	338	449	567	788	1,177	1,374	2,275	1,718	174	0	0	0	0	0	0	9,633
53	0	7	22	43	50	99	143	168	205	282	358	470	676	950	1,072	1,869	2,470	1,955	253	0	0	0	0	0	11,094
54	0	2	21	49	56	96	110	171	207	241	364	440	585	786	917	1,324	1,964	2,565	2,132	230	0	0	0	0	12,261
55	0	1	33	41	56	80	127	160	196	235	265	362	493	630	747	1,051	1,390	1,955	2,672	2,072	158	0	0	0	12,726
56	0	3	20	39	69	74	95	125	172	188	241	314	397	507	556	847	1,101	1,497	1,918	2,878	1,842	129	0	0	13,015
57	0	5	13	38	74	63	79	115	193	194	212	261	353	412	496	723	920	1,143	1,520	2,193	2,413	1,502	139	0	13,061
58	0	3	9	25	41	64	83	112	120	156	164	184	280	339	433	556	660	849	1,026	1,501	1,819	2,105	1,629	93	12,253
59	0	1	5	9	32	42	73	77	103	134	133	167	246	281	342	392	522	687	846	1,039	1,217	1,579	2,232	1,392	11,551
60	0	3	3	9	14	21	27	51	54	45	69	84	119	126	181	203	265	279	398	492	573	692	1,072	1,518	6,297
61	0	0	0	0	2	1	3	1	2	4	4	2	7	10	7	10	16	25	23	27	27	33	43	140	387
62	0	0	0	0	1	0	0	0	2	2	3	3	7	4	9	7	10	7	6	15	17	15	20	110	232
63	0	0	0	0	0	2	0	0	2	5	8	5	11	16	13	25	33	30	30	53	43	79	80	681	1,114
																									0
Total	0	280	1,234	2,171	2,712	3,584	4,488	5,219	5,668	6,888	8,235	8,644	9,766	10,375	9,394	11,313	11,252	11,167	10,824	10,501	8,109	6,134	5,215	3,934	157,106

Average Age: 53.1   Average PEBD Years of Service: 32.0

Notes: Data taken from the actuarial valuation file created by the DoD Office of the Actuary.
Age is age nearest birthday as of the end of the fiscal year.

All DoD Non-Selected Reserve Personnel With 20 Good Years by PEBD Years of Service and Age for FY 2017 Valuation

Completed Pay Entry Base Date (PEBD) Years Of Service (YOS)

Age	<19	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	Total
<37	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
37	0	89	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
38	0	34	198	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	262
39	0	27	211	308	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	580
40	0	21	186	412	334	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	983
41	0	17	114	335	512	404	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,438
42	0	13	121	219	374	655	508	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,943
43	0	9	110	202	260	590	797	628	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,648
44	0	9	77	232	277	385	658	938	521	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,174
45	0	14	58	154	270	339	504	797	974	897	120	0	0	0	0	0	0	0	0	0	0	0	0	0	4,127
46	0	8	56	107	207	340	519	640	957	1,416	1,250	140	0	0	0	0	0	0	0	0	0	0	0	0	5,641
47	0	18	56	102	171	317	531	646	754	1,215	1,835	1,400	84	0	0	0	0	0	0	0	0	0	0	0	7,130
48	0	11	34	79	122	188	365	618	795	836	1,443	1,903	1,523	141	0	0	0	0	0	0	0	0	0	0	8,059
49	0	8	25	84	120	165	232	410	704	932	1,051	1,478	2,261	1,667	159	0	0	0	0	0	0	0	0	0	9,297
50	0	6	30	50	97	143	224	270	449	788	1,144	1,057	1,742	2,358	1,692	313	0	0	0	0	0	0	0	0	10,364
51	0	10	28	49	83	126	207	256	357	555	1,124	1,277	1,373	1,981	2,035	2,089	213	0	0	0	0	0	0	0	11,765
52	0	5	16	49	78	123	164	232	320	446	760	1,174	1,502	1,494	1,678	2,630	2,071	213	0	0	0	0	0	0	12,956
53	0	8	28	46	62	117	173	207	262	365	544	801	1,469	1,791	1,358	2,194	2,891	2,318	298	0	0	0	0	0	14,932
54	0	2	26	52	64	106	133	204	259	323	503	659	1,033	1,675	1,784	1,660	2,351	2,989	2,552	268	0	0	0	0	16,646
55	0	1	36	49	63	88	145	182	217	288	379	516	713	1,091	1,720	1,905	1,683	2,307	3,056	2,380	192	0	0	0	17,013
56	0	4	22	48	77	85	106	147	199	230	326	425	572	804	1,056	1,681	1,994	1,879	2,308	3,244	2,098	146	0	0	17,453
57	0	5	14	43	76	76	87	138	217	238	265	323	483	638	781	1,143	1,867	2,020	1,854	2,517	2,727	1,723	155	0	17,391
58	0	3	11	32	43	71	97	124	148	187	218	238	366	498	652	806	1,174	1,694	1,890	1,812	2,089	2,401	1,883	102	16,538
59	0	3	6	10	35	51	83	92	125	163	174	222	306	378	486	595	816	1,110	1,677	1,860	1,458	1,815	2,569	1,609	15,644
60	0	1	5	10	15	25	32	59	62	53	92	115	152	160	250	272	389	443	651	1,029	901	809	1,203	1,746	8,476
61	0	0	0	0	2	1	3	1	3	4	6	5	9	10	8	11	22	27	30	44	50	59	48	157	500
62	0	0	0	0	1	0	0	0	3	3	5	3	4	6	9	9	11	11	10	18	25	26	35	116	295
63	0	0	2	0	0	2	0	2	2	9	12	12	15	24	20	26	36	35	37	58	59	102	127	891	1,469
Total	0	327	1,520	2,704	3,380	4,428	5,626	6,647	7,380	9,025	11,250	11,748	13,608	14,715	13,689	15,335	15,521	15,047	14,363	13,229	9,599	7,081	6,020	4,621	206,861

Notes: Data taken from the actuarial valuation file created by the DoD Office of the Actuary.
Age is age nearest birthday as of the end of the fiscal year.

Average Age: 53.2   Average PEBD Years of Service: 31.9

DoD Retired Military Valuation Data as of Year-End FY 2017

All Officers

Age	Number — Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis	Avg. Pay — Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis
16	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
17	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
18	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
19	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
20	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
21	0	1	0	0	1	0	0	0	0	$0	$3,700	$0	$0	$3,700	$0	$0	$0	$0
22	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
23	1	1	0	0	2	0	0	0	0	$40,227	$12,184	$0	$0	$26,206	$0	$0	$0	$0
24	0	3	2	0	5	0	0	0	0	$0	$4,992	$8,365	$0	$6,341	$0	$0	$0	$0
25	0	8	6	0	14	0	0	0	0	$0	$6,240	$3,913	$0	$5,243	$0	$0	$0	$0
26	0	15	17	0	32	0	0	0	0	$0	$5,955	$8,864	$0	$7,501	$0	$0	$0	$0
27	0	30	22	0	52	0	0	0	0	$0	$6,929	$7,842	$0	$7,315	$0	$0	$0	$0
28	0	58	29	0	87	0	0	0	0	$0	$7,599	$9,793	$0	$8,331	$0	$0	$0	$0
29	0	59	20	0	79	0	0	0	0	$0	$6,664	$11,713	$0	$7,942	$0	$0	$0	$0
30	0	82	25	0	107	0	0	0	0	$0	$9,829	$12,014	$0	$10,340	$0	$0	$0	$0
31	0	127	38	0	165	0	0	0	0	$0	$10,585	$13,511	$0	$11,259	$0	$0	$0	$0
32	0	153	34	0	187	0	0	0	0	$0	$10,625	$14,985	$0	$11,417	$0	$0	$0	$0
33	0	168	32	0	200	0	0	0	0	$0	$10,777	$16,024	$0	$11,617	$0	$0	$0	$0
34	2	207	53	0	262	2	0	0	0	$18,179	$11,156	$12,911	$0	$11,565	$18,179	$0	$0	$0
35	7	217	52	0	276	7	0	1	1	$17,476	$11,890	$13,072	$0	$12,254	$17,476	$0	$15,288	$12,759
36	12	238	44	0	294	12	0	1	1	$22,837	$11,471	$16,055	$0	$12,621	$22,837	$0	$12,712	$787
37	29	258	54	0	341	28	0	3	4	$26,071	$13,127	$17,461	$0	$14,914	$25,774	$0	$16,896	$24,291
38	112	277	47	0	436	72	0	5	4	$28,533	$13,593	$18,001	$0	$17,906	$24,691	$0	$19,020	$17,985
39	299	244	52	0	595	118	0	24	11	$31,999	$15,561	$19,883	$0	$24,199	$27,328	$0	$25,112	$22,296
40	595	318	40	0	953	246	0	37	12	$32,991	$16,036	$20,724	$0	$26,819	$28,764	$0	$25,065	$27,838
41	889	267	54	0	1,210	359	0	71	10	$33,640	$17,886	$27,311	$0	$29,881	$30,484	$0	$28,137	$23,082
42	1,304	304	45	0	1,653	371	0	111	17	$36,879	$19,647	$27,171	$0	$33,446	$32,039	$0	$29,831	$28,850
43	1,906	311	51	0	2,268	298	0	153	23	$39,747	$21,303	$28,673	$0	$36,969	$32,858	$0	$31,118	$30,279
44	2,692	323	50	0	3,065	247	0	216	31	$41,836	$23,760	$32,054	$0	$39,771	$33,308	$0	$33,924	$30,585
45	3,282	381	39	0	3,702	206	0	270	43	$43,111	$24,609	$31,742	$0	$41,087	$34,688	$0	$35,719	$32,792
46	4,148	395	44	0	4,587	187	0	383	36	$44,249	$25,999	$35,307	$0	$42,591	$34,968	$0	$36,891	$36,338
47	5,045	457	49	0	5,551	126	0	468	39	$45,754	$27,582	$37,920	$0	$44,189	$33,790	$0	$37,725	$35,055
48	5,620	442	27	0	6,089	89	0	553	42	$47,199	$27,088	$36,440	$0	$45,691	$33,224	$0	$40,242	$35,071
49	5,860	396	25	0	6,281	63	0	436	33	$48,527	$27,579	$40,420	$0	$47,174	$36,219	$0	$41,045	$35,453
50	6,368	388	18	0	6,774	36	0	300	21	$49,937	$28,231	$40,305	$0	$48,752	$34,153	$0	$41,444	$37,503
51	6,932	369	23	0	7,324	38	0	210	11	$50,704	$29,655	$42,226	$0	$49,545	$35,240	$0	$41,476	$33,603
52	7,652	380	24	2	8,058	22	0	159	9	$51,809	$29,911	$38,849	$0	$50,726	$31,905	$0	$41,147	$32,394
53	8,405	383	20	4	8,812	32	0	114	5	$53,002	$28,572	$44,689	$54,422	$51,981	$33,595	$0	$41,957	$46,352
54	8,854	379	17	21	9,271	42	0	82	6	$52,893	$26,630	$32,937	$55,288	$51,854	$28,284	$0	$41,797	$41,722
55	8,703	353	18	31	9,105	72	0	61	3	$53,927	$30,131	$46,780	$49,340	$52,831	$24,635	$0	$44,956	$27,576
56	8,734	343	13	66	9,156	108	0	40	1	$54,507	$31,103	$40,362	$46,852	$53,511	$26,222	$0	$38,998	$40,788
57	8,814	327	3	108	9,252	218	1	30	1	$54,704	$29,083	$45,113	$45,649	$53,761	$24,853	$81,468	$44,063	$28,758
58	8,935	324	2	213	9,474	431	0	22	2	$54,298	$28,895	$47,488	$45,943	$53,179	$26,779	$0	$44,173	$34,632
59	9,272	309	6	388	9,975	714	0	10	1	$53,978	$26,126	$49,141	$42,943	$52,749	$27,447	$0	$38,494	$21,884
60	9,753	319	3	2,233	12,308	1,080	63	8	1	$53,605	$29,751	$34,236	$32,547	$49,067	$28,197	$20,227	$39,799	$38,952
61	9,873	312	4	5,107	15,296	1,281	290	12	1	$52,783	$31,398	$51,734	$29,018	$44,378	$29,028	$21,260	$44,106	$10,467
62	10,239	282	1	5,374	15,896	1,480	309	9	0	$51,939	$27,373	$56,484	$29,162	$43,875	$30,015	$20,588	$47,921	$0
63	10,309	306	3	5,268	15,884	1,505	272	7	0	$52,118	$31,489	$18,425	$28,088	$43,669	$31,552	$20,782	$57,518	$0
64	10,547	310	0	5,296	16,156	1,320	236	3	0	$51,965	$30,410	$0	$27,950	$43,696	$32,042	$20,827	$42,581	$0
65	10,495	303	0	5,684	16,482	1,021	212	4	0	$51,509	$31,907	$0	$27,206	$42,740	$32,837	$19,684	$39,560	$0
66	10,255	289	0	5,526	16,070	751	151	7	1	$51,049	$32,948	$0	$26,636	$42,310	$33,294	$19,579	$52,455	$21,231
67	10,443	306	0	6,014	16,763	467	121	1	0	$50,810	$30,419	$0	$25,893	$41,545	$33,155	$18,212	$41,064	$0
68	10,976	348	0	6,881	18,205	367	127	3	0	$50,515	$29,653	$0	$24,498	$40,297	$33,155	$20,634	$45,935	$0
69	11,696	355	0	7,931	19,982	293	106	3	0	$49,908	$29,913	$0	$24,000	$39,265	$34,917	$17,474	$55,126	$0
70	12,486	461	0	8,684	21,631	252	91	0	0	$50,115	$29,913	$0	$24,228	$39,292	$35,318	$16,915	$0	$0

DoD Retired Military Valuation Data as of Year-End FY 2017

All Officers

| Age | Number | | | | | | | | | Average Annual Net Retired Pay | | | | | | | | |
---	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis
71	13,186	560	0	9,184	22,930	200	97	0	0	$50,978	$28,679	$0	$24,030	$39,640	$36,390	$16,351	$0	$0
72	9,111	410	0	6,547	16,068	120	56	0	0	$51,331	$27,879	$0	$24,532	$39,813	$38,595	$16,093	$0	$0
73	9,144	423	0	6,430	15,997	79	41	0	0	$51,583	$28,262	$0	$24,658	$40,144	$36,704	$19,130	$0	$0
74	9,186	390	0	6,009	15,585	69	35	0	0	$51,707	$29,995	$0	$23,950	$40,462	$37,701	$17,641	$0	$0
75	8,970	404	0	5,905	15,279	58	39	0	0	$51,360	$30,850	$0	$23,597	$40,088	$39,084	$14,199	$0	$0
76	7,727	286	0	4,712	12,725	34	28	0	0	$51,331	$31,167	$0	$22,833	$40,325	$40,771	$12,426	$0	$0
77	7,687	292	0	4,161	12,140	13	31	0	0	$51,175	$33,865	$0	$22,862	$41,054	$36,884	$15,224	$0	$0
78	7,618	249	0	3,836	11,703	11	31	0	0	$51,902	$39,041	$0	$22,650	$42,040	$48,330	$15,001	$0	$0
79	7,112	218	0	3,777	11,107	9	36	0	0	$51,839	$38,812	$0	$21,859	$41,388	$50,641	$16,457	$0	$0
80	6,673	191	0	3,570	10,434	8	28	0	0	$53,181	$39,933	$0	$21,327	$42,040	$49,848	$16,067	$0	$0
81	6,245	186	0	3,292	9,723	7	13	0	0	$53,566	$39,426	$0	$21,080	$42,297	$40,006	$15,152	$0	$0
82	5,823	171	0	3,100	9,094	7	13	0	0	$54,333	$41,192	$0	$20,720	$42,628	$41,377	$12,876	$0	$0
83	5,944	157	0	3,043	9,144	6	16	0	0	$55,639	$42,474	$0	$20,573	$43,743	$43,397	$12,407	$0	$0
84	5,339	148	0	2,669	8,156	5	8	0	0	$56,268	$44,294	$0	$20,985	$44,504	$52,988	$11,189	$0	$0
85	5,157	146	0	2,622	7,925	5	4	0	0	$56,832	$47,339	$0	$20,757	$44,722	$41,690	$18,322	$0	$0
86	4,578	158	0	2,550	7,286	3	3	0	0	$57,977	$42,529	$0	$19,865	$44,304	$49,202	$21,567	$0	$0
87	4,224	134	0	2,568	6,926	1	0	0	0	$58,897	$46,103	$0	$19,350	$43,986	$28,848	$0	$0	$0
88	3,512	166	0	2,253	5,931	1	2	0	0	$59,589	$44,917	$0	$18,755	$43,667	$44,724	$17,526	$0	$0
89	2,744	124	0	1,786	4,654	1	4	0	0	$61,364	$47,628	$0	$18,672	$44,615	$37,176	$19,147	$0	$0
90	1,800	85	0	1,117	3,002	1	1	0	0	$62,659	$47,364	$0	$19,582	$46,198	$27,060	$19,788	$0	$0
91	1,261	69	0	956	2,286	1	0	0	0	$65,000	$52,414	$0	$20,006	$45,804	$55,296	$0	$0	$0
92	1,199	74	0	991	2,264	0	0	0	0	$67,216	$46,492	$0	$18,868	$45,376	$0	$0	$0	$0
93	1,175	86	0	1,101	2,362	0	0	0	0	$66,112	$37,962	$0	$18,568	$42,925	$0	$0	$0	$0
94	1,032	107	0	951	2,090	0	0	0	0	$64,457	$37,093	$0	$18,122	$41,973	$0	$0	$0	$0
95	855	107	0	840	1,802	0	0	0	0	$64,277	$39,354	$0	$17,542	$41,012	$0	$0	$0	$0
96	749	109	0	655	1,513	0	0	0	0	$64,636	$34,334	$0	$17,505	$42,049	$0	$0	$0	$0
97	558	89	0	523	1,170	0	0	0	0	$62,073	$34,738	$0	$18,689	$40,600	$0	$0	$0	$0
98	399	64	0	348	811	0	0	0	0	$62,603	$38,372	$0	$19,339	$42,126	$0	$0	$0	$0
99	240	41	0	239	520	0	0	0	0	$60,255	$34,071	$0	$19,411	$40,753	$0	$0	$0	$0
100	136	26	0	140	302	0	0	0	0	$60,983	$34,515	$0	$21,324	$39,394	$0	$0	$0	$0
101	70	12	0	72	154	0	0	0	0	$60,035	$30,900	$0	$20,167	$39,948	$0	$0	$0	$0
102	48	8	0	38	94	0	0	0	0	$55,908	$50,535	$0	$23,680	$40,272	$0	$0	$0	$0
103	21	5	0	25	51	0	0	0	0	$68,237	$86,184	$0	$24,496	$42,735	$0	$0	$0	$0
104	9	2	0	11	22	0	0	0	0	$50,984	$0	$0	$24,111	$37,699	$0	$0	$0	$0
105	2	1	0	8	11	0	0	0	0	$59,160	$0	$0	$57,924	$36,127	$0	$0	$0	$0
106	2	0	0	1	3	0	0	0	0	$96,359	$0	$0	$30,534	$83,548	$0	$0	$0	$0
107	2	0	0	2	4	0	0	0	0	$66,519	$0	$0	$15,072	$48,526	$0	$0	$0	$0
108	0	0	0	1	1	0	0	0	0	$0	$0	$0	$0	$15,072	$0	$0	$0	$0
109	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
110	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total	371,082	18,584	1,107	150,864	541,637	14,600	2,465	3,817	370	$52,160	$28,355	$24,651	$24,142	$43,483	$31,216	$19,265	$38,312	$32,671
60+	256,610	9,289	12	150,031	415,942	10,456	2,464	57	3	$52,833	$33,646	$38,983	$24,033	$42,016	$31,733	$19,239	$47,000	$23,550
62+	236,984	8,658	5	142,691	388,338	8,095	2,111	37	1	$52,803	$34,063	$31,631	$23,722	$41,699	$32,633	$18,699	$49,495	$21,231
65+	205,889	7,760	0	126,753	340,402	3,790	1,294	18	1	$52,923	$34,526	$0	$23,133	$41,411	$34,290	$17,803	$48,315	$21,231

Notes: Age is retiree's current age nearest birthday at end of fiscal year.
60+ is total for ages 60 and over.
62+ is total for ages 62 and over.
65+ is total for ages 65 and over.
Includes only retirees receiving payment from DoD.
Temporary Early Retirement Act (TERA) retirees and payments are shown for informational purposes only.
Career Status Bonus (CSB) retirees and payments are shown for informational purposes only.
TERA and CSB numbers and payments are included in the appropriate categories.
Pay amounts do not include the 12/1/17 cost of living increase of 2.0%.

DoD Office of the Actuary

DoD Retired Military Valuation Data as of Year-End FY 2017

All Enlisted

Number

Age	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	1	2	0	3	0	0	0	0
20	0	12	21	0	33	0	0	0	0
21	0	26	46	0	72	0	0	0	0
22	0	40	75	0	115	0	0	0	0
23	0	88	106	0	194	0	0	0	0
24	0	172	149	0	321	0	0	0	0
25	0	271	185	0	456	0	0	0	0
26	1	476	206	0	683	0	0	0	0
27	0	711	251	0	962	0	0	0	0
28	0	996	233	0	1,229	0	0	0	0
29	0	1,250	282	0	1,532	0	0	0	0
30	0	1,613	293	0	1,906	0	0	0	0
31	0	2,105	303	0	2,408	0	0	0	0
32	1	2,402	279	0	2,682	0	0	0	0
33	3	2,674	315	0	2,992	2	0	0	0
34	43	2,740	254	0	3,037	42	0	0	0
35	124	2,695	283	0	3,102	123	0	2	5
36	307	2,484	259	0	3,050	306	0	2	19
37	615	2,308	223	0	3,146	608	0	7	31
38	1,500	2,156	169	0	3,825	900	0	9	35
39	3,600	1,953	168	0	5,721	952	0	35	45
40	5,961	1,916	178	0	8,055	929	0	49	111
41	7,687	1,857	171	0	9,715	753	0	82	187
42	9,603	1,784	175	0	11,562	543	0	128	231
43	11,736	1,821	176	0	13,733	381	0	177	270
44	13,673	1,798	132	0	15,603	254	0	247	293
45	15,552	1,905	132	0	17,589	180	0	314	315
46	18,206	1,942	89	0	20,237	133	0	420	336
47	20,304	2,000	110	0	22,414	108	0	507	334
48	20,637	1,845	84	0	22,566	60	0	595	273
49	21,961	1,718	71	0	23,750	45	0	469	225
50	23,960	1,605	49	0	25,614	42	0	321	164
51	26,525	1,602	60	0	28,187	51	1	221	109
52	28,965	1,615	32	1	30,613	167	0	168	68
53	31,871	1,610	28	1	33,510	373	0	119	71
54	33,909	1,586	27	4	35,526	838	0	88	45
55	35,580	1,642	22	10	37,254	1,591	0	64	26
56	36,955	1,544	17	24	38,540	2,821	0	41	12
57	37,578	1,464	17	64	39,123	3,849	0	31	12
58	36,901	1,410	12	149	38,472	4,429	1	23	10
59	35,701	1,283	13	409	37,406	4,737	2	12	5
60	34,778	1,368	6	4,731	40,883	4,618	170	9	2
61	33,033	1,346	5	11,922	46,306	3,905	393	13	1
62	31,941	1,365	2	11,914	45,222	2,957	402	9	5
63	31,445	1,378	1	11,284	44,108	2,199	408	7	3
64	30,043	1,360	0	11,503	42,906	1,508	395	3	1
65	29,863	1,413	0	13,094	44,370	1,083	348	1	0
66	27,171	1,387	0	13,109	41,667	875	348	8	0
67	25,898	1,658	0	13,879	41,435	665	307	1	0
68	25,986	2,049	0	15,130	43,165	511	338	3	0
69	25,837	2,310	0	15,886	44,033	419	393	3	0
70	25,642	2,430	0	16,753	44,825	355	397	0	0

Average Annual Net Retired Pay

Age	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis
16	$0	$0	$0	$0	$0	$0	$0	$0	$0
17	$0	$0	$0	$0	$0	$0	$0	$0	$0
18	$0	$0	$0	$0	$0	$0	$0	$0	$0
19	$0	$5,640	$12,073	$0	$9,928	$0	$0	$0	$0
20	$0	$4,293	$7,431	$0	$6,290	$0	$0	$0	$0
21	$0	$3,837	$5,667	$0	$5,006	$0	$0	$0	$0
22	$0	$3,697	$5,307	$0	$4,747	$0	$0	$0	$0
23	$0	$3,032	$5,585	$0	$4,427	$0	$0	$0	$0
24	$0	$3,293	$4,924	$0	$4,050	$0	$0	$0	$0
25	$0	$3,230	$4,348	$0	$3,683	$0	$0	$0	$0
26	$20,051	$2,598	$4,891	$0	$3,315	$0	$0	$0	$0
27	$0	$2,918	$4,364	$0	$3,296	$0	$0	$0	$0
28	$0	$3,290	$3,976	$0	$3,420	$0	$0	$0	$0
29	$0	$3,428	$5,059	$0	$3,728	$0	$0	$0	$0
30	$0	$3,555	$5,679	$0	$3,882	$0	$0	$0	$0
31	$0	$4,072	$6,122	$0	$4,330	$0	$0	$0	$0
32	$38,483	$4,191	$6,428	$0	$4,437	$0	$0	$0	$0
33	$19,119	$4,666	$7,143	$0	$4,941	$16,383	$0	$0	$0
34	$15,965	$5,033	$7,588	$0	$5,402	$15,294	$0	$0	$0
35	$15,129	$5,387	$8,569	$0	$6,067	$14,948	$0	$11,507	$11,265
36	$15,271	$5,873	$8,305	$0	$7,025	$15,164	$0	$32,869	$10,331
37	$14,784	$6,189	$9,085	$0	$8,074	$14,681	$0	$86,021	$12,806
38	$18,014	$6,815	$10,160	$0	$11,354	$15,060	$0	$456,701	$12,617
39	$20,457	$6,962	$11,309	$0	$15,581	$15,363	$0	$378,177	$13,870
40	$21,282	$8,308	$14,295	$0	$18,041	$16,011	$0	$503,833	$16,636
41	$21,828	$9,449	$16,928	$0	$19,375	$16,545	$0	$430,494	$17,338
42	$22,209	$10,642	$16,904	$0	$20,344	$16,924	$0	$402,409	$18,617
43	$22,726	$11,818	$19,164	$0	$21,234	$16,698	$0	$405,348	$19,573
44	$23,206	$12,649	$19,772	$0	$21,961	$17,092	$0	$381,655	$20,266
45	$23,702	$13,212	$19,991	$0	$22,538	$16,760	$0	$369,925	$20,770
46	$23,924	$13,941	$20,039	$0	$22,949	$17,272	$0	$333,271	$22,326
47	$24,035	$13,531	$23,503	$0	$23,095	$17,365	$0	$331,247	$23,247
48	$24,130	$13,806	$24,399	$0	$23,300	$18,191	$0	$299,279	$23,024
49	$24,700	$14,100	$23,439	$0	$23,929	$19,788	$0	$310,644	$23,634
50	$25,141	$14,138	$23,754	$0	$24,449	$15,877	$0	$303,271	$24,203
51	$25,342	$13,459	$20,564	$0	$24,656	$13,186	$12,869	$289,578	$24,654
52	$25,403	$13,042	$18,795	$14,839	$24,744	$12,178	$0	$267,447	$21,763
53	$25,229	$13,806	$25,143	$17,323	$24,680	$12,192	$0	$276,434	$23,155
54	$24,723	$13,627	$19,184	$23,338	$24,224	$12,201	$0	$276,392	$23,064
55	$24,430	$13,830	$23,047	$32,194	$23,962	$12,626	$0	$274,567	$22,932
56	$24,103	$13,437	$23,220	$25,217	$23,677	$12,856	$0	$330,702	$22,625
57	$23,535	$12,666	$25,001	$23,160	$23,128	$13,216	$0	$270,149	$22,087
58	$23,272	$12,948	$26,472	$22,076	$22,890	$13,869	$13,434	$281,017	$26,205
59	$22,995	$12,935	$25,798	$20,810	$22,627	$14,557	$7,760	$314,550	$23,726
60	$22,715	$13,135	$12,186	$13,204	$21,293	$14,957	$8,405	$377,552	$21,879
61	$22,591	$13,473	$25,599	$12,150	$19,638	$15,227	$7,773	$189,740	$20,720
62	$22,601	$13,606	$35,952	$12,028	$19,545	$15,305	$7,683	$174,844	$27,758
63	$22,564	$13,370	$21,505	$11,885	$19,277	$15,232	$7,614	$266,751	$31,483
64	$22,534	$13,473	$0	$11,458	$19,121	$15,196	$7,377	$233,954	$0
65	$22,767	$13,457	$0	$11,418	$18,885	$15,218	$7,344	$145,702	$46,296
66	$22,878	$13,245	$0	$11,206	$18,644	$15,502	$7,342	$19,942	$0
67	$23,228	$11,997	$0	$10,886	$18,529	$16,028	$7,029	$0	$0
68	$23,563	$10,276	$0	$11,000	$18,490	$16,464	$7,051	$0	$0
69	$23,888	$9,293	$0	$11,047	$18,419	$16,785	$7,268	$0	$0
70	$24,311	$9,375	$0	$10,712	$18,419	$17,352	$7,268	$0	$0

DoD Office of the Actuary

DoD Retired Military Valuation Data as of Year-End FY 2017

All Enlisted

Age	Number									Average Annual Net Retired Pay								
	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis
71	25,057	2,084	0	16,509	43,650	293	352	0	0	$24,673	$10,059	$0	$10,701	$18,691	$18,143	$6,963	$0	$0
72	17,246	1,325	0	11,372	29,943	177	234	0	0	$24,705	$11,668	$0	$10,732	$18,821	$18,155	$7,252	$0	$0
73	17,263	1,115	0	10,395	28,773	116	199	0	0	$24,749	$13,100	$0	$10,597	$19,185	$19,351	$7,003	$0	$0
74	18,295	940	0	9,778	29,013	104	168	0	0	$24,690	$14,343	$0	$10,526	$19,581	$19,622	$7,500	$0	$0
75	19,567	860	0	9,217	29,644	70	153	0	0	$24,507	$15,445	$0	$10,041	$19,746	$19,196	$7,186	$0	$0
76	17,867	746	0	7,201	25,814	49	122	0	0	$24,390	$15,514	$0	$9,884	$20,087	$20,233	$6,592	$0	$0
77	16,946	644	0	6,038	23,628	28	85	0	0	$24,215	$17,608	$0	$9,817	$20,356	$21,028	$6,591	$0	$0
78	16,379	522	0	5,834	22,735	17	89	0	0	$24,076	$17,560	$0	$9,618	$20,216	$22,157	$5,898	$0	$0
79	16,667	531	0	5,651	22,849	25	104	0	0	$24,214	$17,617	$0	$9,527	$20,429	$21,424	$6,244	$0	$0
80	17,374	490	0	5,420	23,284	8	117	0	0	$24,431	$17,719	$0	$9,652	$20,849	$17,626	$5,493	$0	$0
81	16,431	455	0	4,976	21,862	8	90	0	0	$24,822	$17,650	$0	$9,691	$21,228	$21,053	$5,498	$0	$0
82	15,386	430	0	4,608	20,424	2	100	0	0	$24,876	$17,839	$0	$9,963	$21,364	$23,884	$6,334	$0	$0
83	13,658	449	0	3,844	17,951	0	53	0	0	$24,991	$17,825	$0	$10,338	$21,674	$0	$5,989	$0	$0
84	12,084	430	0	3,063	15,577	0	52	0	0	$25,297	$16,969	$0	$10,258	$22,109	$0	$6,306	$0	$0
85	11,099	495	0	2,765	14,359	0	9	0	0	$25,543	$16,501	$0	$10,114	$22,260	$0	$5,193	$0	$0
86	9,988	503	0	2,588	13,079	3	3	0	0	$25,630	$14,926	$0	$10,035	$22,132	$0	$8,897	$0	$0
87	9,225	505	0	2,309	12,039	1	1	0	0	$25,372	$16,426	$0	$10,155	$22,078	$0	$5,039	$0	$0
88	7,668	496	0	1,773	9,937	0	0	0	0	$25,441	$16,702	$0	$10,322	$22,307	$0	$0	$0	$0
89	5,576	359	0	1,284	7,219	0	0	0	0	$25,328	$17,916	$0	$10,542	$22,330	$0	$0	$0	$0
90	4,079	216	0	786	5,081	0	1	0	0	$25,065	$18,732	$0	$10,640	$22,564	$0	$0	$0	$0
91	2,664	116	0	661	3,441	0	0	0	0	$24,653	$19,740	$0	$11,100	$21,884	$0	$0	$0	$0
92	1,981	92	0	508	2,581	0	0	0	0	$24,640	$18,922	$0	$10,758	$21,704	$0	$0	$0	$0
93	1,530	91	0	406	2,027	0	0	0	0	$24,825	$20,961	$0	$10,855	$21,853	$0	$0	$0	$0
94	1,169	50	0	267	1,486	0	0	0	0	$24,259	$19,288	$0	$10,763	$21,667	$0	$0	$0	$0
95	820	43	0	199	1,062	0	0	0	0	$23,675	$19,955	$0	$10,863	$21,124	$0	$0	$0	$0
96	554	36	0	151	741	0	0	0	0	$23,669	$26,131	$0	$10,694	$21,144	$0	$0	$0	$0
97	409	19	0	100	528	0	0	0	0	$24,526	$26,709	$0	$12,069	$22,245	$0	$0	$0	$0
98	281	21	0	70	372	0	0	0	0	$24,779	$25,853	$0	$11,958	$22,427	$0	$0	$0	$0
99	153	8	0	44	205	0	0	0	0	$24,261	$33,725	$0	$11,677	$21,929	$0	$0	$0	$0
100	75	2	0	23	100	0	0	0	0	$21,558	$16,451	$0	$12,875	$19,458	$0	$0	$0	$0
101	41	0	0	9	50	0	0	0	0	$23,594	$0	$0	$12,019	$21,510	$0	$0	$0	$0
102	25	1	0	11	37	0	0	0	0	$21,315	$18,720	$0	$11,417	$18,302	$0	$0	$0	$0
103	13	2	0	3	18	0	0	0	0	$22,126	$2,418	$0	$11,592	$18,181	$0	$0	$0	$0
104	5	0	0	0	5	0	0	0	0	$28,320	$0	$0	$0	$28,320	$0	$0	$0	$0
105	1	0	0	0	1	0	0	0	0	$15,672	$0	$0	$8,784	$15,672	$0	$0	$0	$0
106	1	0	0	1	2	0	0	0	0	$14,602	$0	$0	$0	$7,301	$0	$0	$0	$0
107	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
108	1	0	0	0	1	0	0	0	0	$25,680	$0	$0	$0	$25,680	$0	$0	$0	$0
109	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
110	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total	1,098,674	93,260	5,711	257,731	1,455,376	45,209	5,835	4,191	3,244	$23,918	$10,647	$10,284	$10,890	$20,707	$14,730	$7,221	$326,264	$21,090
60+	619,215	32,140	14	257,069	908,438	19,992	5,831	60	12	$23,836	$13,246	$21,037	$10,862	$19,790	$15,482	$7,219	$179,161	$28,668
62+	551,404	29,426	3	240,416	821,249	11,469	5,268	38	9	$23,981	$13,241	$31,136	$10,752	$19,723	$15,780	$7,139	$128,554	$31,059
65+	457,975	25,323	0	205,715	689,013	4,805	4,063	19	1	$24,269	$13,202	$0	$10,576	$19,774	$16,507	$7,014	$39,071	$46,296

Notes: Age is retiree's current age nearest birthday at end of fiscal year.
60+ is total for ages 60 and over.
62+ is total for ages 62 and over.
65+ is total for ages 65 and over.
Includes only retirees receiving payment from DoD.
Temporary Early Retirement Act (TERA) retirees and payments are shown for informational purposes only.
Career Status Bonus (CSB) retirees and payments are shown for informational purposes only.
TERA and CSB numbers and payments are included in the appropriate categories.
Pay amounts do not include the 12/1/17 cost of living increase of 2.0%.

DoD Retired Military Valuation Data as of Year-End FY 2017

All DoD

Age	Number — Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis	Avg Annual Net Retired Pay — Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis
16	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
17	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
18	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
19	0	1	2	0	3	0	0	0	0	$0	$5,640	$12,073	$0	$9,928	$0	$0	$0	$0
20	0	12	21	0	33	0	0	0	0	$0	$4,293	$7,431	$0	$6,290	$0	$0	$0	$0
21	0	27	46	0	73	0	0	0	0	$0	$3,832	$5,667	$0	$4,988	$0	$0	$0	$0
22	0	40	75	0	115	0	0	0	0	$0	$3,697	$5,307	$0	$4,747	$0	$0	$0	$0
23	1	89	106	0	196	0	0	0	0	$40,227	$3,135	$5,585	$0	$4,649	$0	$0	$0	$0
24	0	175	151	0	326	0	0	0	0	$0	$3,322	$4,970	$0	$4,085	$0	$0	$0	$0
25	0	279	191	0	470	0	0	0	0	$0	$3,316	$4,334	$0	$3,730	$0	$0	$0	$0
26	1	491	223	0	715	0	0	0	0	$20,051	$2,700	$5,194	$0	$3,502	$0	$0	$0	$0
27	0	741	273	0	1,014	0	0	0	0	$0	$3,081	$4,645	$0	$3,502	$0	$0	$0	$0
28	0	1,054	262	0	1,316	0	0	0	0	$0	$3,527	$4,620	$0	$3,745	$0	$0	$0	$0
29	0	1,309	302	0	1,611	0	0	0	0	$0	$3,574	$5,499	$0	$3,935	$0	$0	$0	$0
30	0	1,695	318	0	2,013	0	0	0	0	$0	$3,859	$6,178	$0	$4,225	$0	$0	$0	$0
31	0	2,232	341	0	2,573	0	0	0	0	$0	$4,443	$6,946	$0	$4,774	$0	$0	$0	$0
32	1	2,555	313	0	2,869	0	0	0	0	$38,483	$4,576	$7,358	$0	$4,892	$0	$0	$0	$0
33	3	2,842	347	0	3,192	2	0	0	0	$19,119	$5,027	$7,962	$0	$5,359	$16,383	$0	$0	$0
34	45	2,947	307	0	3,299	44	0	0	0	$16,063	$5,463	$8,507	$0	$5,891	$15,425	$0	$0	$0
35	131	2,912	335	0	3,378	130	0	3	6	$15,255	$5,872	$9,268	$0	$6,573	$15,084	$0	$12,767	$11,514
36	319	2,722	303	0	3,344	318	0	3	20	$15,555	$6,363	$9,430	$0	$7,517	$15,454	$0	$26,150	$9,853
37	644	2,566	277	0	3,487	636	0	10	35	$15,292	$6,887	$10,718	$0	$8,743	$15,170	$0	$65,284	$14,119
38	1,612	2,433	216	0	4,261	972	0	14	39	$18,745	$7,587	$11,866	$0	$12,025	$15,773	$0	$300,387	$13,168
39	3,899	2,197	220	0	6,316	1,070	0	59	56	$21,342	$7,917	$13,336	$0	$16,393	$16,683	$0	$234,557	$15,525
40	6,556	2,234	218	0	9,008	1,175	0	86	123	$22,344	$9,408	$15,475	$0	$18,970	$18,681	$0	$297,851	$17,728
41	8,576	2,124	225	0	10,925	1,112	0	153	197	$23,052	$10,509	$19,420	$0	$20,539	$21,045	$0	$243,779	$17,630
42	10,907	2,088	220	0	13,215	914	0	239	248	$23,963	$11,953	$19,004	$0	$21,983	$23,059	$0	$229,370	$19,318
43	13,642	2,132	227	0	16,001	679	0	330	293	$25,104	$13,202	$21,301	$0	$23,464	$23,790	$0	$231,841	$20,413
44	16,365	2,121	182	0	18,668	501	0	463	324	$26,271	$14,341	$23,146	$0	$24,885	$25,087	$0	$219,431	$21,254
45	18,834	2,286	171	0	21,291	386	0	584	358	$27,084	$15,112	$22,671	$0	$25,764	$26,328	$0	$215,412	$22,214
46	22,354	2,337	133	0	24,824	320	0	803	372	$27,695	$15,979	$25,090	$0	$26,578	$27,613	$0	$191,909	$23,682
47	25,349	2,457	159	0	27,965	234	0	975	373	$28,358	$16,144	$27,946	$0	$27,282	$26,209	$0	$190,356	$24,482
48	26,257	2,287	111	0	28,655	149	0	1,148	315	$29,068	$16,504	$27,328	$0	$28,058	$27,171	$0	$174,499	$24,630
49	27,821	2,114	96	0	30,031	108	0	905	258	$29,719	$16,625	$27,861	$0	$28,791	$29,373	$0	$180,760	$25,145
50	30,328	1,993	67	0	32,388	78	0	621	185	$30,348	$17,165	$28,201	$0	$29,532	$24,312	$0	$176,784	$25,713
51	33,457	1,971	83	0	35,511	89	0	431	120	$30,597	$16,225	$26,567	$0	$29,789	$22,602	$12,869	$168,693	$25,474
52	36,617	1,995	56	3	38,671	189	1	327	77	$31,025	$16,206	$27,389	$42,056	$30,158	$14,475	$0	$157,411	$23,006
53	40,276	1,993	48	5	42,322	405	1	233	76	$30,556	$16,901	$33,287	$48,898	$30,364	$13,883	$0	$161,711	$24,681
54	42,763	1,965	44	25	44,797	880	2	170	51	$30,227	$16,510	$24,498	$46,597	$29,942	$12,969	$0	$163,234	$25,259
55	44,283	1,995	40	41	46,359	1,663	233	125	29	$29,915	$16,095	$33,727	$41,575	$29,632	$13,146	$0	$162,517	$23,413
56	45,689	1,887	30	90	47,696	2,929	683	81	13	$29,457	$16,472	$30,648	$40,747	$29,404	$13,349	$81,468	$186,651	$24,022
57	46,392	1,791	20	172	48,375	4,067	711	61	13	$29,320	$16,032	$28,018	$37,281	$28,987	$13,840	$13,434	$158,959	$22,600
58	45,836	1,734	14	362	47,946	4,860	680	45	11	$29,383	$15,963	$29,474	$34,354	$28,875	$15,014	$7,760	$165,227	$26,971
59	44,973	1,592	19	797	47,381	5,451	631	22	7	$29,481	$16,032	$33,169	$31,339	$28,969	$16,245	$11,602	$189,070	$23,200
60	44,531	1,687	9	6,964	53,191	5,698	560	17	3	$29,539	$15,592	$19,536	$19,407	$27,720	$17,466	$13,499	$218,610	$27,570
61	42,906	1,658	9	17,029	61,602	5,186	499	25	2	$29,723	$16,536	$37,214	$17,209	$25,781	$18,636	$13,291	$119,836	$15,594
62	42,180	1,647	3	17,288	61,118	4,437	428	18	5	$29,860	$16,653	$42,796	$17,355	$25,873	$20,211	$12,881	$111,382	$27,758
63	41,754	1,684	2	16,552	59,992	3,704	465	14	3	$30,181	$15,915	$19,965	$17,042	$25,932	$21,863	$12,407	$162,135	$31,483
64	40,590	1,670	3	16,799	59,062	2,828	499	6	0	$30,241	$16,818	$27,749	$16,657	$25,957	$23,059	$12,314	$138,267	$0
65	40,358	1,716	1	18,778	60,852	2,104	488	8	1	$30,597	$16,450	$0	$16,197	$25,519	$23,768	$0	$92,651	$46,296
66	37,426	1,676	0	18,635	57,737	1,626	0	15	1	$31,154	$16,463	$0	$15,781	$25,405	$23,720	$11,046	$35,115	$21,231
67	36,341	1,964	0	19,893	58,198	1,132	0	2	2	$31,567	$15,262	$0	$15,422	$25,240	$23,094	$10,415	$20,532	$0
68	36,962	2,397	0	22,011	61,370	878	0	6	0	$31,997	$13,200	$0	$15,220	$24,986	$23,522	$10,745	$22,968	$0
69	37,533	2,665	0	23,817	64,015	712	0	6	0	$32,761	$12,005	$0	$15,360	$24,975	$24,246	$9,265	$27,563	$0
70	38,128	2,891	0	25,437	66,456	607	0	0	0	$32,761	$12,650	$0	$15,326	$25,213	$24,811	$9,067	$0	$0

DoD Retired Military Valuation Data as of Year-End FY 2017

All DoD

Age	Number									Average Annual Net Retired Pay								
	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis
71	38,243	2,644	0	25,693	66,580	493	449	0	0	$33,743	$14,003	$0	$15,465	$25,906	$25,545	$8,991	$0	$0
72	26,357	1,735	0	17,919	46,011	297	290	0	0	$33,909	$15,499	$0	$15,774	$26,152	$26,414	$8,960	$0	$0
73	26,407	1,538	0	16,825	44,770	195	240	0	0	$34,041	$17,270	$0	$15,970	$26,674	$26,381	$9,075	$0	$0
74	27,481	1,330	0	15,787	44,598	173	203	0	0	$33,721	$18,932	$0	$15,636	$26,878	$26,833	$9,249	$0	$0
75	28,537	1,264	0	15,122	44,923	128	192	0	0	$32,948	$20,369	$0	$15,334	$26,665	$28,208	$8,611	$0	$0
76	25,594	1,032	0	11,913	38,539	83	150	0	0	$32,524	$19,852	$0	$15,006	$26,769	$28,646	$7,681	$0	$0
77	24,633	936	0	10,199	35,768	41	116	0	0	$32,628	$22,680	$0	$15,139	$27,381	$26,056	$8,898	$0	$0
78	23,997	771	0	9,670	34,438	28	120	0	0	$32,909	$24,497	$0	$14,788	$27,632	$32,440	$8,249	$0	$0
79	23,779	749	0	9,428	33,956	34	140	0	0	$32,477	$23,786	$0	$14,467	$27,284	$29,158	$8,871	$0	$0
80	24,047	681	0	8,990	33,718	16	145	0	0	$32,409	$23,949	$0	$14,288	$27,407	$33,737	$7,535	$0	$0
81	22,676	641	0	8,268	31,585	15	103	0	0	$32,738	$23,969	$0	$14,226	$27,714	$29,898	$6,716	$0	$0
82	21,209	601	0	7,708	29,518	9	113	0	0	$32,964	$24,484	$0	$14,289	$27,915	$37,490	$7,086	$0	$0
83	19,602	606	0	6,887	27,095	6	69	0	0	$34,285	$24,211	$0	$14,860	$29,122	$43,397	$7,478	$0	$0
84	17,423	578	0	5,732	23,733	5	60	0	0	$34,787	$23,966	$0	$15,252	$29,806	$52,988	$6,957	$0	$0
85	16,256	641	0	5,387	22,284	5	13	0	0	$35,469	$23,525	$0	$15,294	$30,248	$41,690	$9,233	$0	$0
86	14,566	661	0	5,138	20,365	3	6	0	0	$35,796	$21,524	$0	$14,914	$30,065	$49,202	$15,232	$0	$0
87	13,449	639	0	4,877	18,965	1	1	0	0	$35,901	$22,649	$0	$14,996	$30,079	$28,848	$5,039	$0	$0
88	11,180	662	0	4,026	15,868	1	2	0	0	$36,168	$23,777	$0	$15,041	$30,291	$44,724	$17,526	$0	$0
89	8,320	483	0	3,070	11,873	1	4	0	0	$37,213	$25,544	$0	$15,272	$31,065	$37,176	$19,147	$0	$0
90	5,879	301	0	1,903	8,083	0	2	0	0	$36,575	$26,817	$0	$15,889	$31,342	$27,060	$9,894	$0	$0
91	3,925	185	0	1,617	5,727	1	0	0	0	$37,615	$31,926	$0	$16,365	$31,432	$55,296	$0	$0	$0
92	3,180	166	0	1,499	4,845	0	0	0	0	$40,693	$31,212	$0	$16,120	$32,766	$0	$0	$0	$0
93	2,705	177	0	1,507	4,389	0	0	0	0	$42,759	$29,221	$0	$16,490	$33,193	$0	$0	$0	$0
94	2,201	157	0	1,218	3,576	0	0	0	0	$43,107	$31,422	$0	$16,509	$33,535	$0	$0	$0	$0
95	1,675	150	0	1,039	2,864	0	0	0	0	$44,400	$33,793	$0	$16,262	$33,637	$0	$0	$0	$0
96	1,303	145	0	806	2,254	0	0	0	0	$47,218	$32,297	$0	$16,229	$35,177	$0	$0	$0	$0
97	967	108	0	623	1,698	0	0	0	0	$46,192	$33,325	$0	$17,626	$34,893	$0	$0	$0	$0
98	680	85	0	418	1,183	0	0	0	0	$46,972	$35,279	$0	$18,103	$35,932	$0	$0	$0	$0
99	393	49	0	283	725	0	0	0	0	$46,242	$40,607	$0	$19,520	$35,430	$0	$0	$0	$0
100	211	28	0	163	402	0	0	0	0	$46,969	$32,812	$0	$18,489	$34,435	$0	$0	$0	$0
101	111	12	0	81	204	0	0	0	0	$46,575	$34,515	$0	$20,291	$35,429	$0	$0	$0	$0
102	73	9	0	49	131	0	0	0	0	$44,061	$39,370	$0	$18,203	$34,067	$0	$0	$0	$0
103	34	7	0	28	69	0	0	0	0	$50,607	$22,762	$0	$22,385	$36,330	$0	$0	$0	$0
104	14	2	0	11	27	0	0	0	0	$42,890	$50,535	$0	$24,496	$35,962	$0	$0	$0	$0
105	3	1	0	8	12	0	0	0	0	$44,664	$86,184	$0	$24,111	$34,422	$0	$0	$0	$0
106	3	0	0	2	5	0	0	0	0	$69,107	$0	$0	$28,962	$53,049	$0	$0	$0	$0
107	2	0	0	2	4	0	0	0	0	$66,519	$0	$0	$30,534	$48,526	$0	$0	$0	$0
108	1	0	0	1	2	0	0	0	0	$25,680	$0	$0	$15,072	$20,376	$0	$0	$0	$0
109	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
110	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total	1,469,756	111,844	6,818	408,595	1,997,013	59,809	8,300	8,008	3,614	$31,048	$13,589	$12,617	$15,783	$26,884	$18,754	$10,798	$189,012	$22,275
60+	875,825	41,429	26	407,100	1,324,380	30,448	8,295	117	15	$32,331	$17,820	$29,320	$15,716	$26,770	$21,063	$10,789	$114,775	$27,644
62+	788,388	38,084	8	383,107	1,209,587	19,564	7,379	75	10	$32,644	$17,975	$31,446	$15,575	$26,776	$22,753	$10,513	$89,552	$30,076
65+	663,864	33,083	0	332,468	1,029,415	8,595	5,357	37	2	$33,156	$18,204	$0	$15,364	$26,929	$24,349	$9,620	$43,568	$33,764

Notes: Age is retiree's current age nearest birthday at end of fiscal year.
60+ is total for ages 60 and over.
62+ is total for ages 62 and over.
65+ is total for ages 65 and over.
Includes only retirees receiving payment from DoD.
Temporary Early Retirement Act (TERA) retirees and payments are shown for informational purposes only.
Career Status Bonus (CSB) retirees and payments are shown for informational purposes only.
TERA and CSB numbers and payments are included in the appropriate categories.
Pay amounts do not include the 12/1/17 cost of living increase of 2.0%.

DoD Survivor Valuation Data as of Year-End FY 2017

| Age | Number | | | | | | Average Annual Net Survivor Pay | | | | | |
	SBP	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total	SBP	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total
0	10	2	0	23	0	35	$24,136	$9,468	$0	$7,912	$0	$12,636
1	1	0	0	35	0	36	$12,912		$0	$7,701	$0	$7,846
2	2	0	0	56	0	57	$5,244		$0	$7,040	$0	$7,009
3	2	0	0	202	0	204	$3,252		$0	$6,779	$0	$6,745
4	3	0	0	337	0	340	$9,872		$0	$6,674	$0	$6,702
5	6	0	0	262	0	268	$6,583		$0	$7,032	$0	$7,022
6	21	2	0	661	1	685	$8,721	$12,372	$0	$7,323	$3,534	$7,375
7	12	1	0	400	0	413	$7,327	$1,368	$0	$6,694	$0	$6,699
8	29	1	0	928	0	958	$6,998	$4,068	$0	$7,091	$0	$7,085
9	42	1	0	897	0	940	$5,046	$2,724	$0	$7,534	$0	$7,418
10	53	1	0	722	0	776	$6,713	$1,368	$0	$7,788	$0	$7,706
11	66	2	0	644	0	712	$6,721	$4,161	$0	$8,919	$0	$8,702
12	84	8	0	553	0	645	$6,338	$6,038	$0	$9,743	$0	$9,254
13	114	10	0	653	1	778	$9,557	$5,298	$0	$10,893	$492	$10,612
14	83	10	0	329	0	422	$9,935	$4,380	$0	$10,927	$0	$10,577
15	142	38	0	313	0	493	$12,380	$6,171	$0	$12,164	$0	$11,764
16	121	21	0	163	0	305	$11,330	$6,831	$0	$12,680	$0	$11,742
17	171	22	0	140	0	333	$12,457	$6,771	$0	$13,139	$0	$12,368
18	106	16	0	74	0	196	$11,659	$8,375	$0	$12,576	$0	$11,737
19	68	20	0	42	0	130	$13,155	$7,799	$0	$13,412	$0	$12,414
20	43	13	0	39	0	95	$12,422	$3,839	$0	$13,132	$0	$11,539
21	61	13	0	30	0	104	$15,570	$5,557	$0	$9,770	$0	$12,645
22	32	3	0	21	0	56	$12,944	$10,292	$0	$8,858	$0	$11,270
23	34	5	0	24	0	63	$10,929	$3,410	$0	$4,539	$0	$7,898
24	60	14	0	26	0	100	$13,762	$5,994	$0	$6,097	$0	$10,682
25	26	6	0	45	0	77	$16,658	$5,976	$0	$4,565	$0	$8,758
26	27	7	0	60	0	94	$13,189	$5,736	$0	$5,092	$0	$7,466
27	28	5	0	87	0	120	$10,768	$6,622	$0	$4,520	$0	$6,066
28	34	7	0	102	0	143	$10,347	$6,104	$0	$5,110	$0	$6,403
29	54	10	0	99	0	163	$13,099	$6,492	$0	$4,523	$0	$7,485
30	53	6	0	88	0	147	$11,683	$11,200	$0	$4,603	$0	$7,425
31	59	4	0	134	0	197	$14,517	$6,119	$0	$4,609	$0	$7,607
32	57	6	0	121	0	184	$9,487	$5,254	$0	$4,924	$0	$6,348
33	45	8	0	144	1	198	$12,239	$7,701	$0	$4,818	$1,204	$6,603
34	51	10	0	135	0	196	$9,866	$8,093	$0	$4,410	$0	$6,018
35	76	8	0	139	0	223	$11,587	$5,202	$0	$5,048	$0	$7,282
36	93	8	0	119	0	220	$11,599	$6,973	$0	$5,830	$0	$8,310
37	85	18	0	118	2	223	$14,281	$7,289	$0	$6,205	$6,858	$9,377
38	104	21	0	110	0	235	$11,658	$8,129	$0	$6,262	$0	$8,817
39	71	10	0	93	0	174	$8,914	$7,271	$0	$7,647	$0	$8,142
40	102	22	0	98	1	223	$13,537	$6,607	$0	$8,718	$2,052	$10,684
41	120	31	0	98	5	254	$12,382	$6,966	$0	$9,368	$6,428	$10,441
42	123	26	0	78	1	228	$12,321	$8,507	$0	$8,521	$2,088	$10,541
43	157	33	0	99	6	295	$13,119	$8,714	$0	$10,518	$2,695	$11,541
44	120	31	0	85	0	236	$10,483	$8,497	$0	$10,609	$0	$10,267
45	202	58	0	95	2	357	$12,457	$6,337	$0	$12,855	$3,707	$11,520
46	233	48	0	85	3	369	$12,874	$6,536	$0	$10,629	$1,768	$11,442
47	254	80	0	116	5	455	$12,186	$7,314	$0	$12,204	$1,848	$11,220
48	316	90	0	108	11	525	$12,318	$7,902	$0	$13,550	$3,219	$11,624
49	350	127	0	109	4	590	$11,607	$7,834	$0	$11,607	$4,194	$10,744
50	342	100	0	102	4	548	$12,519	$8,145	$0	$12,616	$2,232	$11,664
51	449	143	0	95	9	696	$12,380	$7,739	$0	$16,461	$2,524	$11,856
52	614	195	0	103	28	940	$12,971	$7,733	$0	$14,393	$3,931	$11,771
53	786	238	0	109	36	1,169	$13,769	$8,274	$0	$13,831	$2,807	$12,318
54	672	240	0	81	6	999	$11,223	$7,632	$0	$16,064	$1,816	$10,696
55	796	320	0	98	7	1,221	$10,768	$8,020	$0	$16,897	$4,296	$10,503
56	933	350	0	101	10	1,394	$11,412	$7,123	$0	$17,814	$3,168	$10,740
57	1,095	372	0	89	15	1,571	$11,179	$7,446	$0	$17,994	$3,897	$10,612
58	1,244	458	0	74	6	1,782	$11,313	$7,447	$0	$14,902	$3,466	$10,442
59	1,374	513	0	85	7	1,979	$10,908	$7,847	$0	$16,319	$1,751	$10,315

DoD Survivor Valuation Data as of Year-End FY 2017

	Number						Average Annual Net Survivor Pay					
	SBP	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total	SBP	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total
Age	---	---	---	---	---	---	---	---	---	---	---	---
60	1,604	656	0	75	14	2,349	$10,782	$7,485	$0	$15,233	$3,062	$9,958
61	1,749	768	0	88	23	2,628	$11,363	$7,942	$0	$16,999	$4,153	$10,489
62	1,929	800	0	69	8	2,806	$11,320	$7,586	$0	$17,384	$5,364	$10,388
63	2,201	1,022	0	59	6	3,288	$11,244	$7,646	$0	$16,527	$6,050	$10,211
64	2,424	1,091	0	70	17	3,602	$11,513	$7,415	$0	$16,549	$3,490	$10,332
65	2,750	1,348	0	60	11	4,169	$11,157	$7,438	$0	$16,924	$4,761	$10,021
66	2,903	1,578	0	66	9	4,556	$11,273	$7,374	$0	$13,738	$2,325	$9,940
67	3,267	1,704	0	68	6	5,045	$11,453	$7,430	$0	$14,204	$4,193	$10,123
68	3,621	1,907	0	60	11	5,599	$11,842	$7,370	$0	$15,462	$3,140	$10,340
69	4,009	2,224	1	52	15	6,301	$11,821	$7,425	$7,825	$13,442	$3,024	$10,261
70	4,562	2,511	0	61	11	7,145	$11,704	$7,555	$0	$13,556	$2,772	$10,248
71	5,127	2,717	0	53	3	7,901	$12,060	$7,661	$8,652	$13,549	$1,328	$10,552
72	4,438	2,124	0	51	10	6,623	$12,035	$7,661	$0	$11,750	$2,417	$10,616
73	5,129	2,351	0	53	12	7,545	$12,052	$7,624	$0	$11,746	$2,179	$10,654
74	5,873	2,578	0	51	8	8,510	$12,239	$7,752	$0	$10,231	$1,663	$10,858
75	6,686	2,833	0	69	19	9,607	$12,230	$7,757	$0	$13,044	$2,270	$10,897
76	6,847	2,714	1	53	18	9,632	$12,254	$7,826	$0	$11,873	$2,604	$10,986
77	7,306	2,690	0	53	36	10,086	$12,299	$7,688	$8,652	$10,008	$2,163	$11,020
78	7,852	2,861	0	63	39	10,815	$12,386	$7,749	$0	$11,488	$1,864	$11,116
79	8,406	3,108	2	46	37	11,599	$12,889	$7,846	$8,652	$11,588	$1,980	$11,497
80	8,845	2,968	2	54	62	11,931	$12,879	$7,939	$7,939	$12,272	$2,705	$11,594
81	9,037	3,054	3	84	110	12,288	$13,121	$7,994	$7,809	$11,180	$2,641	$11,738
82	9,391	3,266	2	64	128	12,855	$13,507	$7,908	$7,501	$11,369	$2,373	$11,960
83	9,212	3,196	2	80	182	12,672	$13,915	$8,092	$7,908	$12,144	$2,651	$12,272
84	8,818	3,006	2	75	219	12,120	$14,444	$8,216	$6,570	$13,872	$2,413	$12,677
85	8,839	3,150	1	78	298	12,366	$14,761	$8,246	$7,062	$11,120	$2,397	$12,780
86	8,279	3,011	1	75	277	11,643	$15,613	$8,351	$5,626	$11,367	$3,055	$13,408
87	7,785	2,840	1	59	336	11,021	$16,005	$8,714	$8,652	$12,493	$2,791	$13,704
88	6,834	2,650	3	68	315	9,870	$16,224	$8,586	$7,592	$8,815	$2,647	$13,686
89	6,215	2,626	5	61	322	9,229	$16,514	$8,774	$7,643	$10,691	$2,765	$13,789
90	5,556	2,405	4	53	332	8,350	$16,989	$9,048	$8,652	$11,120	$2,926	$14,078
91	5,165	2,314	3	71	360	7,914	$18,158	$9,188	$9,561	$7,330	$2,872	$14,738
92	4,783	2,213	3	53	332	7,384	$18,881	$9,269	$8,652	$10,575	$3,239	$15,233
93	4,225	2,015	2	57	297	6,596	$19,252	$9,482	$5,044	$5,520	$3,329	$15,427
94	3,760	1,798	3	75	301	5,937	$20,070	$9,465	$8,615	$7,186	$3,767	$15,863
95	2,883	1,520	2	44	273	4,722	$20,447	$9,710	$7,026	$5,154	$3,122	$15,841
96	2,331	1,335	2	41	199	3,908	$20,686	$9,944	$8,652	$9,822	$3,947	$16,061
97	1,585	912	1	23	151	2,672	$21,206	$10,501	$8,652	$7,402	$3,810	$16,446
98	935	620	0	22	115	1,694	$22,236	$10,271	$7,707	$4,139	$4,472	$16,398
99	619	356	0	8	70	1,053	$19,972	$10,582	$0	$4,063	$3,625	$15,590
100	368	237	2	5	41	653	$21,124	$10,500	$8,652	$11,137	$2,749	$16,000
101	200	125	1	4	22	352	$20,686	$10,464	$6,973	$3,009	$3,593	$15,748
102	117	79	0	5	11	212	$20,257	$11,137	$0	$3,009	$2,265	$15,518
103	68	48	0	1	6	123	$19,110	$11,398	$0	$3,009	$1,819	$15,126
104	39	23	0	0	6	68	$21,477	$10,905	$0	$0	$3,754	$16,337
105	26	23	0	0	3	52	$16,474	$12,130	$0	$0	$5,119	$13,898
106	14	4	0	2	2	22	$15,687	$8,199	$0	$3,009	$10,728	$12,722
107	7	3	0	0	0	10	$24,463	$13,624	$0	$0	$0	$21,211
108	3	0	1	0	2	6	$9,156	$0	$8,388	$0	$1,935	$6,621
109	3	2	0	0	0	5	$11,511	$5,454	$0	$0	$0	$9,088
110	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0
111	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0
112	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0
113	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0
114	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0
Total	217,135	89,196	58	13,458	5,256	325,103	$14,053	$8,189	$7,946	$9,454	$3,023	$12,074
60+	204,625	85,384	58	2,382	5,085	297,534	$14,199	$8,217	$7,946	$11,959	$3,016	$12,272
62+	201,272	83,960	58	2,219	5,048	292,557	$14,251	$8,225	$7,946	$11,648	$3,011	$12,307
65+	194,718	81,047	58	2,021	5,017	282,861	$14,348	$8,249	$7,946	$11,140	$3,002	$12,375

Notes: Age is survivor's current age nearest birthday at end of fiscal year.
60+ is total for ages 60 and over.
62+ is total for ages 62 and over.
65+ is total for ages 65 and over.
Includes only survivors receiving payment from DoD.
Survivors receiving payment under SBP and RSFPP are counted twice.
Children of the same deceased member receiving separate benefit payments are counted individually.
Two-life survivors are given by the age of the adult survivor.
RCSBP includes all reserve survivors, whether or not the reserve retiree elected RCSBP.
Pay amounts do not include the 12/1/17 cost of living increase of 2.0%.
Amounts include increased survivor benefits as part of Special Survivor Indemnity Allowance (NDAA 2008, P.L. 111-31, and 115-91).

APPENDIX D

ECONOMIC ASSUMPTIONS

ECONOMIC ASSUMPTIONS

In July 2017, the DoD Board of Actuaries approved the following economic assumptions for use in the valuation as of September 30, 2017: the rate of inflation (CPI) is assumed to be 2.75 percent per year; the investment return (interest rate) is 5.00 percent per year; and the basic pay scale increases are 3.25 percent per year.[1] As noted in the "Valuation Data and Procedure" section in the main text, the valuation results are highly sensitive to changes in these three primary economic assumptions. As background for approving the economic assumptions, the Board receives information from economists and actuaries and is provided with extensive historical data on inflation, interest rates, and wage growth. The Board analyzes past trends, current environment, and future expectations. As part of their assessment of the current environment, the Board also considers what other federal retirement and social insurance systems are assuming as well as other government agencies and financial experts. Table D-1 shows the DoD Board of Actuaries' approved long-term economic assumptions by valuation year since the Fund's inception in 1984.

The comparisons to Civil Service and Social Security in this appendix are not meant to imply an expectation that all three systems should use the same assumptions. There are differences in terms of the trust funds themselves and the programs financed by the trust funds.

Inflation

The CPI-W, one of the consumer price indexes published by the Bureau of Labor Statistics (BLS), is emphasized as an inflation measure since it is used in calculating military retired pay cost-of-living increases. The CPI-W measures the average price change for Urban Wage Earners and Clerical Workers and covers approximately 29 percent of the U.S population. (The CPI-W is a subset of the broader CPI-U measure which computes the average price change for All Urban Consumers and covers approximately 93 percent of the U.S. population). The CPI-W is the common index used to make cost-of-living adjustments for labor contracts.

Table D-2 shows the average annual CPI-W changes over various periods of time since 1940. Different periods experienced different rates of change. The average annual CPI change during successive 30-year periods since World War II has risen from 3.79 percent for the period ending in 1975 to 5.20 percent for the period ending in 1995. This reflects the high inflation during the 1970s. The average annual CPI change during the 37-year period ending in 2017 is 2.71 percent.

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[1] Notes and transcript of the meeting can be found in the FACA database: https://www.facadatabase.gov/FACA/apex/FACAPublicAgencyNavigation. Please contact Kathleen Ludwig at OACT if you need any help with the FACA website.

The DoD assumption for CPI is reasonably consistent with what is used in other parts of the government. In its 2017 report, the Civil Service Retirement System (CSRS) assumes a 2.50 percent CPI increase. The Trustees of the Social Security Administration (SSA) in their 2017 Annual Report made projections under three alternative sets of assumptions. Their intermediate assumption for CPI was 2.6 percent (other assumptions: low cost – 3.2 percent; high cost – 2.0 percent). The Board has noted that in certain respects, the effect of the CPI on the valuation is relatively minor in a system where retirement benefits are fully indexed and expressed as a percentage of payroll.

Interest Rate

The Board analyzes Tables D-3 and D-4, as well as other material presented to them, when assessing the interest assumption. The Board focuses on real interest rates. To simplify discussion, the real interest rate is defined as the difference between the nominal interest rate and the CPI. Other things being equal, a lower element of risk in an investment will give a lower real interest rate. Because the Military Retirement Fund must be invested in obligations of the U.S. Government, a highly secure investment, the real interest rates are expected to be relatively low. As noted in the "Assets" section in the main text, the Fund is currently heavily investing in Treasury Inflation-Protected Securities (TIPS). TIPS allow the investor/institution to lock in the real interest rate for the given period of time.

The Board examines past real interest rates that would have been earned by the types of public debt securities in which the Fund is invested. The Board recognizes the importance of selecting a real interest rate that would prevail on average over a long period of time and that would not unduly weight recent experience or expected results during the near-term future.

Table D-3 depicts the average real yield rates on new purchases of the Fund. Because the Fund was established in 1984, the DoD Office of the Actuary constructed a Composite Series to simulate what new purchases would have yielded in the past.

Table D-4 shows the average real Military Retirement Fund effective yield. The effective yield calculation uses a "dollar-weighted yield," which is computed by dividing the investment income by the average amount of principal invested throughout the year. Since the Fund's inception, the average annual real yield is 4.31 percent.

After analyzing past trends and forecasts of government trust fund earnings, 2.25 percent was adopted as the assumed rate of real interest. Since 2.75 percent had been adopted as the inflation rate, the assumed nominal rate of interest is 5.00 percent (5.00 = 2.25 + 2.75). This is commonly known as the "building block method" in setting actuarial assumptions.

It is relevant to note the real interest rates being assumed by the other two major public benefit systems. The SSA Trustees used an intermediate ultimate real interest rate assumption of 2.7 percent in their 2017 report (other assumptions: low cost – 3.2 percent; high cost – 2.2

percent). The Board of Actuaries of the CSRS used a 2.00 percent real interest rate assumption in its 2017 valuation.

Wage Growth

For the salary increase assumption, recent historical data is used as well as expectations for the future. The Career Compensation Act of 1949 revamped the military compensation structure to provide an equitable pay and allowance system. Associated with this change was a large basic pay increase designed to establish rough comparability with the private sector. Additionally, the Army and Air Force Vitalization and Retirement Equalization Act of 1948 established for the first time a uniform voluntary retirement system authority among all branches of Service. The reserve retirement program was also established at this time. These two Acts provided the start of the modern-day compensation structure designed to attract and retain the number of Service members needed. In the analysis of basic pay scale increases, the Board looks at all data from this point forward.

The Military Pay Comparability Act of 2003 ensures that military pay increases are comparable to private sector pay growth, as measured by the Employment Cost Index (ECI) – Wages and Salaries index on a 15-month lag. ("Wages and Salaries" account for about 70 percent of the broader "Compensation" costs, with "Benefits" making up the remaining 30 percent.) Covenants are embedded within the Act which give the President the authority to propose an alternate basic pay adjustment. This Act specifically referenced fiscal years through 2006. However, Congress has continued to use the basic framework of the Act in the subsequent fiscal years.

Table D-5 displays real military basic pay increases over various periods of time during the post-World War II era. From the early 1950s to the early 1970s, the average annual real military pay increase was approximately 1.79 percent. From the early 1950s to the present, the increase has averaged approximately 0.91 percent a year. Since the Vietnam War (~1970), annual real pay increases have averaged only 0.54 percent. (There was negative real pay growth in the late 1970s and late 1980s as well as numerous years since 2005.)

In making its recommendation for the real rate of the annual basic pay scale increase, the Board considered information presented and approved a real basic pay growth assumption of 0.50 percent, leading to a nominal growth of 3.25 percent (3.25 = 0.50 + 2.75). The Board of Actuaries of the CSRS assumed 0.25 percent real wage growth for its 2017 valuation. The Social Security Trustees' 2017 report had an intermediate ultimate assumption for real wage growth of 1.2 percent (other assumptions: low cost – 1.8 percent; high cost – 0.6 percent). (For the Military Retirement System and CSRS, wage increase relates to "across-the-board" salary increase which excludes merit and certain longevity increases, whereas for Social Security, wage increase generally relates to the total salary increase.)

TABLE D-1

DOD BOARD OF ACTUARIES' LONG-TERM ECONOMIC ASSUMPTIONS

Fiscal Year	Inflation (1)	Interest (2)	Salary Growth (3)	Real Interest (4)	Real Salary (5)
1984	5.00%	6.60%	6.20%	1.60%	1.20%
1985	5.00	6.60	6.20	1.60	1.20
1986	5.00	6.60	6.20	1.60	1.20
1987	5.00	6.60	6.20	1.60	1.20
1988	5.00	7.00	5.75	2.00	0.75
1989	5.00	7.00	5.75	2.00	0.75
1990	5.00	7.00	5.75	2.00	0.75
1991	5.00	7.50	5.50	2.50	0.50
1992	5.00	7.50	5.50	2.50	0.50
1993	5.00	7.50	5.50	2.50	0.50
1994	4.00	6.75	4.50	2.75	0.50
1995	4.00	6.75	4.50	2.75	0.50
1996	3.50	6.50	4.00	3.00	0.50
1997	3.50	6.50	4.00	3.00	0.50
1998	3.50	6.50	4.00	3.00	0.50
1999	3.00	6.25	3.50	3.25	0.50
2000	3.00	6.25	3.50	3.25	0.50
2001	3.00	6.25	3.50	3.25	0.50
2002	3.00	6.25	3.50	3.25	0.50
2003	3.00	6.25	3.75	3.25	0.75
2004	3.00	6.25	3.75	3.25	0.75
2005	3.00	6.25	3.75	3.25	0.75
2006	3.00	6.00	3.75	3.00	0.75
2007	3.00	6.00	3.75	3.00	0.75
2008	3.00	5.75	3.75	2.75	0.75
2009	3.00	5.75	3.75	2.75	0.75
2010	3.00	5.75	3.75	2.75	0.75
2011	3.00	5.75	3.75	2.75	0.75
2012	3.00	5.50	3.50	2.50	0.50
2013	3.00	5.50	3.50	2.50	0.50
2014	3.00	5.50	3.50	2.50	0.50
2015	2.75	5.25	3.25	2.50	0.50
2016	2.75	5.25	3.25	2.50	0.50
2017	2.75	5.00	3.25	2.25	0.50

NOTES:
(1) Board Assumption
(2) Board Assumption
(3) Board Assumption
(4) = (2) - (1)
(5) = (3) - (1)

DoD Office of the Actuary

TABLE D-2

AVERAGE CONSUMER PRICE INDEX (CPI-W) INCREASES

FROM PERIOD CORRESPONDING TO END OF:

TO END OF:	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1945	5.25																								
1950	5.91	6.57																							
1955	4.39	3.96	1.43																						
1960	3.82	3.35	1.77	2.12																					
1965	3.32	2.84	1.63	1.73	1.33																				
1970	3.52	3.18	2.35	2.65	2.92	4.54																			
1975	4.00	3.79	3.24	3.70	4.23	5.71	6.90																		
1980	4.64	4.55	4.22	4.79	5.46	6.88	8.07	9.24																	
1985	4.55	4.46	4.16	4.62	5.13	6.10	6.63	6.50	3.82																
1990	4.48	4.40	4.13	4.52	4.93	5.66	5.95	5.63	3.87	3.91															
1995	4.34	4.25	4.00	4.32	4.64	5.20	5.34	4.95	3.56	3.42	2.94														
2000	4.18	4.08	3.84	4.11	4.36	4.80	4.85	4.44	3.28	3.09	2.69	2.44													
2005	4.06	3.96	3.72	3.96	4.16	4.52	4.52	4.13	3.14	2.96	2.65	2.51	2.58												
2006	4.05	3.95	3.72	3.94	4.14	4.49	4.49	4.10	3.14	2.98	2.69	2.58	2.70	3.30											
2007	4.02	3.92	3.69	3.91	4.10	4.44	4.43	4.04	3.11	2.95	2.67	2.56	2.64	2.80	2.30										
2008	4.05	3.95	3.73	3.95	4.14	4.47	4.46	4.10	3.20	3.07	2.84	2.80	3.03	3.79	4.04	5.80									
2009	3.99	3.89	3.66	3.87	4.05	4.37	4.35	3.97	3.09	2.94	2.69	2.60	2.69	2.83	2.67	2.86	0.00								
2010	3.93	3.83	3.60	3.80	3.97	4.27	4.23	3.86	2.99	2.82	2.55	2.42	2.42	2.26	2.00	1.90	0.00	0.00							
2011	3.92	3.82	3.60	3.80	3.96	4.25	4.22	3.85	3.01	2.85	2.60	2.50	2.52	2.48	2.32	2.32	1.19	1.78	3.60						
2012	3.89	3.79	3.57	3.76	3.92	4.20	4.16	3.79	2.97	2.81	2.56	2.45	2.45	2.37	2.21	2.20	1.31	1.76	2.65	1.70					
2013	3.86	3.76	3.54	3.72	3.87	4.14	4.10	3.73	2.92	2.76	2.51	2.40	2.38	2.26	2.11	2.08	1.35	1.69	2.26	1.60	1.50				
2014	3.83	3.73	3.51	3.69	3.83	4.09	4.04	3.68	2.89	2.73	2.48	2.36	2.33	2.20	2.06	2.03	1.41	1.69	2.12	1.63	1.60	1.70			
2015	3.78	3.67	3.45	3.62	3.76	4.01	3.95	3.59	2.80	2.63	2.38	2.24	2.17	1.97	1.83	1.77	1.21	1.41	1.69	1.22	1.06	0.85	0.00		
2016	3.73	3.62	3.40	3.57	3.70	3.93	3.87	3.50	2.73	2.56	2.30	2.15	2.06	1.82	1.67	1.61	1.09	1.25	1.46	1.04	0.87	0.66	0.15	0.30	
2017	3.71	3.60	3.38	3.54	3.67	3.90	3.83	3.47	2.71	2.54	2.29	2.14	2.05	1.84	1.70	1.64	1.19	1.34	1.54	1.20	1.10	1.00	0.76	1.15	2.00

- All figures are average annual percentage increases.

Source: Bureau of Labor Statistics

*** CPI-W SERIES: DECEMBER TO DECEMBER INCREASES FROM 1930 TO 1984;
    ACTUAL COST-OF-LIVING ADJUSTMENTS GIVEN TO MILITARY RETIREES BEGINNING FISCAL YEAR 1985.
    - MRF COLAS ARE CALCULATED AS THE INCREASE FROM 3RD QUARTER TO 3RD QUARTER.

TABLE D-3

AVERAGE REAL YIELD RATES ON NEW PURCHASES

FROM DECEMBER 31 OF:

TO DECEMBER 31 OF:	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1945	-3.28																								
1950	-3.85	-4.41																							
1955	-2.25	-1.73	1.02																						
1960	-1.33	-0.67	1.25	1.48																					
1965	-0.55	0.15	1.71	2.06	2.64																				
1970	-0.24	0.38	1.62	1.82	1.99	1.34																			
1975	-0.22	0.30	1.27	1.34	1.29	0.62	-0.10																		
1980	-0.25	0.19	0.97	0.96	0.83	0.24	-0.30	-0.51																	
1985	0.66	1.17	1.99	2.15	2.29	2.20	2.49	3.81	8.31																
1990	1.09	1.59	2.37	2.56	2.74	2.77	3.13	4.22	6.67	5.06															
1995	1.26	1.73	2.43	2.61	2.77	2.79	3.09	3.90	5.41	3.99	2.93														
2000	1.43	1.87	2.52	2.69	2.84	2.87	3.12	3.78	4.88	3.76	3.12	3.31													
2005	1.42	1.82	2.41	2.55	2.67	2.67	2.86	3.37	4.16	3.15	2.52	2.31	1.32												
2006	1.43	1.83	2.41	2.54	2.66	2.66	2.85	3.33	4.09	3.10	2.50	2.31	1.48	2.27											
2007	1.45	1.84	2.40	2.54	2.65	2.65	2.83	3.30	4.02	3.06	2.48	2.30	1.58	2.24	2.20										
2008	1.45	1.84	2.40	2.53	2.64	2.63	2.81	3.25	3.94	3.01	2.45	2.27	1.63	2.14	2.07	1.94									
2009	1.46	1.84	2.39	2.52	2.62	2.62	2.79	3.22	3.87	2.97	2.43	2.25	1.67	2.11	2.05	1.98	2.01								
2010	1.46	1.83	2.37	2.49	2.60	2.59	2.75	3.16	3.79	2.90	2.37	2.19	1.63	1.94	1.85	1.74	1.64	1.26							
2011	1.43	1.79	2.32	2.44	2.53	2.52	2.66	3.05	3.64	2.76	2.23	2.01	1.42	1.50	1.35	1.14	0.87	0.31	-0.64						
2012	1.41	1.77	2.29	2.40	2.49	2.47	2.60	2.98	3.53	2.67	2.13	1.90	1.32	1.32	1.16	0.95	0.70	0.27	-0.22	0.19					
2013	1.41	1.76	2.27	2.38	2.46	2.45	2.58	2.93	3.47	2.62	2.10	1.87	1.32	1.33	1.19	1.02	0.84	0.55	0.32	0.80	1.41				
2014	1.41	1.76	2.26	2.36	2.44	2.42	2.55	2.89	3.40	2.57	2.06	1.84	1.32	1.32	1.20	1.05	0.91	0.69	0.54	0.94	1.32	1.23			
2015	1.42	1.77	2.26	2.36	2.44	2.42	2.54	2.88	3.37	2.57	2.08	1.87	1.39	1.42	1.33	1.22	1.12	0.97	0.91	1.30	1.67	1.80	2.38		
2016	1.41	1.75	2.23	2.33	2.41	2.39	2.50	2.82	3.29	2.51	2.02	1.81	1.34	1.35	1.26	1.16	1.06	0.92	0.87	1.17	1.42	1.42	1.52	0.67	
2017	1.40	1.74	2.21	2.31	2.38	2.36	2.47	2.78	3.23	2.45	1.98	1.77	1.32	1.31	1.23	1.13	1.04	0.92	0.87	1.12	1.31	1.28	1.30	0.77	0.86

- "Real" rates defined as the difference between the associated nominal rate and the CPI-W (Table D-2).
- All figures are average annual percentages.
- Real yields for non-TIPS securities are computed as the nominal yield at purchase offset by inflation in the year of purchase.
  For TIPS securities, the real yield is known and constant throughout the life of the security.

Source: Office of the Actuary, Office of Personnel Management; Office of the Actuary, Department of Defense

*** COMPOSITE SERIES: TREASURY LONG TERM SECURITIES WITH REMAINING MATURITIES OF 10 OR MORE YEARS FROM 1931 TO 1941;
AVERAGE OF TREASURY LONG TERM AND TREASURY 3-5 YEARS REMAINING MATURITY FROM 1941 TO 1961;
SPECIAL TREASURY CERTIFICATES (CSRS) FROM 1962 TO 1984;
MILITARY RETIREMENT SYSTEM TRUST FUND NEW INVESTMENTS BEGINNING WITH 1985

DoD Office of the Actuary

TABLE D-4

AVERAGE REAL MILITARY RETIREMENT FUND EFFECTIVE YIELD

FROM PERIOD CORRESPONDING TO END OF FISCAL YEAR:

TO END OF FISCAL YEAR:

TO↓ / FROM→	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1985	14.27																																
1986	12.32	10.41																															
1987	10.35	8.45	6.52																														
1988	9.31	7.71	6.38	6.24																													
1989	8.47	7.06	5.97	5.70	5.15																												
1990	7.76	6.50	5.55	5.22	4.72	4.29																											
1991	7.49	6.40	5.62	5.39	5.11	5.09	5.90																										
1992	7.34	6.38	5.73	5.57	5.40	5.48	6.08	6.27																									
1993	7.22	6.37	5.81	5.69	5.58	5.69	6.16	6.29	6.32																								
1994	7.07	6.30	5.80	5.72	5.61	5.70	6.05	6.10	6.02	5.72																							
1995	6.96	6.26	5.81	5.70	5.64	5.73	6.02	6.05	5.97	5.80	5.87																						
1996	6.84	6.19	5.78	5.72	5.63	5.70	5.94	5.94	5.86	5.71	5.71	5.54																					
1997	6.80	6.20	5.83	5.76	5.70	5.77	5.99	6.00	5.95	5.85	5.90	5.91	6.29																				
1998	6.81	6.26	5.92	5.87	5.83	5.90	6.11	6.07	6.04	5.99	6.04	6.26	6.63	6.97																			
1999	6.73	6.26	5.89	5.84	5.80	5.87	6.05	5.88	5.83	5.76	5.76	6.09	6.27	6.26	4.37																		
2000	6.58	6.09	5.78	5.73	5.68	5.73	5.82	5.81	5.76	5.69	5.69	5.66	5.68	5.79	4.96	5.23																	
2001	6.50	6.03	5.75	5.69	5.65	5.69	5.81	5.80	5.75	5.69	5.69	5.74	5.68	5.74	5.05	5.45	5.68																
2002	6.45	6.01	5.74	5.54	5.50	5.52	5.62	5.59	5.53	5.45	5.42	5.37	5.34	5.56	5.21	5.09	4.50	3.34															
2003	6.29	5.86	5.60	5.37	5.33	5.33	5.40	5.36	5.29	5.19	5.14	5.06	5.00	5.19	4.83	4.65	4.74	3.88	2.99	2.64													
2004	6.10	5.69	5.43	5.14	5.13	5.07	4.98	4.90	4.81	4.69	4.60	4.49	4.59	4.82	4.46	4.25	4.21	3.25	2.45	2.01	1.39												
2005	5.87	5.47	5.08	5.01	5.07	4.92	4.81	4.74	4.64	4.52	4.43	4.31	4.39	4.38	4.02	3.76	3.64	3.11	2.48	2.19	1.97	2.55											
2006	5.72	5.33	5.01	4.87	4.94	4.78	4.56	4.48	4.37	4.24	4.14	4.00	3.88	4.18	3.83	3.59	3.46	2.98	2.45	2.23	2.09	2.45	2.34										
2007	5.57	5.19	4.87	4.65	4.80	4.54	4.31	4.23	4.11	3.99	3.88	3.75	3.62	3.99	3.67	3.43	3.30	2.61	2.11	1.86	1.67	1.00	1.37	0.40									
2008	5.35	4.98	4.74	4.57	4.57	4.31	4.08	4.08	3.83	3.83	3.72	3.59	3.46	3.66	3.66	3.09	2.93	1.34	1.54	1.20	1.10	1.90	0.76	1.15	2.00								
2009	5.21	4.74	4.65	4.43	4.35	4.17	4.03	3.94	3.71	3.69	3.58	3.45	3.34	3.42	3.34	2.91	2.76	2.49	2.10	1.93	1.81	1.79	1.73	1.53	2.10	3.22							
2010	5.10	4.61	4.52	4.21	4.21	4.04	3.92	3.83	3.61	3.59	3.48	3.34	3.22	3.26	3.13	2.77	2.63	2.37	2.01	1.84	1.73	1.71	1.63	1.46	1.81	2.23	1.25						
2011	4.95	4.48	4.43	4.08	4.08	3.93	3.81	3.72	3.53	3.48	3.37	3.24	3.12	3.12	2.98	2.65	2.51	2.26	1.93	1.77	1.67	1.69	1.57	1.41	1.66	1.89	1.23	1.22					
2012	4.82	4.38	4.29	3.98	3.98	3.83	3.73	3.64	3.47	3.41	3.30	3.17	3.05	3.03	2.86	2.57	2.44	2.21	1.90	1.75	1.66	1.66	1.55	1.44	1.65	1.81	1.35	1.40	1.58				
2013	4.70	4.27	4.17	3.88	3.88	3.75	3.67	3.58	3.41	3.35	3.24	3.11	3.00	2.93	2.77	2.50	2.36	2.15	1.86	1.72	1.63	1.67	1.58	1.48	1.61	1.74	1.37	1.50	1.51	1.43			
2014	4.59	4.19	4.07	3.81	3.81	3.69	3.58	3.47	3.35	3.30	3.24	3.11	2.89	2.87	2.69	2.45	2.33	2.12	1.85	1.73	1.65	1.71	1.62	1.54	1.64	1.75	1.45	1.50	1.60	1.61	1.79		
2015	4.50	4.12	3.97	3.74	3.74	3.58	3.47	3.41	3.24	3.24	3.17	3.01	2.82	2.82	2.63	2.43	2.31	2.12	1.87	1.75	1.68	1.68	1.62	1.54	1.69	1.79	1.55	1.61	1.71	1.75	1.91	2.03	
2016	4.42	4.07	3.89	3.67	3.67	3.47	3.41	3.35	3.11	3.14	3.01	2.89	2.73	2.73	2.60	2.34	2.22	2.04	1.80	1.69	1.62	1.64	1.56	1.48	1.60	1.68	1.46	1.49	1.55	1.54	1.57	1.47	0.91
2017	4.31	4.02	3.82	3.73	3.64	3.59	3.56	3.47	3.36	3.24	3.14	3.01	2.89	2.73	2.51	2.34	2.22	2.04	1.80	1.69	1.62	1.64	1.56	1.48	1.60	1.68	1.46	1.49	1.55	1.54	1.57	1.47	0.91

- "Real" rates defined as the difference between the associated nominal rate and the CPI-W (Table D-2).
- All figures are average annual percentages.

Source: Office of the Actuary, Department of Defense

*** THE EFFECTIVE YIELD CALCULATION USES A "DOLLAR-WEIGHTED YIELD". "DOLLAR-WEIGHTED YIELDS" ARE COMPUTED BY
  TAKING THE INVESTMENT INCOME OVER THE AVERAGE AMOUNT OF PRINCIPAL INVESTED THROUGHOUT THE YEAR.

DoD Office of the Actuary

TABLE D-5

AVERAGE REAL MILITARY PERSONNEL BASIC PAY INCREASES

FROM DECEMBER 31 OF:

TO DECEMBER 31 OF:

TO \ FROM	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1950	-2.21																							
1955	-0.48	1.28																						
1960	-0.49	0.39	-0.50																					
1965	0.58	1.52	1.65	3.84																				
1970	0.97	1.79	1.96	3.21	2.58																			
1975	1.31	2.03	2.22	3.14	2.80	3.02																		
1980	0.79	1.30	1.31	1.76	1.08	0.34	-2.26																	
1985	0.93	1.39	1.40	1.79	1.28	0.85	-0.21	1.89																
1990	0.77	1.14	1.12	1.40	0.92	0.51	-0.32	0.67	-0.53															
1995	0.70	1.03	0.99	1.21	0.78	0.42	-0.22	0.47	-0.23	0.08														
2000	0.73	1.03	1.01	1.20	0.82	0.54	0.05	0.63	0.22	0.59	1.11													
2005	0.77	1.05	1.02	1.20	0.87	0.63	0.24	0.74	0.46	0.79	1.15	1.19												
2006	0.74	1.01	0.98	1.15	0.82	0.58	0.19	0.67	0.39	0.68	0.95	0.81	-1.07											
2007	0.75	1.01	0.99	1.15	0.83	0.60	0.22	0.69	0.42	0.70	0.97	0.86	0.05	1.17										
2008	0.71	0.96	0.93	1.08	0.77	0.53	0.16	0.60	0.32	0.56	0.75	0.53	-0.57	-0.32	-1.80									
2009	0.75	1.00	0.98	1.13	0.83	0.61	0.26	0.70	0.45	0.71	0.94	0.84	0.41	0.90	0.77	3.40								
2010	0.76	1.01	0.99	1.14	0.84	0.63	0.29	0.72	0.49	0.75	0.97	0.90	0.61	1.03	0.98	2.40	1.40							
2011	0.72	0.96	0.93	1.08	0.78	0.56	0.23	0.63	0.39	0.62	0.79	0.64	0.18	0.43	0.24	0.93	-0.28	-1.93						
2012	0.71	0.95	0.92	1.05	0.76	0.55	0.22	0.61	0.38	0.59	0.74	0.58	0.15	0.36	0.19	0.70	-0.19	-0.97	0.00					
2013	0.69	0.92	0.89	1.03	0.74	0.52	0.20	0.58	0.35	0.54	0.67	0.50	0.07	0.24	0.08	0.46	-0.26	-0.81	-0.25	-0.49				
2014	0.67	0.90	0.87	0.99	0.71	0.50	0.18	0.54	0.31	0.49	0.60	0.42	-0.01	0.12	-0.03	0.27	-0.35	-0.78	-0.39	-0.59	-0.69			
2015	0.68	0.90	0.87	1.00	0.72	0.51	0.21	0.56	0.35	0.52	0.63	0.47	0.12	0.25	0.14	0.41	-0.08	-0.37	0.03	0.04	0.30	1.30		
2016	0.69	0.92	0.89	1.01	0.74	0.54	0.24	0.60	0.39	0.57	0.69	0.56	0.27	0.40	0.32	0.59	0.19	-0.01	0.38	0.47	0.80	1.55	1.79	
2017	0.69	0.91	0.88	1.00	0.73	0.54	0.25	0.59	0.39	0.56	0.68	0.55	0.28	0.40	0.33	0.56	0.21	0.05	0.38	0.46	0.70	1.16	1.09	0.39

- "Real" rates defined as the difference between the associated nominal rate and the CPI-W (Table D-2).
- All figures are average annual percentage increases.
- Excludes annual, year-specific targeted adjustments.

Source: House Armed Services Committee publication, Title 37,
   United States Code (Pay and Allowances of the Uniformed Services.)

DoD Office of the Actuary

APPENDIX E

NORMAL COST WEIGHTING FACTORS

NORMAL COST WEIGHTING FACTORS

There are four different retirement benefit formulas that apply to different populations within the Military Retirement System[1]. (See Appendix A for a discussion of *Final Pay*, *High-3*, *CSB/Redux, and BRS* benefit formulas.) A single normal cost percentage (NCP) for the entire population is obtained by weighting the NCP for each retirement group by its expected percentage of payroll in the relevant year[2].

In order to continue to budget for NCPs well in advance of the valuation date, the DoD Board of Actuaries decided to create a set of projected weighting factors. The relative stability of past experience indicates that this method gives reasonable results.

Current rates were created using 2010 data. Table E-1 displays the active duty and reserve basic payroll percentage distributions by completed years of service at the end of FY 2010.

[1] The Blended Retirement System (enacted in NDAA 2016) is the fourth tier, effective January 1, 2018, for those who enter military service on or after January 1, 2018, or opt-in with fewer than 12 years of service during the 1 year open season starting January 1, 2018. NDAA 2016 also sunsets CSB/Redux and repeals all aspects of BBA 2013 (reduced annual cost-of-living adjustments for "working age" retirees), as amended.

[2] For BRS, assumptions for the proportions of eligible members who will "opt-in" to the new plan are also needed. These assumptions are shown in Appendix F.

TABLE E-1

BASIC PAYROLL PERCENTAGE DISTRIBUTION
BY COMPLETED YEARS OF SERVICE

Completed Years of Service	Percentage of Payroll on 9/30/2010:	
	Full-time	Part-time
0	3%	0.5%
1 or less	8%	6%
2 or less	13%	11%
3 or less	18%	16%
4 or less	24%	20%
5 or less	28%	24%
6 or less	32%	27%
7 or less	37%	31%
8 or less	41%	35%
9 or less	45%	38%
10 or less	49%	41%
11 or less	53%	44%
12 or less	56%	46%
13 or less	59%	49%
14 or less	63%	51%
15 or less	66%	53%
16 or less	68%	55%
17 or less	71%	58%
18 or less	75%	60%
19 or less	78%	64%
20 or less	81%	67%
21 or less	84%	70%
22 or less	86%	74%
23 or less	89%	77%
24 or less	91%	80%
25 or less	93%	83%
26 or less	95%	86%
27 or less	96%	89%
28 or less	97%	91%
29 or less	98%	93%
30 or less	98%	94%
31 or less	99%	95%
32 or less	99%	96%
33 or less	99%	97%
34 or less	100%	98%
35 or less	100%	98%
36 or less	100%	99%
37 or less	100%	99%
38 and greater	100%	100%
TOTAL FORCE	100	100

APPENDIX F

VALUATION PROGRAM PARAMETERS

VALUATION PROGRAM PARAMETERS DESCRIPTION

GORGO is an actuarial projection model run in a spreadsheet environment with embedded Visual Basic programming. The purpose is to simulate future cash flows impacting the Military Retirement Fund. The model is used to compute the aggregate entry-age normal cost percentage, unfunded liability, and make long-term projections; in some cases slight adjustments to GORGO cash flow projection are made outside of GORGO. In addition to being affected by the decrement rates, GORGO has a number of parameters which affect its results. These parameters are generally summaries of recent experience and/or future expectations. Examples include the rates of election of the Survivor Benefit Plan and member-spouse age differences.

Public Law (P.L.) 108-136 ("Concurrent Receipt") requires additional breakouts of some parameters in order to calculate the DoD and Treasury normal cost components. Subsequent legislation required further breakouts.

A description of major valuation program parameters is given in Table F-1. The table is organized by population group with the economic factors reproduced for user convenience. Numerical values are also shown for selected items. To keep this report manageable and prevent unintentional misuse, other parameters not described as well as numerical values not shown in the table may be requested if needed.

TABLE F-1

DESCRIPTION OF THE MAJOR VALUATION PROGRAM PARAMETERS

Economic Factors

Item	Description/Value
1) Salary Increase	A parameter for each of the next ten fiscal years specifies the annual percentage increase in basic pay for the active duty and reserve duty members. An 11th parameter specifies the percentage increase for subsequent years. The value for the valuation is 3.25 percent.
2) CPI (Inflation)	A parameter for each of the next nine fiscal years specifies the annual inflation (Consumer Price Index - CPI) rate for that year. A tenth parameter specifies the inflation rate for all subsequent years. The value for the valuation is 2.75 percent.
3) Interest Rate	A parameter for each of the next nine fiscal years specifies the annual interest rate for that year. A tenth parameter specifies the interest rate for all subsequent years. The value for the valuation is 5.00 percent.
4) Lump Sum Discount Rate	A parameter that specifies the assumed annual interest rate (in real economic terms) used to calculate BRS lump sums. The value for the valuation is 7.3%.

Active Duty

Item	Description/Value
1) Member Election of Spouse or Spouse/Child SBP Coverage	This gives the percentage of members by age, officer/enlisted status, and Career Status Bonus (CSB) election status who have elected spouse or spouse/child coverage under the Survivor Benefit Plan (SBP).

DoD Office of the Actuary

TABLE F-1 (continued)

Item	Description/Value
2) Full Offsets	A member who is disabled may waive all or part of his or her retired pay to receive benefits from the Veterans Administration (VA). Furthermore, a member who decides to convert his or her military service to receive a federal civilian retirement also waives his or her right to a military pension. These amounts are not included when computing normal costs or unfunded liabilities. The percent of retired pay of new retirees that is fully offset is given by officer/enlisted status, benefit tier, and type of retirement (disability/nondisability). Disability status is given further by those with over and under 20 years of service.
3) Partial VA Offsets	It is possible to have part of DoD retired pay offset by VA compensation. The parameter is defined as the percent of retired pay out of the total paid new retirees. They are given by officer/enlisted status, benefit tier, and disability/nondisability status. Disability status is given further by those with over and under 20 years of service.
4) Disability Factor	When an active duty member is disabled and receives DoD disability retirement, retired pay is based on a minimum (30%), a maximum (given by the conditions discussed in Appendix A regarding Disability Retirement), and a disability rating. These are combined into a single officer/enlisted factor, expressed as a percentage of Final, or High-3, pay and given by length of service and temporary disability or permanent disability retirement.

TABLE F-1 (continued)

Item	Description/Value
5) Percent Active Duty with Beneficiary	When a member dies from a Service-connected disability or on active duty, any surviving spouse is eligible for Dependency and Indemnity Compensation (DIC) from the Veterans Administration. In addition, if the member dies in the line of duty or after completing 20 years of service, the surviving spouse is eligible for an SBP annuity from DoD which would bring the total amount of the benefit up to 55 percent of the member's retired pay. The excess of the SBP annuity over DIC comes from the Military Retirement Fund. If no spouse is present, the benefit passes on to an eligible child. If both spouse and eligible child are present then, under certain tax provisions, it is advantageous for the spouse to pass the benefits to the child. Thus, it is necessary to estimate the percent of active duty members with beneficiaries. The percentages are given by officer/enlisted status, and further allocated by spouse/child.
6) Reduction Factors for SBP	Premium amounts, as a percent of retired pay, by age, officer/enlisted status, and benefit tier.
7) Rounding Assumptions for Partially Completed Years of Service	When retired pay is computed, years of service are rounded down to the nearest completed month. An assumption must be made for the computation. The value for the valuation is 0.017.
8) CSB/Redux election proportion	The proportion of members who elect CSB/Redux. For the unfunded liability and open group valuations, the proportion varies by entry year and officer/enlisted status. For the normal cost (new entrant) valuation, the proportion is 10 percent. This value is essentially a representative rate needed to approximate the floating proportions (of CSB/Redux electors) used in the unfunded liability and open group valuations.

TABLE F-1 (continued)

Item	Description/Value

9) Initial Annual Pay of 16-year-old Active Duty Officer

This value is used to allocate a portion of part-time benefits to full-time in normal cost valuations, thus linking the radixes (i.e., notional starting populations) and pay of full- and part-time members. The value for the valuation is $37,058.

10) Accumulated Value of Partial Pay in the First Year of Service

This amount is used to properly align the decrement rates with the assumption, in a normal cost run, of a new entrant cohort starting with zero years of service.

11) BRS Opt-In Rates

Rates used to determine the portion of members with fewer than 12 years of service as of December 31, 2017, electing, during the calendar year 2018 Open Season, to opt-in to BRS. Varies by years of service and officer/enlisted. Rates are based on results from a RAND Corp. analytical model approved with minor adjustments by the Board. Separate rates are used for NCP weighting and census purposes to reflect timing differences in the respective modeling needs. Reservists are assumed to have opt-in rates equal to half of the active duty rates (i.e., multiply the below rates by 0.5).

YOS	NCP Off / Enl	Census Officer	Census Enlisted
0	100.0%	100.0%	100.0%
1	98.4%	85.5%	95.0%
2	93.5%	85.6%	95.0%
3	93.3%	85.2%	95.0%
4	92.5%	83.5%	93.3%
5	90.5%	80.2%	92.9%
6	88.9%	79.9%	90.2%
7	84.8%	79.1%	76.8%
8	74.1%	77.4%	57.5%
9	61.1%	70.9%	45.0%
10	46.3%	45.8%	17.4%
11	24.1%	28.5%	10.2%
12	12.4%	0.0%	0.0%
13+	0.0%	0.0%	0.0%

TABLE F-1 (continued)

Item	Description/Value
12) BRS Lump Sum Election Rates	This is the rate of election of lump sums by those who are covered under BRS. The value is based on a study completed by an external organization and represents members having a "Low Personal Discount Rate and Aware of Tax and VA Offset Implications." It is an interpolated value for active duty using an assumed lump sum discount rate (used to calculate lump sums) of 7.3%; the assumptions are 5.2% for officers and 22.8% for enlisted. Of those who elect lump sums, all are assumed to elect the 50% lump sum option.

Reserve Duty

Item	Description/Value
1) Ratio of Net to Gross Retired Pay For Reserves	This is the ratio of reserve net retired pay to gross retired pay. This is given by officer/enlisted status, age, and benefit tier.
2) Proportion of Points Based on Active Service	This amount is used to allocate the part of the reserve normal cost that should be paid for as a part of the active duty normal cost. The value for the valuation is 51%.
3) Initial Annual Pay of new Selected Reserve member	This array is used to set initial pay for a new Selected Reserve member in a normal cost run. The values for the valuation are updated with an across-the-board salary increase each year.
4) Reserve Retirement Age FYs	An assumption is made to reflect the number of years, on average, reservists retire early due to performing certain active service, per P.L. 110-181. An average reduction of two years (age 58) is assumed. Fiscal years are needed to phase into this earlier retirement over time. The transition to an average retirement age of 59 is assumed to occur in 2024, and the transition to age 58 is assumed to occur in 2033. See also the 'Retiree Gain Statement' in Appendix K.

TABLE F-1 (continued)

Item	Description/Value
5) Ratio of Reserve to Active Payroll	For the purposes of the allocation referred to in item 2) above, this value represents the assumed ratio of reserve duty to active duty basic payroll. The value for the valuation is 10%.
6) BRS Opt-In Rates	Rates used to determine the portion of members with fewer than 4,320 points as of December 31, 2017, opting into BRS during the calendar year 2018 Open Season. Varies by years of service and officer/enlisted. They are equal to ½ of the Opt-In Rates for Active Duty (Item 11).
7) BRS Lump Sum Election Rates	This is the rate of election of lump sums by those who are covered under BRS. The value is based on a study done by an external organization and represents members having a "Low Personal Discount Rate and Aware of Tax and VA Offset Implications." It is an interpolated value for reserves using an assumed lump sum discount rate (used to calculate lump sums) of 7.3%; the assumptions are 2.0% for officers and 8.4% for enlisted. Of those who elect lump sums, all are assumed to elect the 50% lump sum.

Retiree

Item	Description/Value
1) Retired Pay Adjustment Factors	Retired pay of current retirees is adjusted for VA compensation, SBP offset changes, and other non-COLA effects during the year. They are given by officer/enlisted status, disability/nondisability, and whether or not the member has elected SBP spouse or spouse/child coverage.

TABLE F-1 (continued)

Item	Description/Value
2) Retired Pay Adjustment to Members With SBP Spouse Coverage	These factors model data that show mortality is better (or less), and non-death loss from paid status is generally higher, for those retired members who elect SBP spouse coverage. Rather than develop additional sets of mortality and loss rates, the respective retiree death and loss rates (Appendix I) are adjusted with these factors. This impacts retirees with SBP spouse coverage. The factors are given by active/reserve, disability/nondisability status, and officer/enlisted status.

Survivor

Item	Description/Value
1) Member-Survivor Age Difference	When a member dies, a survivor is assumed to be a certain number of years younger (or older) than the member. This is given by active/reserve, age, officer/enlisted status, type of retirement (i.e., nondisability, temporary disability, permanent disability), and type of survivor (i.e., spouse, child, insurable interest).
2) Ratio of SBP Base Amount to Net Retired Pay	Under SBP the retiree may elect an amount less than his or her gross retired pay as a base in computing the survivor annuity. Base amounts can also exceed net retired pay because of factors that reduce gross retired pay to net retired pay. This is expressed as a percentage of net retired pay and is given by age, officer/enlisted status, benefit tier, and type of retirement (disability/nondisability/reserve). Additional adjustments are made to the factors as part of Concurrent Receipt.
3) Ratio of RSFPP Survivor Benefit To Net Retired Pay	For RSFPP (Retired Servicemen's Family Protection Plan), this gives the ratio of the survivor payment to the net amount of retired pay.
4) Reservists' Election of RCSBP	Proportion of reservists who have elected the Reserve Component Survivor Benefit Plan (RCSBP) by immediate and deferred annuity, age, and officer/enlisted status.

TABLE F-1 (continued)

Item	Description/Value
5) Partial DIC Offsets	The percent of survivor pay of new survivors whose pay is partially offset by DIC. They are given by the member's active/reserve status.
6) Full DIC Offsets	The percent of survivor pay of new survivors whose pay is fully offset by DIC. They are given by the member's active/reserve status.
7) Rates for Electing SBP Options	Given that a member elects SBP, there is still a choice of options: spouse only, child only, spouse and child, or insurable interest (some other designated beneficiary in the absence of a spouse or child). These are expressed as ratios to those electing spouse only or spouse/child coverage, and are given by age, officer/enlisted status, and type of retirement (disability/nondisability/reserve).
8) Rates for Election of RSFPP Options	Given that a member elected an RSFPP option, there was a choice of options: spouse only, child only, or spouse and child. These are expressed as ratios to those electing spouse only or spouse/child coverage, and are given by age and officer/enlisted status.
9) Survivor Pay Adjustment Factors	Survivor pay of current survivors is adjusted for changes in DIC and other non-COLA effects during the year.
10) DIC Base Amount	Monthly amount by which DoD annuitant pay is offset by DIC. Future values are indexed to CPI. The first-year value for the valuation is $1,283.

APPENDIX G

ACTIVE DUTY RATES

ACTIVE DUTY RATE DESCRIPTION

The active duty rates consist principally of decrement rates related to the probabilities of a member leaving a category of military service for a specific cause. In addition, they include a new entrant distribution, a set of reentrant ratios, and ratios for promotion and merit pay increases. For the purposes of active duty rate development, full-time support reservists (excluding Army National Guard) are included in the underlying data.

The active duty decrement rates are used to project active duty deaths, temporary and permanent disability retirements, nondisability retirements, and withdrawals (i.e., other active duty losses). As noted in the "Valuation Data and Procedure" section, as well as Table 6B, in the main text, the valuation results for active duty members and the full-time normal cost are highly sensitive to the withdrawal rates. In addition, the active duty decrements include rates of transfer between officer and enlisted status. The death rates are given by age nearest birthday for officers and enlistees separately. The remaining decrement rates are given by completed years of active service for officers and enlistees separately. The formulas used to derive the active duty rates are given on the following page. The fiscal years on which various rates are based are given on the subsequent page. The experience period was selected such that the sum of the active force size changes for the included periods was near zero, and the experience period intentionally excludes the significant downsizing of the early 1990s, which is not considered a representative basis upon which to develop long-run actuarial assumptions. Full-time reservist experience is included in the data used to develop the rates.

Active duty disability retirement rates were updated in a prior year's (September 30, 2015), valuation using an underlying experience period from FY 2010 – FY 2014 for years of service less than 19. These rates recognize the increase in disability retirements resulting from implementing a new Integrated Disability Evaluation System (IDES, operated jointly by DoD and the VA since 2007), as well as a notable increase in combat-related disability retirements. The data available for study could not fully explain the reasons for the increased disability retirement experience (i.e., the inability to separate combat-related injuries by incidence year due to some backlogs created by moving to the IDES). In order to recognize this inherent uncertainty in the data, and also to acknowledge potential future improvements to reduce the severity of combat-related injuries and potential reductions to combat exposure, the Board agreed to remove half of the combat-related disabilities from the FY 2010 – FY 2014 experience period. However, the Board also agreed that OACT should add an additional amount of accrued liability to recognize the higher number of disability retirements expected in the near term (phased out over the next four years) compared to what the new disability rates produce.

Generally, the decrement rates were graduated (smoothed) using Whittaker-Henderson graduations. The typical active duty career has inherent discontinuities at select points (reenlistment, promotion, retirement, etc). Rates were separated into ranges where assumptions of continuity were reasonable. Where actual discontinuities exist, the rates were not smoothed.

A reentrant is defined as someone who is on active duty at year end, who was not on active duty a year earlier, and who is not a new entrant. The reentrant ratios give the expected number of reentrants per year, per active member, in each cell. The cells are defined by length of active service and by officer/enlisted status.

The new entrant distribution gives the percentages of new entrants to the military by age and by officer/enlisted status. This distribution is only used in the normal cost (new entrant) valuation and the open-group projection.

The promotion and merit increase scales (PAMS) give the expected annual percentage increase in pay regardless of whether or not there are across-the-board increases in the active duty pay table. The PAMS do not include adjustments for inflation or productivity increases. They are defined by length of service, by entry age, and by officer/enlisted status. The PAMS were created by first arraying the average pay for each entry age along a dimension of increasing years of service. The PAMS were then computed by dividing the average pay at the next year of service by the average pay at the current year of service.

ACTIVE DUTY RATE FORMULAS

ACTIVE DEATH (by age nearest birthday)

$$\frac{\text{Deaths during year}}{[\text{Number at beginning of year} - \tfrac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

NONDISABILITY RETIREMENT (by completed years of service)

$$\frac{\text{New retirees during year}}{\text{Number at beginning of year}}$$

TEMPORARY DISABILITY RETIREMENT (by completed years of service)

$$\frac{\text{New temporary disabilities during year}}{[\text{Number at beginning of year} - \tfrac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

PERMANENT DISABILITY RETIREMENT (by completed years of service)

$$\frac{\text{New permanent disabilities during year}}{[\text{Number at beginning of year} - \tfrac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

WITHDRAWAL (by completed years of service)

$$\frac{\text{Withdrawals during year}}{\text{Number at beginning of year}}$$

REENTRANT RATIOS (by completed years of service)

$$\frac{\text{Number reentering during year}}{\text{Number at beginning of year}}$$

PERCENTAGE DISTRIBUTION OF NEW ENTRANTS (by age nearest birthday)

$$\frac{\text{New entrants during year}}{\text{Total new entrants}}$$

PAYGRADE TRANSFER (by completed years of service)

$$\frac{\text{Transfers to category during year}}{[\text{Number at beginning of year} - \tfrac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

PROMOTION AND MERIT SCALES (by entry age and completed years of service)

$$\frac{\text{Average basic pay at next year of service using current year pay table}}{\text{Average basic pay at current year of service}}$$

SUMMARY OF YEARS ON WHICH ACTIVE DUTY RATES ARE BASED

By Fiscal Year

RATE	1982-1989	1997-1999	2000-2008	2010-2014*	2015
Death				X	X
Nondisability Retirement	X	X	X		
Temporary Disability Retirement				X	
Permanent Disability Retirement				X	
Withdrawal (other losses)	X	X	X		
Reentrant Ratios	X	X	X		
New Entrant Distribution	X	X	X		
Paygrade Transfer	X	X	X		
Promotion and Merit Scales (PAMS)	X	X	X		

* In the construction of the disability-related rates, we removed one half of the combat-related disability retirements occurring during the the FY 2010-2014 experience period. This removal only affects rates less than 19 years of service. We subtracted additional disability retirements from withdrawals, thereby affecting withdrawal rates and not impacting the percentage making 20 year retirement.

DoD Office of the Actuary

DEATH RATES FOR NONRETIRED MILITARY

(AGE NEAREST BIRTHDAY)

Age	Officer	Enlisted
16	0.00046	0.00065
17	0.00046	0.00066
18	0.00044	0.00067
19	0.00043	0.00069
20	0.00042	0.00070
21	0.00042	0.00072
22	0.00041	0.00072
23	0.00041	0.00072
24	0.00041	0.00071
25	0.00040	0.00070
26	0.00039	0.00068
27	0.00038	0.00067
28	0.00038	0.00065
29	0.00038	0.00064
30	0.00037	0.00062
31	0.00037	0.00062
32	0.00037	0.00061
33	0.00036	0.00060
34	0.00037	0.00060
35	0.00037	0.00061
36	0.00038	0.00061
37	0.00037	0.00060
38	0.00038	0.00061
39	0.00039	0.00061
40	0.00039	0.00061
41	0.00039	0.00062
42	0.00040	0.00063
43	0.00041	0.00065
44	0.00043	0.00066
45	0.00045	0.00068
46	0.00048	0.00071
47	0.00050	0.00075
48	0.00054	0.00079
49	0.00058	0.00082
50	0.00062	0.00087
51	0.00067	0.00092
52	0.00071	0.00097
53	0.00077	0.00103
54	0.00083	0.00108
55	0.00087	0.00114
56	0.00093	0.00121
57	0.00099	0.00128
58	0.00106	0.00133
59	0.00112	0.00140
60	0.00118	0.00146

Note: These death rates should not be compared to other published rates or used for other purposes without examining the exposure formula used in the derivation.

NONDISABILITY, TEMPORARY DISABILITY & PERMANENT DISABILITY RETIREMENT RATES

OFFICERS (BY COMPLETED YEARS OF SERVICE)

Years of Service	Non-disability	Temporary Disability ***	Permanent Disability ***
0	0.00000	0.00033	0.00037
1	0.00000	0.00064	0.00038
2	0.00000	0.00083	0.00074
3	0.00000	0.00091	0.00096
4	0.00000	0.00101	0.00087
5	0.00000	0.00095	0.00093
6	0.00000	0.00107	0.00154
7	0.00000	0.00112	0.00103
8	0.00000	0.00115	0.00152
9	0.00000	0.00103	0.00171
10	0.00000	0.00105	0.00153
11	0.00000	0.00098	0.00135
12	0.00000	0.00090	0.00148
13	0.00000	0.00080	0.00175
14	0.00000	0.00080	0.00154
15	0.00000	0.00077	0.00159
16	0.00000	0.00069	0.00202
17	0.00000	0.00059	0.00224
18	0.00000	0.00048	0.00204
19	0.24556	0.00192	0.00141
20	0.20352	0.00231	0.00198
21	0.16113	0.00169	0.00178
22	0.14428	0.00204	0.00150
23	0.14541	0.00222	0.00187
24	0.14305	0.00209	0.00176
25	0.18396	0.00214	0.00140
26	0.19135	0.00361	0.00210
27	0.22470	0.00322	0.00166
28	0.20692	0.00367	0.00262
29	0.49853	0.00505	0.00341
30	0.37879	0.00692	0.00435
31	0.28016	0.00534	0.00334
32	0.25438	0.00534	0.00334
33	0.26999	0.00534	0.00334
34	1.00000	0.00534	0.00334

*** The increase in disability rates shown between 18 and 19 years of service may be due to the removal of the 30% disability rating minimum for members with 20 years of service. The tax advantages accorded disability retired pay described in Appendix A may result in members choosing disability over nondisability retirements. Disabilities were increased to reflect recent trends.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service. The associated rate applied to the number of people at the beginning of the year in the category will produce the expected number of occurrences during the following year.

NONDISABILITY, TEMPORARY DISABILITY & PERMANENT DISABILITY RETIREMENT RATES

ENLISTED (BY COMPLETED YEARS OF SERVICE)

Years of Service	Non-disability	Temporary Disability ***	Permanent Disability ***
0	0.00000	0.00187	0.00054
1	0.00000	0.00307	0.00179
2	0.00000	0.00383	0.00291
3	0.00000	0.00450	0.00382
4	0.00000	0.00430	0.00396
5	0.00000	0.00422	0.00425
6	0.00000	0.00415	0.00497
7	0.00000	0.00440	0.00521
8	0.00000	0.00441	0.00614
9	0.00000	0.00448	0.00645
10	0.00000	0.00429	0.00688
11	0.00000	0.00423	0.00776
12	0.00000	0.00398	0.00757
13	0.00000	0.00387	0.00785
14	0.00000	0.00380	0.00737
15	0.00000	0.00281	0.00749
16	0.00000	0.00186	0.00601
17	0.00000	0.00132	0.00492
18	0.00000	0.00075	0.00352
19	0.42256	0.00541	0.00551
20	0.30241	0.00521	0.00634
21	0.26793	0.00422	0.00482
22	0.23110	0.00433	0.00508
23	0.29343	0.00417	0.00419
24	0.18735	0.00362	0.00359
25	0.33712	0.00437	0.00322
26	0.24102	0.00511	0.00333
27	0.24118	0.00523	0.00343
28	0.19147	0.00545	0.00466
29	0.77601	0.00999	0.00586
30	0.64842	0.01644	0.00795
31	0.42640	0.01399	0.00340
32	0.50641	0.01399	0.00340
33	0.40749	0.01399	0.00340
34	1.00000	0.01399	0.00340

*** The increase in disability rates shown between 18 and 19 years of service may be due to the removal of the 30% disability rating minimum for members with 20 years of service. The tax advantages accorded disability retired pay described in Appendix A may result in members choosing disability over nondisability retirements. Disabilities were increased to reflect recent trends.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service. The associated rate applied to the number of people at the beginning of the year in the category will produce the expected number of occurrences during the following year.

DoD Office of the Actuary

WITHDRAWAL, REENTRANT, AND NET LOSS RATES
FOR ACTIVE DUTY PERSONNEL

OFFICERS (BY COMPLETED YEARS OF SERVICE)

Years of Service	Withdrawal	Reentrant ***	Net Loss
0	0.01797	0.11937	-0.10140
1	0.02185	0.03298	-0.01113
2	0.07016	0.02574	0.04442
3	0.12152	0.02898	0.09254
4	0.10811	0.01964	0.08847
5	0.09269	0.01703	0.07566
6	0.09609	0.01444	0.08165
7	0.08410	0.01400	0.07010
8	0.07614	0.01200	0.06414
9	0.06734	0.01155	0.05579
10	0.06538	0.00872	0.05666
11	0.05271	0.00798	0.04473
12	0.03476	0.00656	0.02820
13	0.02376	0.00557	0.01819
14	0.01562	0.00467	0.01095
15	0.00947	0.00368	0.00579
16	0.00629	0.00291	0.00338
17	0.00326	0.00252	0.00074
18	0.00122	0.00246	-0.00124
19	0.00000	0.00223	-0.00223
20	0.00000	0.00247	-0.00247
21	0.00000	0.00259	-0.00259
22	0.00000	0.00230	-0.00230
23	0.00000	0.00237	-0.00237
24	0.00000	0.00229	-0.00229
25	0.00000	0.00268	-0.00268
26	0.00000	0.00276	-0.00276
27	0.00000	0.00284	-0.00284
28	0.00000	0.00329	-0.00329
29	0.00000	0.00419	-0.00419
30	0.00000	0.00912	-0.00912
31	0.00000	0.00803	-0.00803
32	0.00000	0.01145	-0.01145
33	0.00000	0.01084	-0.01084
34	0.00000	0.00000	0.00000

*** The reentrant (and all other) rates are developed for valuation purposes to be consistent
with the data sources used in the valuation. For example, high reentrant rates for members with
zero completed years of service at the beginning of the year reflect members showing up on the
valuation data files with one completed year of service at year end, who were not on the data
files at the beginning of the year, and who were not new entrants. For this reason, the above
rates should not be used for other purposes.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service.
The associated rate applied to the number of people at the beginning of the year in the category
will produce the expected number of occurrences during the following year.

WITHDRAWAL, REENTRANT, AND NET LOSS RATES
FOR ACTIVE DUTY PERSONNEL

ENLISTED (BY COMPLETED YEARS OF SERVICE)

Years of Service	Withdrawal	Reentrant ***	Net Loss
0	0.10397	0.03043	0.07354
1	0.10110	0.00769	0.09341
2	0.18122	0.01394	0.16728
3	0.35270	0.02745	0.32525
4	0.15681	0.01394	0.14287
5	0.15456	0.01128	0.14328
6	0.11141	0.00966	0.10175
7	0.12239	0.00918	0.11321
8	0.09056	0.00761	0.08295
9	0.08561	0.00682	0.07879
10	0.05092	0.00540	0.04552
11	0.04076	0.00453	0.03623
12	0.03078	0.00347	0.02731
13	0.01845	0.00282	0.01563
14	0.01548	0.00223	0.01325
15	0.00712	0.00188	0.00524
16	0.00476	0.00154	0.00322
17	0.00314	0.00145	0.00169
18	0.00157	0.00139	0.00018
19	0.00000	0.00126	-0.00126
20	0.00000	0.00157	-0.00157
21	0.00000	0.00148	-0.00148
22	0.00000	0.00167	-0.00167
23	0.00000	0.00156	-0.00156
24	0.00000	0.00212	-0.00212
25	0.00000	0.00169	-0.00169
26	0.00000	0.00247	-0.00247
27	0.00000	0.00180	-0.00180
28	0.00000	0.00212	-0.00212
29	0.00000	0.00168	-0.00168
30	0.00000	0.01403	-0.01403
31	0.00000	0.03693	-0.03693
32	0.00000	0.04974	-0.04974
33	0.00000	0.09762	-0.09762
34	0.00000	0.00000	0.00000

*** The reentrant (and all other) rates are developed for valuation purposes to be consistent
with the data sources used in the valuation. For example, high reentrant rates for members with
zero completed years of service at the beginning of the year reflect members showing up on the
valuation data files with one completed year of service at year end, who were not on the data
files at the beginning of the year, and who were not new entrants. For this reason, the above
rates should not be used for other purposes.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service.
The associated rate applied to the number of people at the beginning of the year in the category
will produce the expected number of occurrences during the following year.

DoD Office of the Actuary

PERCENTAGE DISTRIBUTION OF NEW ENTRANTS

(AGE NEAREST BIRTHDAY)

Age	Officers	Enlisted	Total
16	0.00000	0.00000	0.00000
17	0.00000	0.00142	0.00142
18	0.00000	0.12146	0.12146
19	0.00001	0.25484	0.25485
20	0.00008	0.19288	0.19296
21	0.00045	0.11431	0.11476
22	0.01188	0.07357	0.08545
23	0.01920	0.05093	0.07013
24	0.01025	0.03619	0.04644
25	0.00470	0.02550	0.03020
26	0.00386	0.01783	0.02169
27	0.00327	0.01252	0.01579
28	0.00216	0.00929	0.01145
29	0.00163	0.00663	0.00826
30	0.00127	0.00475	0.00602
31	0.00097	0.00358	0.00455
32	0.00075	0.00285	0.00360
33	0.00058	0.00226	0.00284
34	0.00046	0.00187	0.00233
35	0.00038	0.00165	0.00203
36	0.00028	0.00063	0.00091
37	0.00020	0.00030	0.00050
38	0.00017	0.00024	0.00041
39	0.00015	0.00020	0.00035
40	0.00013	0.00018	0.00031
41	0.00010	0.00014	0.00024
42	0.00008	0.00014	0.00022
43	0.00007	0.00007	0.00014
44	0.00006	0.00004	0.00010
45	0.00005	0.00004	0.00009
46	0.00005	0.00003	0.00008
47	0.00004	0.00003	0.00007
48	0.00004	0.00003	0.00007
49	0.00003	0.00002	0.00005
50	0.00003	0.00002	0.00005
51	0.00002	0.00001	0.00003
52	0.00002	0.00001	0.00003
53	0.00002	0.00001	0.00003
54	0.00002	0.00001	0.00003
55	0.00002	0.00001	0.00003
56	0.00001	0.00000	0.00001
57	0.00001	0.00000	0.00001
58	0.00001	0.00000	0.00001
59	0.00001	0.00000	0.00001
60	0.00000	0.00000	0.00000
Total	0.06352	0.93648	1.00000

DoD Office of the Actuary

PAYGRADE TRANSFER RATES

STATUS (BY COMPLETED YEARS OF SERVICE)

Years of Service	Officer to Enlisted	Enlisted to Officer
0	0.00042	0.00304
1	0.00010	0.00096
2	0.00006	0.00112
3	0.00013	0.00145
4	0.00013	0.00227
5	0.00008	0.00282
6	0.00014	0.00393
7	0.00014	0.00515
8	0.00013	0.00718
9	0.00013	0.00874
10	0.00012	0.00968
11	0.00039	0.00969
12	0.00058	0.00907
13	0.00047	0.00778
14	0.00077	0.00613
15	0.00094	0.00472
16	0.00112	0.00306
17	0.00055	0.00179
18	0.00014	0.00137
19	0.00017	0.00096
20	0.00010	0.00115
21	0.00005	0.00105
22	0.00006	0.00093
23	0.00002	0.00088
24	0.00000	0.00044
25	0.00000	0.00005
26	0.00000	0.00002
27	0.00000	0.00007
28	0.00000	0.00000
29	0.00000	0.00000
30	0.00000	0.00000
31	0.00000	0.00000
32	0.00000	0.00000
33	0.00000	0.00000
34	0.00000	0.00000

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service.
The associated rate applied to the number of people at the beginning of the year in the category
will produce the expected number of occurrences during the following year.

PROMOTION AND MERIT BASIC PAY INCREASE SCALES

OFFICERS (BY ENTRY AGE)

Years of Service	Entry Age										
	16	17	18	19	20	21	22	23	24	25	26
1	1.01406	1.01406	1.01406	1.01406	1.01406	1.01406	1.01406	1.03788	1.06850	1.06863	1.03084
2	1.26101	1.26101	1.26101	1.26101	1.26101	1.26101	1.26101	1.26733	1.24639	1.22059	1.12813
3	1.16436	1.16436	1.16436	1.16436	1.16436	1.16436	1.16436	1.15592	1.14107	1.13118	1.08444
4	1.12838	1.12838	1.12838	1.12838	1.12838	1.12838	1.12838	1.12854	1.10999	1.09523	1.06425
5	1.01427	1.01427	1.01427	1.01427	1.01427	1.01427	1.01427	1.02410	1.02904	1.03108	1.02871
6	1.03943	1.03943	1.03943	1.03943	1.03943	1.03943	1.03943	1.04289	1.03995	1.04497	1.05461
7	0.99489	0.99489	0.99489	0.99489	0.99489	0.99489	0.99489	1.01191	1.02020	1.02535	1.02334
8	1.03290	1.03290	1.03290	1.03290	1.03290	1.03290	1.03290	1.04169	1.03766	1.04233	1.04014
9	0.99442	0.99442	0.99442	0.99442	0.99442	0.99442	0.99442	1.01394	1.02086	1.02143	1.02062
10	1.03956	1.03956	1.03956	1.03956	1.03956	1.03956	1.03956	1.05820	1.05017	1.04618	1.03943
11	1.01571	1.01571	1.01571	1.01571	1.01571	1.01571	1.01571	1.04944	1.05558	1.04535	1.02645
12	1.05143	1.05143	1.05143	1.05143	1.05143	1.05143	1.05143	1.05911	1.04767	1.04470	1.03802
13	1.00603	1.00603	1.00603	1.00603	1.00603	1.00603	1.00603	1.01511	1.01989	1.02090	1.01887
14	1.03458	1.03458	1.03458	1.03458	1.03458	1.03458	1.03458	1.02798	1.02367	1.02606	1.02729
15	1.01346	1.01346	1.01346	1.01346	1.01346	1.01346	1.01346	1.01512	1.02064	1.02177	1.01984
16	1.03810	1.03810	1.03810	1.03810	1.03810	1.03810	1.03810	1.04225	1.03899	1.03557	1.03369
17	1.02706	1.02706	1.02706	1.02706	1.02706	1.02706	1.02706	1.03034	1.02876	1.02850	1.02258
18	1.03826	1.03826	1.03826	1.03826	1.03826	1.03826	1.03826	1.02671	1.02287	1.02382	1.02758
19	1.01543	1.01543	1.01543	1.01543	1.01543	1.01543	1.01543	1.01051	1.01301	1.01426	1.01488
20	1.03350	1.03350	1.03350	1.03350	1.03350	1.03350	1.03350	1.03628	1.03721	1.03951	1.04114
21	1.02310	1.02310	1.02310	1.02310	1.02310	1.02310	1.02310	1.03595	1.03778	1.03563	1.02747
22	1.04475	1.04475	1.04475	1.04475	1.04475	1.04475	1.04475	1.06061	1.05316	1.04753	1.03385
23	1.02847	1.02847	1.02847	1.02847	1.02847	1.02847	1.02847	1.03169	1.03022	1.03020	1.02115
24	1.03200	1.03200	1.03200	1.03200	1.03200	1.03200	1.03200	1.02880	1.02749	1.02601	1.01918
25	1.02086	1.02086	1.02086	1.02086	1.02086	1.02086	1.02086	1.02065	1.02561	1.02340	1.01420
26	1.03961	1.03961	1.03961	1.03961	1.03961	1.03961	1.03961	1.03981	1.03084	1.02729	1.02475
27	1.01440	1.01440	1.01440	1.01440	1.01440	1.01440	1.01440	1.01278	1.00986	1.01164	1.00971
28	1.01850	1.01850	1.01850	1.01850	1.01850	1.01850	1.01850	1.02795	1.02738	1.02510	1.01871
29	1.01886	1.01886	1.01886	1.01886	1.01886	1.01886	1.01886	1.02296	1.01666	1.01419	1.00772
30	1.04665	1.04665	1.04665	1.04665	1.04665	1.04665	1.04665	1.06930	1.05109	1.04079	1.02158
31	1.03553	1.03553	1.03553	1.03553	1.03553	1.03553	1.03553	1.07120	1.05099	1.05582	1.01283
32	1.02979	1.02979	1.02979	1.02979	1.02979	1.02979	1.02979	1.04555	1.04030	1.04734	1.02783
33	1.02118	1.02118	1.02118	1.02118	1.02118	1.02118	1.02118	1.02422	1.02166	1.03341	1.02317
34	0.98796	0.98796	0.98796	0.98796	0.98796	0.98796	0.98796	0.94853	0.99750	1.00271	1.03332

Note: The number that appears, for example, in the column marked '20' and the row marked '2' is the ratio of basic
pay at two years of service to basic pay at one year of service for a member who entered at age 20.

DoD Office of the Actuary

PROMOTION AND MERIT BASIC PAY INCREASE SCALES

ENLISTED (BY ENTRY AGE)

Years of Service	Entry Age										
	16	17	18	19	20	21	22	23	24	25	26
1	1.14463	1.14463	1.15192	1.13066	1.10499	1.09967	1.09485	1.08803	1.08174	1.07784	1.04388
2	1.11460	1.11460	1.11454	1.11191	1.11084	1.11190	1.11330	1.11410	1.11451	1.11391	1.10682
3	1.10585	1.10585	1.10336	1.10136	1.09840	1.09751	1.09578	1.09395	1.09251	1.09236	1.09052
4	1.09187	1.09187	1.08458	1.07787	1.07474	1.07408	1.07363	1.07388	1.07381	1.07393	1.07417
5	1.03813	1.03813	1.03342	1.03727	1.03777	1.03740	1.03826	1.03842	1.03976	1.04040	1.03887
6	1.08603	1.08603	1.08305	1.07612	1.07386	1.07369	1.07362	1.07384	1.07273	1.07226	1.06800
7	1.02569	1.02569	1.02685	1.03172	1.03395	1.03440	1.03456	1.03495	1.03490	1.03383	1.03581
8	1.08945	1.08945	1.08981	1.08241	1.07796	1.07646	1.07554	1.07405	1.07357	1.07271	1.06366
9	1.02372	1.02372	1.02136	1.02525	1.02709	1.02798	1.02772	1.02775	1.02740	1.02875	1.03084
10	1.05618	1.05618	1.06018	1.05735	1.05554	1.05409	1.05344	1.05256	1.05125	1.05021	1.04647
11	1.02443	1.02443	1.01796	1.02035	1.02207	1.02316	1.02245	1.02319	1.02343	1.02383	1.02399
12	1.06395	1.06395	1.06126	1.05530	1.05231	1.04959	1.04767	1.04687	1.04545	1.04561	1.03990
13	1.02883	1.02883	1.02147	1.02384	1.02456	1.02460	1.02476	1.02412	1.02438	1.02418	1.02288
14	1.03612	1.03612	1.04314	1.04047	1.03940	1.03772	1.03657	1.03541	1.03583	1.03424	1.03081
15	1.01461	1.01461	1.02312	1.02476	1.02479	1.02538	1.02514	1.02551	1.02446	1.02450	1.02351
16	1.03567	1.03567	1.03907	1.03689	1.03592	1.03480	1.03388	1.03283	1.03144	1.03022	1.02680
17	1.01696	1.01696	1.02141	1.02410	1.02454	1.02478	1.02413	1.02380	1.02323	1.02202	1.01908
18	1.04477	1.04477	1.04392	1.04034	1.03856	1.03586	1.03521	1.03422	1.03362	1.03169	1.02626
19	1.01797	1.01797	1.01812	1.01892	1.01876	1.01881	1.01845	1.01842	1.01786	1.01906	1.01495
20	1.04784	1.04784	1.05683	1.05989	1.06321	1.06664	1.06815	1.06936	1.07225	1.07401	1.08248
21	1.04156	1.04156	1.03878	1.04043	1.03946	1.03837	1.03962	1.04139	1.03968	1.04195	1.04150
22	1.06034	1.06034	1.06287	1.05641	1.05425	1.05316	1.05374	1.05449	1.05673	1.05100	1.04776
23	1.02863	1.02863	1.02731	1.03243	1.03388	1.03447	1.03473	1.03259	1.03274	1.03491	1.02869
24	1.05285	1.05285	1.06189	1.05931	1.05994	1.06183	1.06077	1.06046	1.06050	1.06188	1.05705
25	1.02562	1.02562	1.02998	1.03604	1.03767	1.03327	1.03183	1.03066	1.03112	1.03306	1.03074
26	1.08867	1.08867	1.09105	1.08810	1.08584	1.08542	1.08566	1.08473	1.07945	1.07139	1.05590
27	1.02419	1.02419	1.02080	1.02143	1.02065	1.02253	1.02540	1.02172	1.02343	1.02752	1.02455
28	0.99741	0.99741	1.01810	1.01911	1.02082	1.02168	1.02324	1.02113	1.02044	1.02451	1.02800
29	1.00414	1.00414	1.00950	1.01334	1.01506	1.01463	1.01298	1.01340	1.01243	1.01383	1.01924
30	1.02632	1.02632	1.05110	1.04098	1.03000	1.03513	1.02915	1.02501	1.02043	1.01257	1.00996
31	1.00002	1.00002	0.99460	0.98261	0.98840	1.00386	1.00729	1.00439	0.99995	0.99713	1.01452
32	0.99875	0.99875	1.00633	1.00144	1.00387	0.99960	1.02260	0.99998	1.00059	0.98624	0.99341
33	0.99973	0.99973	1.00337	0.99297	1.00241	1.01097	1.01385	0.99310	0.99612	0.97424	0.98173
34	0.99950	0.99950	1.02324	1.02368	1.00965	1.00437	1.01341	0.98561	0.99206	0.95993	0.98570

Note: The number that appears, for example, in the column marked '20' and the row marked '2' is the ratio of basic
pay at two years of service to basic pay at one year of service for a member who entered at age 20.

DoD Office of the Actuary

APPENDIX H

RESERVE DUTY RATES

RESERVE DUTY RATES
(continued)

RESERVE DUTY RATES DESCRIPTION

Modeling reserves is similar in some respects to modeling active duty. There are, however, additional challenges due to the complexities of the reserve career (multiple breaks in service of varying durations, movement between active and reserve components, etc.); the structure of the reserve force; limitations of the reserve data; and evolving changes in how the reserves are used.

Reserves are modeled in two population categories in the portion of their career prior to receiving retired pay – Selected Reserves and non-Selected Reserves with 20 good years. The Selected Reserves include only part-time members (full-time Reservists are included in the active-duty (full-time) portion of this valuation) and are the reservists for whom normal costs are paid. The non-Selected Reserves with 20 good years[1] are modeled because they have enough service to qualify for retirement.

The reserve rates consist primarily of decrement rates related to the probabilities of a member leaving a category of military service for a specific reason. In addition, they include a new entrant distribution; a set of reentrant ratios; ratios for promotion and merit pay increases; average points per year; transfer to 20-year non-Selected Reserve status; and blow-up[2] factors. The decrement rates are mainly given by age nearest birthday at entry and completed years of service since Pay Entry Base Date (PEBD), for officers and enlisted separately. "Entry Age" is constructed on an assumption of no breaks in service; e.g., an "entry age" of 57 could represent a member who started at a much earlier age with a long break in service. As noted in the "Valuation Data and Procedure" section, as well as Table 6B, in the main text, the valuation results are highly sensitive to the separation rates and reentrant ratios[3]. Below is a description of the rates used in the reserve valuation process.

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[1]   This includes the category commonly referred to as the "grey area" as well as other non-Selected Reservists with 20 qualifying retirement years.

[2]   These are used to adjust for persistent patterns of actual outcomes not conforming to expectations based on known data. For example, some new reserve retirees show up in the data each year who were not in the data as eligible-to-retire reservists the year before. The need for such "blow up" factors is one of many challenges in modeling reservists.

[3]   Another challenge in modeling reserves relates to the fact that many reservists start their career in the active duty component or have breaks in service throughout their career. Their movements back into the Selected Reserves (from the active duty component, from civilian status, etc.) are modeled as implicit flows via reentrant ratios. However, in some cases these ratios are unusually high, and population cells with small numbers of members initially are then augmented throughout the actuarial projection by large numbers of reentrants. This creates the potential for volatility of results, to the extent small population cell counts experience variations over time. Additionally, patterns of reservist population flows (between the Selected Reserves and the active duty component and between civilian status and the Selected Reserve) are changing, given external and internal factors such as changes in how reserves are used by the military.

The data for the rates was taken from the Reserve Component Common Personnel Data System files as of September 30 for the years 2005 through 2009, generally. The experience period was selected such that the sum of the part-time Selected Reserve force size changes for the included period was near zero. The fiscal years on which the rates are based is given on a subsequent page. A summary qualitative description follows in the below text, in addition to being displayed at the bottom of the respective rate tables in this appendix. The general formula derivation is similar to those of the Active Duty rates (Appendix G) and Retiree/Survivor rates (Appendix I). The reserve rate formulas are not shown, but may be requested from the Office of the Actuary.

The separation rates give the probability that a member in a given status at the beginning of the fiscal year leaves that status during the fiscal year. Separation rates from the Selected Reserve include standard losses, transfers to active duty, transfers to the full-time reserves, discharge, and death. They do not include transfers to non-Selected Reserves with 20 good years, or retirement. Separation rates from the non-Selected Reserve with 20 good years include transfer to Selected Reserve, death, discharge, and file corrections and timing delays. They do not include transfer to retirement status.

A reentrant is defined as someone who is in the Selected Reserves at year end, who was not in the same status a year earlier, and who is not a new entrant (as defined by having greater than zero completed years of PEBD service). It can include transfers from active duty; former Selected Reserve or active members returning after breaks in service; reserve members returning after being attached to a non-selected reserve component (Individual Ready Reserve or Inactive National Guard); and members transferring to the part-time Selected Reserves from the full-time reserves.

The new entrant distribution gives the percentages of new entrants (as defined by having zero completed years of PEBD service) to the part-time Selected Reserves by age and by officer/enlisted status. The distribution is only used in the normal cost (new entrant) valuation and the open group projection.

Due to Public Law (P.L.) 110-181 (see Appendix A), the set of separation rates shown apply only in the early years of the projection, and then phase in to an average age of 58 for reserve retirement. (See Item 4 in the Reserve Duty section in Appendix F for a description of the parameter used to model the phase-in.) As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

In most cases the separation and reentrant rates and ratios are not smoothed (graduated). However, cells with numerators of fewer than 10 cases are combined with other cells.

The promotion and merit increase scales (PAMS) give the expected annual percentage increase in pay independent of the across-the-board increases in the active duty pay scale. The PAMS do not include adjustments for inflation or productivity increases. The PAMS are defined by length of PEBD service, by age, and by officer/enlisted status. They are computed by dividing the average pay at age $(x+1)$, years of service $(y+1)$ by the average pay at age (x), years of service

(y) one year earlier. An adjustment is made to compute the averages for the numerator and denominator based on the same pay table, and cells based on few observations are combined with other cells.

SUMMARY OF YEARS ON WHICH RESERVE RATES ARE BASED

By Fiscal Year

RATE	2005	2006	2007	2008	2009	2010-2014*	2015
New Entrant Distribution *(Officer/Enlisted)*	X	X	X	X	X		
Death *(Officer/Enlisted; Selected/Non-Selected)*						X	X
Separation* *(Officer/Enlisted; Selected/Non-Selected)*	X	X	X	X	X		
Reentrant *(Officer/Enlisted; Selected)*	X	X	X	X	X		
Paygrade Transfer *(Officer/Enlisted; Selected)*	X	X	X	X	X		
Status Transfer *(Officer/Enlisted; Selected-to-Non-Selected)*	X	X	X	X	X		
Retirement *(Officer/Enlisted; Selected/Non-Selected)*	X	X	X	X	X		
Disability Retirement *(Permanent/Temporary; Officer/Enlisted; Selected)*						X	
Average Points Per Year *(Officer/Enlisted; Selected/Non-Selected)*	X	X	X	X	X		
Career Points Adjustment *(Officer/Enlisted; Selected)*	X	X	X	X	X		
Reentering Average Points *(Officer/Enlisted; Selected)*	X	X	X	X	X		
Retirement Ratios *(Officer/Enlisted; Non-Selected)*	X	X	X	X	X		
Transfer Ratios *(Officer/Enlisted; Selected-to-Non-Selected)*	X	X	X	X	X		
Transfer Ratio Adjustment *(Officer/Enlisted; Selected-to-Non-Selected)*	X	X	X	X	X		
Selected Reserve PAMS *(Officer/Enlisted)*	X	X	X	X	X		
Non-Selected Reserve PAMS *(Officer/Enlisted)*	X	X	X	X	X		

* In the construction of the disability-related rates, we removed one half of the combat-related disability retirements occurring during the FY 2010-2014 experience period. We subtracted additional disability retirements from separations, thereby affecting separation rates and reducing the impact on the percentage making 20 year retirement. The adjustment did not impact Officer Temporary Disability Rates.

New Entrant Distribution

By Paygrade (Officer/Enlisted)

Entry Age	Officer	Enlisted	Total
17	0.00000	0.02350	0.02350
18	0.00000	0.19427	0.19427
19	0.00001	0.20176	0.20177
20	0.00018	0.14591	0.14609
21	0.00028	0.10208	0.10236
22	0.00072	0.07088	0.07160
23	0.00149	0.05248	0.05397
24	0.00107	0.03949	0.04056
25	0.00074	0.03018	0.03092
26	0.00069	0.02308	0.02377
27	0.00071	0.01890	0.01961
28	0.00063	0.01535	0.01598
29	0.00061	0.01341	0.01402
30	0.00070	0.01077	0.01147
31	0.00064	0.00925	0.00989
32	0.00052	0.00773	0.00825
33	0.00055	0.00687	0.00742
34	0.00054	0.00607	0.00661
35	0.00067	0.00633	0.00700
36	0.00048	0.00518	0.00566
37	0.00054	0.00474	0.00528
38	0.00000	0.00000	0.00000
39	0.00000	0.00000	0.00000
40	0.00000	0.00000	0.00000
41	0.00000	0.00000	0.00000
42	0.00000	0.00000	0.00000
43	0.00000	0.00000	0.00000
44	0.00000	0.00000	0.00000
45	0.00000	0.00000	0.00000
46	0.00000	0.00000	0.00000
47	0.00000	0.00000	0.00000
48	0.00000	0.00000	0.00000
49	0.00000	0.00000	0.00000
50	0.00000	0.00000	0.00000
51	0.00000	0.00000	0.00000
52	0.00000	0.00000	0.00000
53	0.00000	0.00000	0.00000
54	0.00000	0.00000	0.00000
55	0.00000	0.00000	0.00000
56	0.00000	0.00000	0.00000
57	0.00000	0.00000	0.00000
58	0.00000	0.00000	0.00000
59	0.00000	0.00000	0.00000
60	0.00000	0.00000	0.00000
61	0.00000	0.00000	0.00000
>62	0.00000	0.00000	0.00000
Total	0.01177	0.98823	1.00000

DESCRIPTION: New Entrant distribution for a normal cost valuation (as well as open group), where a new entrant is defined as: a part-time selected reserve on the file as of year-end, who was not in that status in the prior year, and has zero completed PEBD years of service.

Arrayed by entry age and paygrade (officer/enlisted). Populates age scatter of new entrant cohort. Model assumes no new entrants older than age 37.

Reserve Death Rates

By Reserve Status and Paygrade

Age	Selected		Non-Selected	
	Officer	Enlisted	Officer	Enlisted
16	0.00027	0.00044		
17	0.00027	0.00050		
18	0.00027	0.00057		
19	0.00027	0.00065		
20	0.00027	0.00071		
21	0.00027	0.00075		
22	0.00027	0.00077		
23	0.00027	0.00078		
24	0.00027	0.00076		
25	0.00028	0.00073		
26	0.00028	0.00070		
27	0.00028	0.00067		
28	0.00029	0.00065		
29	0.00029	0.00063		
30	0.00029	0.00062	0.00022	0.00042
31	0.00031	0.00062	0.00022	0.00041
32	0.00031	0.00062	0.00024	0.00041
33	0.00032	0.00061	0.00024	0.00041
34	0.00032	0.00060	0.00024	0.00040
35	0.00033	0.00060	0.00025	0.00039
36	0.00034	0.00060	0.00026	0.00039
37	0.00034	0.00059	0.00026	0.00038
38	0.00034	0.00060	0.00026	0.00038
39	0.00035	0.00061	0.00026	0.00039
40	0.00035	0.00063	0.00027	0.00039
41	0.00036	0.00066	0.00027	0.00048
42	0.00036	0.00068	0.00028	0.00058
43	0.00038	0.00071	0.00033	0.00067
44	0.00039	0.00072	0.00037	0.00076
45	0.00040	0.00073	0.00042	0.00086
46	0.00042	0.00074	0.00047	0.00095
47	0.00043	0.00075	0.00053	0.00105
48	0.00046	0.00075	0.00059	0.00117
49	0.00048	0.00076	0.00066	0.00130
50	0.00050	0.00078	0.00075	0.00146
51	0.00053	0.00082	0.00087	0.00164
52	0.00056	0.00086	0.00101	0.00186
53	0.00059	0.00094	0.00118	0.00214
54	0.00062	0.00105	0.00142	0.00248
55	0.00065	0.00117	0.00171	0.00289
56	0.00068	0.00133	0.00208	0.00342
57	0.00070	0.00150	0.00253	0.00409
58	0.00074	0.00170	0.00308	0.00491
59	0.00076	0.00192	0.00371	0.00585
60	0.00078	0.00217	0.00437	0.00683
61	0.00081	0.00243	0.00504	0.00781
62	0.00083	0.00273	0.00572	0.00876
63	0.00084	0.00306	0.00638	0.00969

DESCRIPTION: Reserve Death Rates
Arrayed by reserve status (Selected/Non-Selected), age (nearest birthday),
and paygrade (officer/enlisted).
Probability that a member dies in the next year. Should not be compared to other
published rates or used for other purposes without examining how they are derived.

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Officer Selected Reserve Separation Rates (Non-Retirement Causes)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.054	0.047	0.054	0.029	0.044	0.038	0.035	0.028	0.023	0.033	0.039	0.053	0.073	0.037	0.065	0.064	0.063	0.050	0.063	0.048	0.058	0.079	0.039	0.064	0.036	0.040	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	0.095	0.053	0.048	0.182	0.100	0.333		1.000
1	0.000	0.054	0.047	0.054	0.029	0.044	0.038	0.057	0.039	0.023	0.033	0.039	0.059	0.065	0.064	0.079	0.074	0.077	0.050	0.075	0.074	0.067	0.082	0.082	0.064	0.036	0.040	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	0.095	0.053	0.048	0.182	0.100	0.333	1.000	
2	0.000	0.054	0.047	0.054	0.118	0.054	0.069	0.059	0.056	0.055	0.042	0.071	0.069	0.042	0.057	0.081	0.094	0.078	0.089	0.075	0.066	0.075	0.068	0.068	0.065	0.069	0.060	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	0.095	0.053	0.048	0.182	0.100	1.000		
3	0.000	0.054	0.047	0.051	0.076	0.060	0.052	0.073	0.070	0.051	0.069	0.052	0.071	0.079	0.084	0.086	0.088	0.079	0.065	0.078	0.065	0.094	0.070	0.113	0.094	0.135	0.110	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	0.095	0.053	0.048	0.182	1.000			
4	0.000	0.054	0.067	0.065	0.056	0.085	0.085	0.092	0.067	0.061	0.057	0.078	0.084	0.073	0.100	0.100	0.073	0.053	0.071	0.102	0.060	0.088	0.081	0.084	0.060	0.083	0.143	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	0.095	0.053	0.048	1.000				
5	0.000	0.054	0.063	0.089	0.057	0.073	0.093	0.115	0.127	0.083	0.118	0.074	0.119	0.082	0.099	0.065	0.101	0.048	0.090	0.086	0.095	0.089	0.130	0.119	0.062	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	0.095	0.053	1.000					
6	0.000	0.054	0.044	0.055	0.061	0.074	0.146	0.168	0.137	0.100	0.128	0.123	0.079	0.095	0.093	0.101	0.076	0.058	0.074	0.064	0.057	0.090	0.053	0.089	0.086	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	0.095	1.000						
7	0.000	0.054	0.051	0.059	0.087	0.115	0.171	0.174	0.169	0.156	0.113	0.113	0.134	0.148	0.142	0.116	0.170	0.115	0.134	0.144	0.113	0.144	0.157	0.091	0.081	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	0.106	1.000							
8	0.000	0.056	0.065	0.089	0.094	0.109	0.168	0.168	0.153	0.152	0.152	0.132	0.137	0.142	0.125	0.189	0.158	0.156	0.112	0.082	0.132	0.133	0.152	0.124	0.134	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	0.099	1.000								
9	0.000	0.096	0.074	0.084	0.098	0.112	0.147	0.167	0.145	0.145	0.103	0.107	0.113	0.116	0.114	0.087	0.049	0.097	0.083	0.099	0.093	0.130	0.175	0.087	0.059	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	0.094	1.000									
10	0.000	0.086	0.091	0.096	0.112	0.115	0.135	0.134	0.134	0.126	0.096	0.099	0.094	0.087	0.082	0.102	0.118	0.088	0.101	0.101	0.128	0.117	0.110	0.091	0.060	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	0.058	1.000										
11	0.000	0.092	0.096	0.102	0.102	0.117	0.129	0.113	0.113	0.113	0.102	0.092	0.080	0.066	0.097	0.091	0.075	0.086	0.070	0.070	0.114	0.106	0.049	0.072	0.117	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	0.084	1.000											
12	0.000	0.081	0.089	0.081	0.111	0.106	0.099	0.099	0.114	0.103	0.094	0.097	0.089	0.086	0.108	0.090	0.076	0.123	0.036	0.089	0.035	0.086	0.049	0.042	0.067	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	0.051	1.000												
13	0.000	0.059	0.086	0.083	0.107	0.101	0.100	0.096	0.093	0.089	0.083	0.079	0.076	0.098	0.056	0.066	0.073	0.086	0.036	0.061	0.040	0.040	0.049	0.042	0.040	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	0.080	1.000													
14	0.000	0.105	0.090	0.083	0.080	0.080	0.094	0.089	0.086	0.069	0.083	0.084	0.078	0.078	0.063	0.050	0.035	0.096	0.064	0.057	0.035	0.040	0.078	0.042	0.040	0.063	0.063	0.098	0.099	0.089	0.107	0.104	0.117	1.000														
15	0.000	0.084	0.082	0.079	0.073	0.075	0.082	0.078	0.076	0.072	0.072	0.059	0.056	0.085	0.060	0.083	0.057	0.065	0.040	0.052	0.035	0.040	0.049	0.042	0.040	0.063	0.063	0.098	0.099	0.089	0.107	0.104	1.000															
16	0.000	0.085	0.081	0.075	0.082	0.083	0.073	0.064	0.060	0.060	0.068	0.056	0.061	0.058	0.069	0.028	0.058	0.031	0.037	0.051	0.035	0.040	0.049	0.042	0.040	0.063	0.063	0.098	0.099	0.089	0.107	1.000																
17	0.000	0.078	0.060	0.072	0.061	0.069	0.068	0.061	0.068	0.058	0.058	0.062	0.051	0.057	0.044	0.022	0.028	0.031	0.047	0.044	0.035	0.040	0.040	0.042	0.040	0.063	0.063	0.098	0.099	0.089	1.000																	
18	0.000	0.060	0.056	0.061	0.061	0.086	0.063	0.061	0.068	0.051	0.046	0.062	0.051	0.059	0.045	0.038	0.028	0.029	0.039	0.065	0.035	0.040	0.049	0.042	0.040	0.063	0.063	0.098	0.099	1.000																		
19	0.000	0.073	0.079	0.076	0.072	0.079	0.062	0.057	0.058	0.058	0.056	0.058	0.037	0.031	0.023	0.025	0.054	0.046	0.017	0.031	0.035	0.040	0.049	0.042	0.042	0.063	0.063	0.098	0.099																			
20	0.000	0.110	0.099	0.089	0.073	0.073	0.053	0.056	0.045	0.047	0.049	0.041	0.056	0.061	0.060	0.026	0.047	0.021	0.039	0.020	0.035	0.040	0.049	0.042	0.040	0.063	0.063	0.098																				
21	0.000	0.062	0.076	0.081	0.063	0.067	0.073	0.067	0.042	0.050	0.048	0.038	0.050	0.029	0.069	0.020	0.024	0.020	0.037	0.020	0.035	0.040	0.049	0.042	0.040	0.063	0.063																					
22	0.000	0.078	0.083	0.072	0.058	0.053	0.044	0.040	0.038	0.032	0.035	0.038	0.029	0.054	0.016	0.041	0.028	0.029	0.017	0.020	0.035	0.040	0.049	0.042	0.040	0.063	0.063																					
23	0.000	0.081	0.081	0.061	0.051	0.054	0.039	0.035	0.025	0.030	0.020	0.020	0.026	0.059	0.025	0.038	0.028	0.029	0.017	0.020	0.035	0.040	0.049	0.042	0.040																							
24	0.000	0.079	0.058	0.060	0.046	0.036	0.030	0.030	0.039	0.022	0.028	0.035	0.042	0.031	0.023	0.025	0.028	0.029	0.017	0.020	0.035	0.040	0.049	0.042	0.042																							
25	0.000	0.055	0.070	0.058	0.036	0.047	0.024	0.030	0.031	0.031	0.029	0.020	0.029	0.016	0.026	0.019	0.028	0.029	0.020	0.020	0.035	0.040	0.049																									
26	0.000	0.026	0.015	0.038	0.028	0.032	0.024	0.028	0.029	0.034	0.036	0.041	0.030	0.030	0.022	0.019	0.020	0.029	0.017	0.020	0.035	0.040	0.040																									
27	0.000	0.026	0.036	0.044	0.036	0.033	0.024	0.028	0.025	0.030	0.043	0.020	0.030	0.017	0.038	0.019	0.028	0.029	0.017	0.020																												
28	0.000	0.026	0.043	0.036	0.036	0.030	0.025	0.028	0.030	0.030	0.020	0.020	0.026	0.017	0.037	0.019	0.028	0.029	0.017	0.020																												
29	0.000	0.026	0.041	0.027	0.045	0.032	0.029	0.030	0.039	0.021	0.025	0.047	0.042	0.017	0.024	0.019	0.028	0.029	0.017	0.020																												
30	0.000	0.026	0.015	0.025	0.037	0.020	0.036	0.027	0.035	0.022	0.052	0.040	0.012	0.017	0.024	0.019	0.028	0.029																														
31	0.000	0.026	0.038	0.038	0.027	0.006	0.033	0.041	0.029	0.025	0.021	0.016	0.012	0.017	0.024	0.019	0.028																														
32	0.000	0.026	0.040	0.049	0.026	0.031	0.022	0.022	0.043	0.029	0.029	0.016	0.012	0.017	0.024	0.028	0.028																														
33	0.000	0.028	0.037	0.066	0.034	0.029	0.013	0.034	0.032	0.026	0.026	0.016	0.012	0.017	0.024																																
34	0.000	0.026	0.041	0.014	0.045	0.030	0.024	0.027	0.031	0.021	0.026	0.016	0.012	0.017																																	
35	0.000	0.037	0.037	0.030	0.055	0.033	0.028	0.031	0.021	0.021	0.026	0.016	0.012																																		
36	0.000	0.037	0.016	0.033	0.052	0.029	0.025	0.011	0.021	0.021	0.026	0.016																																			
37	0.000	0.037	0.040	0.034	0.047	0.029	0.027	0.011	0.021	0.021	0.026																																				
38	0.000	0.037	0.049	0.066	0.014	0.013	0.024	0.011	0.021	0.021																																					
39	0.000	0.037	0.013	0.013	0.010	0.024	0.024	0.011	0.021	0.021																																					
40	0.000	0.026	0.037	0.030	0.010	0.014	0.024	0.011	0.021	0.024																																					
41	0.000	0.026	0.037	0.013	0.010	0.014	0.024	0.011	0.024																																						

DESCRIPTION: Selected Reserve Separation Rates

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

Probability that a member exits the status (due to non-retirement causes) during the fiscal year.

Values for certain cells in above rate table may represent little to no exposure in the population, hence have minimal or no impact on results.

Blank cells should be considered a value of zero ('0.000').

Enlisted Selected Reserve Separation Rates (Non-Retirement Causes)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.128	0.169	0.164	0.153	0.156	0.160	0.164	0.171	0.164	0.176	0.177	0.170	0.190	0.189	0.182	0.203	0.171	0.197	0.192	0.190	0.189	0.191	0.200	0.174	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000
1	0.000	0.233	0.214	0.149	0.141	0.144	0.148	0.149	0.148	0.151	0.159	0.151	0.165	0.151	0.155	0.159	0.162	0.145	0.157	0.157	0.149	0.177	0.162	0.157	0.147	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000	
2	0.000	0.155	0.133	0.116	0.127	0.134	0.140	0.135	0.137	0.148	0.145	0.134	0.141	0.137	0.136	0.132	0.137	0.146	0.129	0.119	0.129	0.132	0.144	0.128	0.144	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000		
3	0.000	0.103	0.108	0.110	0.129	0.131	0.133	0.130	0.129	0.133	0.143	0.134	0.141	0.137	0.127	0.131	0.126	0.130	0.122	0.111	0.117	0.136	0.152	0.130	0.102	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000			
4	0.000	0.093	0.106	0.135	0.135	0.137	0.143	0.142	0.138	0.142	0.133	0.136	0.138	0.140	0.140	0.124	0.121	0.128	0.120	0.113	0.117	0.109	0.117	0.141	0.139	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000				
5	0.000	0.226	0.293	0.324	0.341	0.335	0.318	0.309	0.294	0.294	0.284	0.257	0.261	0.257	0.216	0.225	0.211	0.204	0.204	0.175	0.191	0.158	0.159	0.139	0.148	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000					
6	0.000	0.233	0.210	0.235	0.237	0.238	0.229	0.225	0.216	0.216	0.196	0.196	0.202	0.180	0.170	0.186	0.151	0.150	0.149	0.146	0.134	0.133	0.143	0.134	0.165	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000						
7	0.000	0.228	0.278	0.299	0.305	0.306	0.308	0.292	0.288	0.280	0.254	0.258	0.248	0.227	0.249	0.203	0.198	0.193	0.186	0.191	0.167	0.167	0.162	0.158	0.153	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000							
8	0.000	0.238	0.231	0.233	0.230	0.224	0.223	0.217	0.205	0.202	0.192	0.187	0.187	0.169	0.173	0.162	0.153	0.151	0.163	0.146	0.147	0.149	0.143	0.155	0.155	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000								
9	0.000	0.178	0.173	0.178	0.183	0.186	0.179	0.179	0.176	0.173	0.169	0.161	0.167	0.148	0.157	0.138	0.160	0.128	0.132	0.131	0.118	0.141	0.136	0.148	0.151	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000									
10	0.000	0.145	0.143	0.160	0.170	0.168	0.170	0.175	0.158	0.165	0.165	0.170	0.145	0.148	0.151	0.135	0.132	0.127	0.119	0.100	0.103	0.107	0.121	0.121	0.107	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	0.140	1.000										
11	0.000	0.178	0.167	0.154	0.159	0.159	0.160	0.161	0.157	0.154	0.156	0.154	0.130	0.138	0.132	0.146	0.125	0.136	0.124	0.119	0.115	0.097	0.101	0.121	0.135	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	0.140	1.000											
12	0.000	0.161	0.132	0.127	0.134	0.134	0.139	0.147	0.132	0.138	0.127	0.131	0.121	0.121	0.113	0.105	0.125	0.110	0.094	0.093	0.109	0.113	0.085	0.080	0.106	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	0.140	1.000												
13	0.000	0.148	0.132	0.131	0.140	0.137	0.142	0.141	0.129	0.137	0.118	0.136	0.131	0.110	0.120	0.110	0.114	0.106	0.076	0.098	0.101	0.075	0.061	0.098	0.063	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	0.140	1.000													
14	0.000	0.115	0.110	0.112	0.111	0.107	0.114	0.114	0.113	0.113	0.116	0.115	0.104	0.088	0.087	0.084	0.097	0.093	0.085	0.083	0.073	0.084	0.086	0.093	0.078	0.135	0.135	0.156	0.156	0.156	0.140	0.140	0.140	1.000														
15	0.000	0.094	0.097	0.093	0.096	0.096	0.094	0.099	0.094	0.091	0.094	0.110	0.092	0.091	0.094	0.093	0.073	0.093	0.085	0.090	0.074	0.079	0.073	0.044	0.075	0.135	0.135	0.156	0.156	0.156	0.140	0.140	1.000															
16	0.000	0.105	0.082	0.085	0.088	0.085	0.085	0.082	0.077	0.076	0.084	0.087	0.084	0.074	0.076	0.056	0.056	0.055	0.054	0.059	0.085	0.069	0.059	0.056	0.074	0.135	0.135	0.156	0.156	0.156	0.140	1.000																
17	0.000	0.081	0.074	0.071	0.073	0.067	0.075	0.075	0.072	0.067	0.071	0.072	0.052	0.065	0.070	0.061	0.064	0.060	0.037	0.062	0.044	0.040	0.065	0.048	0.062	0.135	0.135	0.156	0.156	0.156	1.000																	
18	0.000	0.063	0.062	0.060	0.058	0.067	0.062	0.060	0.053	0.075	0.055	0.065	0.088	0.075	0.067	0.061	0.081	0.052	0.056	0.084	0.044	0.081	0.047	0.048	0.043	0.135	0.135	0.156	0.156	1.000																		
19	0.000	0.111	0.095	0.074	0.071	0.086	0.084	0.083	0.079	0.057	0.070	0.072	0.082	0.087	0.066	0.087	0.068	0.061	0.061	0.071	0.076	0.084	0.090	0.066	0.043	0.135	0.135	0.156	1.000																			
20	0.000	0.150	0.119	0.101	0.099	0.097	0.097	0.099	0.093	0.061	0.092	0.089	0.092	0.091	0.094	0.093	0.090	0.081	0.086	0.078	0.060	0.067	0.056	0.041	0.043	0.135	0.135	1.000																				
21	0.000	0.137	0.109	0.093	0.092	0.086	0.096	0.084	0.083	0.046	0.098	0.107	0.084	0.106	0.091	0.085	0.101	0.087	0.097	0.057	0.065	0.048	0.021	0.069	0.043	0.135	1.000																					
22	0.000	0.115	0.100	0.092	0.085	0.096	0.085	0.087	0.051	0.051	0.087	0.088	0.089	0.085	0.084	0.081	0.086	0.090	0.096	0.062	0.016	0.029	0.017	0.010	0.043	1.000																						
23	0.000	0.108	0.086	0.077	0.082	0.050	0.077	0.082	0.084	0.041	0.076	0.073	0.069	0.076	0.068	0.005	0.090	0.008	0.008	0.019	0.016	0.028	0.017	0.010	1.000																							
24	0.000	0.113	0.076	0.074	0.071	0.043	0.067	0.074	0.059	0.033	0.073	0.072	0.082	0.039	0.079	0.025	0.106	0.096	0.047	0.019	0.041	0.075	0.017	1.000																								
25	0.073	0.073	0.077	0.061	0.061	0.062	0.067	0.064	0.071	0.068	0.068	0.086	0.048	0.048	0.075	0.082	0.089	0.056	0.086	0.078	0.074	0.067	1.000																									
26	0.047	0.094	0.059	0.055	0.056	0.059	0.057	0.057	0.049	0.046	0.052	0.060	0.060	0.051	0.087	0.088	0.059	0.012	0.016	0.057	0.085	1.000																										
27	0.047	0.095	0.054	0.047	0.045	0.050	0.038	0.039	0.051	0.059	0.050	0.066	0.046	0.047	0.079	0.081	0.026	0.008	0.016	0.062	1.000																											
28	0.047	0.057	0.040	0.042	0.038	0.049	0.041	0.044	0.044	0.041	0.036	0.069	0.060	0.057	0.060	0.005	0.028	0.008	0.016	1.000																												
29	0.047	0.061	0.037	0.039	0.036	0.033	0.039	0.036	0.033	0.051	0.053	0.064	0.032	0.025	0.011	0.025	0.063	0.008	1.000																													
30	0.000	0.047	0.036	0.030	0.032	0.037	0.042	0.024	0.040	0.049	0.047	0.037	0.010	0.009	0.006	0.025	0.063	0.008	1.000																														
31	0.000	0.047	0.029	0.030	0.026	0.025	0.026	0.035	0.039	0.033	0.029	0.018	0.008	0.017	0.006	0.025	0.063	1.000																															
32	0.000	0.047	0.027	0.023	0.031	0.031	0.040	0.032	0.049	0.027	0.014	0.013	0.005	0.013	0.006	0.025	1.000																																
33	0.000	0.047	0.025	0.016	0.031	0.028	0.036	0.028	0.036	0.028	0.020	0.021	0.017	0.021	0.006	1.000																																	
34	0.000	0.047	0.021	0.028	0.036	0.046	0.042	0.042	0.018	0.011	0.012	0.021	0.017	0.031	1.000																																		
35	0.000	0.047	0.028	0.025	0.034	0.030	0.041	0.019	0.017	0.005	0.012	0.021	0.075	1.000																																			
36	0.000	0.047	0.025	0.024	0.027	0.028	0.024	0.010	0.016	0.005	0.024	0.021	1.000																																				
37	0.000	0.047	0.032	0.026	0.023	0.025	0.004	0.018	0.018	0.005	0.012	1.000																																					
38	0.000	0.047	0.024	0.025	0.025	0.025	0.004	0.023	0.018	0.005	1.000																																						
39	0.000	0.047	0.024	0.025	0.011	0.006	0.004	0.023	0.018	1.000																																							
40	0.000	0.047	0.024	0.024	0.011	0.006	0.041	0.004	1.000																																								
41	0.000	0.047	0.025	0.025	0.011	0.006	0.004	1.000																																									

DESCRIPTION: Selected Reserve Separation Rates

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

Probability that a member exits the status (due to non-retirement causes) during the fiscal year.

Values for certain cells in above rate table may represent little to no exposure in the population, hence have minimal or no impact on results.

Blank cells should be considered a value of zero ('0.000').

Officer Selected Reserve Reentrant Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.042	0.353	0.659	0.157	0.313	0.580	0.329	0.351	0.346	0.368	0.365	0.275	0.227	0.264	0.283	0.192	0.222	0.150	0.259	0.339	0.174	0.214	0.234	0.239	0.298	0.239	0.259	0.211	0.243	0.297	0.355	0.211	0.213	0.238	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267
1	0.000	0.042	0.353	0.659	0.336	0.294	0.278	0.183	0.123	0.087	0.055	0.057	0.105	0.057	0.066	0.069	0.046	0.052	0.059	0.027	0.027	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028		
2	0.000	0.042	0.353	0.561	0.300	0.119	0.220	0.220	0.190	0.128	0.105	0.096	0.098	0.066	0.066	0.051	0.049	0.033	0.048	0.027	0.027	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028			
3	0.000	0.042	0.281	0.231	0.126	0.063	0.146	0.569	0.391	0.256	0.126	0.178	0.135	0.089	0.066	0.089	0.069	0.035	0.054	0.027	0.027	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028					
4	0.000	0.042	0.128	0.105	0.050	0.048	0.422	0.605	0.394	0.202	0.202	0.184	0.128	0.128	0.058	0.088	0.036	0.036	0.051	0.056	0.036	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028						
5	0.000	0.042	0.050	0.041	0.044	0.069	0.269	0.342	0.216	0.148	0.137	0.133	0.091	0.090	0.063	0.059	0.053	0.061	0.067	0.040	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028									
6	0.000	0.042	0.038	0.049	0.071	0.088	0.270	0.288	0.223	0.194	0.139	0.154	0.150	0.101	0.078	0.083	0.070	0.049	0.074	0.044	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028											
7	0.000	0.042	0.043	0.063	0.076	0.130	0.219	0.222	0.215	0.202	0.178	0.154	0.134	0.121	0.110	0.151	0.127	0.111	0.130	0.093	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028													
8	0.000	0.042	0.041	0.059	0.065	0.103	0.205	0.189	0.176	0.176	0.161	0.126	0.097	0.106	0.106	0.065	0.064	0.082	0.072	0.082	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028														
9	0.000	0.042	0.055	0.064	0.075	0.086	0.171	0.224	0.173	0.135	0.148	0.148	0.091	0.087	0.089	0.108	0.058	0.055	0.054	0.099	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028															
10	0.000	0.042	0.059	0.066	0.066	0.075	0.151	0.162	0.147	0.115	0.097	0.085	0.096	0.074	0.090	0.047	0.042	0.074	0.039	0.070	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028	0.028																
11	0.000	0.042	0.054	0.072	0.085	0.097	0.119	0.113	0.099	0.112	0.093	0.072	0.072	0.079	0.062	0.063	0.080	0.046	0.039	0.070	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028	0.028																	
12	0.000	0.042	0.069	0.069	0.078	0.097	0.103	0.094	0.079	0.085	0.065	0.058	0.059	0.058	0.052	0.090	0.065	0.078	0.067	0.063	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028	0.028																		
13	0.000	0.042	0.052	0.059	0.065	0.074	0.069	0.068	0.073	0.067	0.060	0.062	0.043	0.051	0.056	0.037	0.045	0.038	0.071	0.042	0.042	0.040	0.038	0.032	0.029	0.028	0.028	0.028	0.028																			
14	0.000	0.042	0.046	0.056	0.066	0.086	0.051	0.052	0.058	0.045	0.071	0.050	0.037	0.047	0.074	0.023	0.035	0.040	0.024	0.031	0.031	0.040	0.038	0.032	0.029	0.028	0.028	0.028																				
15	0.000	0.042	0.042	0.047	0.070	0.049	0.041	0.037	0.051	0.036	0.039	0.031	0.046	0.039	0.057	0.038	0.028	0.032	0.024	0.043	0.037	0.040	0.038	0.032	0.029	0.028	0.028	0.028																					
16	0.000	0.042	0.042	0.046	0.051	0.054	0.040	0.033	0.047	0.032	0.040	0.029	0.028	0.033	0.030	0.032	0.020	0.027	0.024	0.026	0.037	0.040	0.038	0.032	0.029	0.028	0.028																						
17	0.000	0.042	0.042	0.040	0.043	0.049	0.033	0.034	0.029	0.032	0.034	0.030	0.035	0.034	0.039	0.035	0.020	0.023	0.024	0.028	0.037	0.040	0.038	0.032	0.029	0.028	0.028																							
18	0.000	0.042	0.033	0.038	0.038	0.048	0.038	0.035	0.040	0.029	0.037	0.030	0.026	0.034	0.031	0.022	0.020	0.031	0.024	0.021	0.037	0.040	0.038	0.032	0.029	0.028																								
19	0.000	0.042	0.034	0.037	0.032	0.040	0.031	0.036	0.032	0.024	0.031	0.028	0.037	0.030	0.028	0.017	0.020	0.020	0.024	0.021	0.037	0.040	0.038	0.032	0.029	0.028																									
20	0.000	0.042	0.035	0.032	0.038	0.045	0.033	0.032	0.036	0.037	0.039	0.031	0.026	0.035	0.027	0.027	0.020	0.016	0.024	0.021	0.037	0.040	0.038	0.032	0.029																										
21	0.000	0.042	0.039	0.036	0.040	0.035	0.036	0.033	0.032	0.032	0.030	0.034	0.024	0.031	0.016	0.025	0.020	0.016	0.024	0.021	0.037	0.040	0.038	0.032	0.029																										
22	0.000	0.042	0.039	0.036	0.034	0.035	0.032	0.026	0.028	0.032	0.022	0.029	0.030	0.033	0.025	0.022	0.020	0.016	0.018	0.021	0.037	0.040	0.038	0.032																											
23	0.000	0.042	0.042	0.039	0.045	0.048	0.038	0.033	0.028	0.031	0.030	0.030	0.031	0.033	0.025	0.019	0.020	0.016	0.018	0.021	0.037	0.040	0.038																												
24	0.000	0.042	0.049	0.038	0.029	0.040	0.031	0.031	0.037	0.024	0.029	0.028	0.037	0.031	0.023	0.022	0.020	0.016	0.018	0.021	0.037	0.040	0.038																												
25	0.000	0.042	0.048	0.040	0.040	0.027	0.026	0.031	0.032	0.032	0.029	0.029	0.029	0.021	0.025	0.020	0.020	0.016	0.018	0.021	0.037	0.040																													
26	0.000	0.030	0.039	0.028	0.028	0.033	0.026	0.030	0.029	0.031	0.039	0.034	0.021	0.022	0.016	0.019	0.020	0.016	0.018	0.021	0.037	0.037																													
27	0.000	0.030	0.033	0.043	0.037	0.037	0.032	0.026	0.025	0.034	0.026	0.029	0.021	0.021	0.020	0.020	0.020	0.016	0.018	0.021																														
28	0.000	0.030	0.043	0.035	0.035	0.032	0.020	0.021	0.025	0.032	0.021	0.032	0.021	0.019	0.025	0.019	0.020	0.016	0.018																															
29	0.000	0.030	0.035	0.038	0.030	0.029	0.019	0.029	0.029	0.025	0.025	0.024	0.021	0.002	0.024	0.022	0.020	0.016	0.018																															
30	0.000	0.030	0.031	0.027	0.033	0.018	0.030	0.024	0.023	0.022	0.031	0.024	0.015	0.002	0.024	0.019	0.020	0.016																																
31	0.000	0.030	0.020	0.037	0.029	0.013	0.027	0.021	0.027	0.022	0.015	0.016	0.015	0.002	0.024	0.019																																	
32	0.000	0.030	0.032	0.029	0.026	0.022	0.026	0.022	0.024	0.026	0.015	0.016	0.015	0.002	0.024																																		
33	0.000	0.030	0.032	0.013	0.021	0.021	0.021	0.014	0.025	0.015	0.015	0.016	0.015	0.002																																			
34	0.000	0.030	0.030	0.017	0.023	0.023	0.017	0.021	0.017	0.017	0.015	0.016	0.015																																				
35	0.000	0.030	0.013	0.030	0.020	0.020	0.018	0.024	0.017	0.014	0.015	0.016																																					
36	0.000	0.030	0.013	0.021	0.025	0.013	0.013	0.021	0.017	0.014	0.015																																						
37	0.000	0.030	0.013	0.029	0.032	0.022	0.022	0.011	0.017	0.014																																							
38	0.000	0.030	0.013	0.030	0.013	0.026	0.026	0.008	0.008																																								
39	0.000	0.030	0.013	0.013	0.008	0.009	0.009	0.008	0.008																																								
40	0.000	0.030	0.013	0.013	0.008	0.008	0.009																																										
41	0.000	0.030	0.013	0.013	0.008	0.008																																											

DESCRIPTION: Selected Reserve Reentrant Rates -- Members have a prior entry date.
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Increment rate that a member enters reserve status during the fiscal year.
For PEBD YOS greater than 15, if the reentrant rate > loss rate then set the reentrant rate equal to the loss rate.
Additional adjustments are made in an open group valuation in order to prevent the population from becoming "over-strengthed" relative to DoD-Comptroller projected endstrengths.
Values for certain cells in above rate table may represent little to no exposure in the population, hence have minimal or no impact on results.
Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Enlisted Selected Reserve Reentrant Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.121	0.030	0.029	0.038	0.043	0.048	0.050	0.053	0.060	0.059	0.067	0.065	0.060	0.070	0.064	0.073	0.073	0.085	0.081	0.083	0.101	0.082	0.086	0.081	0.092	0.094	0.088	0.169	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168
1	0.000	0.006	0.012	0.030	0.041	0.046	0.051	0.051	0.052	0.054	0.052	0.052	0.058	0.046	0.048	0.057	0.063	0.057	0.058	0.051	0.060	0.047	0.059	0.051	0.057	0.105	0.075	0.136	0.143	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	
2	0.000	0.004	0.004	0.048	0.048	0.048	0.070	0.087	0.083	0.086	0.080	0.073	0.070	0.077	0.066	0.078	0.074	0.060	0.082	0.066	0.068	0.101	0.081	0.099	0.117	0.236	0.397	0.344	0.364	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168		
3	0.000	0.012	0.066	0.139	0.176	0.187	0.190	0.194	0.186	0.195	0.163	0.151	0.153	0.128	0.121	0.138	0.137	0.142	0.128	0.110	0.102	0.102	0.127	0.133	0.207	0.452	0.603	0.563	0.267	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168			
4	0.000	0.022	0.077	0.134	0.144	0.139	0.142	0.141	0.145	0.151	0.138	0.098	0.120	0.105	0.097	0.083	0.088	0.088	0.091	0.081	0.073	0.079	0.104	0.125	0.125	0.231	0.317	0.240	0.286	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168				
5	0.000	0.026	0.074	0.124	0.133	0.135	0.137	0.134	0.131	0.133	0.129	0.112	0.108	0.097	0.097	0.089	0.093	0.109	0.154	0.155	0.216	0.336	0.544	0.657	0.880	1.140	1.155	0.896	0.960	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168					
6	0.000	0.050	0.099	0.144	0.166	0.173	0.187	0.185	0.185	0.198	0.198	0.220	0.234	0.230	0.189	0.205	0.206	0.208	0.178	0.161	0.146	0.237	0.181	0.188	0.219	0.238	0.175	0.171	0.412	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168						
7	0.000	0.052	0.074	0.117	0.167	0.217	0.257	0.290	0.318	0.368	0.435	0.433	0.492	0.536	0.593	0.605	0.566	0.430	0.347	0.284	0.229	0.237	0.220	0.233	0.194	0.251	0.258	0.234	0.171	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168							
8	0.000	0.027	0.041	0.088	0.088	0.098	0.100	0.103	0.115	0.108	0.118	0.107	0.114	0.114	0.128	0.119	0.116	0.108	0.106	0.090	0.086	0.084	0.140	0.153	0.153	0.105	0.153	0.234	0.240	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168								
9	0.000	0.028	0.051	0.070	0.082	0.090	0.091	0.085	0.089	0.094	0.087	0.091	0.083	0.098	0.099	0.084	0.097	0.092	0.093	0.073	0.092	0.078	0.096	0.117	0.166	0.110	0.203	0.073	0.107	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168									
10	0.000	0.032	0.046	0.060	0.071	0.064	0.075	0.078	0.087	0.086	0.079	0.083	0.090	0.086	0.068	0.074	0.073	0.074	0.067	0.063	0.061	0.079	0.090	0.076	0.141	0.165	0.075	0.073	0.107	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168											
11	0.000	0.027	0.040	0.053	0.053	0.066	0.075	0.070	0.077	0.079	0.073	0.077	0.072	0.070	0.092	0.095	0.085	0.091	0.080	0.069	0.079	0.087	0.054	0.072	0.082	0.096	0.075	0.073	0.107	0.168	0.168	0.168	0.168	0.168	0.168	0.168												
12	0.000	0.032	0.038	0.051	0.053	0.059	0.061	0.060	0.056	0.067	0.070	0.070	0.070	0.069	0.078	0.080	0.081	0.076	0.071	0.066	0.058	0.062	0.074	0.053	0.099	0.138	0.075	0.073	0.107	0.168	0.168	0.168	0.168	0.168	0.168													
13	0.000	0.030	0.038	0.042	0.049	0.051	0.049	0.060	0.056	0.063	0.057	0.061	0.067	0.060	0.064	0.060	0.066	0.065	0.044	0.059	0.044	0.035	0.060	0.061	0.046	0.099	0.075	0.073	0.107	0.168	0.168	0.168	0.168	0.168														
14	0.000	0.046	0.038	0.041	0.047	0.050	0.053	0.053	0.052	0.046	0.048	0.056	0.055	0.057	0.063	0.073	0.054	0.064	0.040	0.053	0.045	0.042	0.052	0.054	0.043	0.028	0.075	0.073	0.107	0.168	0.168	0.168	0.168															
15	0.000	0.035	0.027	0.036	0.035	0.037	0.042	0.039	0.039	0.039	0.045	0.046	0.046	0.047	0.036	0.037	0.038	0.031	0.038	0.038	0.037	0.038	0.023	0.044	0.044	0.028	0.075	0.075	0.107	0.168	0.168	0.168																
16	0.000	0.034	0.030	0.030	0.033	0.033	0.032	0.037	0.038	0.038	0.039	0.044	0.034	0.038	0.029	0.035	0.027	0.033	0.025	0.025	0.021	0.032	0.021	0.011	0.011	0.028	0.075	0.073	0.107	0.168	0.168																	
17	0.000	0.029	0.027	0.027	0.028	0.029	0.028	0.027	0.030	0.027	0.033	0.025	0.032	0.025	0.031	0.028	0.020	0.028	0.018	0.016	0.020	0.017	0.020	0.011	0.015	0.028	0.075	0.073	0.107	0.168																		
18	0.000	0.046	0.024	0.025	0.024	0.022	0.026	0.020	0.025	0.015	0.023	0.015	0.032	0.018	0.031	0.028	0.015	0.028	0.005	0.006	0.004	0.006	0.009	0.011	0.015	0.028	0.075	0.073	0.107																			
19	0.000	0.034	0.038	0.022	0.021	0.022	0.028	0.021	0.018	0.022	0.025	0.012	0.026	0.012	0.016	0.021	0.014	0.018	0.022	0.016	0.013	0.006	0.009	0.011	0.015	0.028	0.075	0.073	0.107																			
20	0.000	0.021	0.022	0.021	0.019	0.018	0.019	0.015	0.021	0.020	0.025	0.016	0.021	0.013	0.023	0.014	0.017	0.017	0.011	0.012	0.012	0.006	0.009	0.011	0.015	0.028	0.075																					
21	0.000	0.025	0.022	0.019	0.019	0.014	0.017	0.020	0.017	0.023	0.016	0.019	0.018	0.018	0.018	0.019	0.010	0.020	0.012	0.011	0.015	0.006	0.009	0.011	0.015	0.028																						
22	0.000	0.020	0.024	0.014	0.022	0.013	0.022	0.018	0.023	0.020	0.019	0.015	0.020	0.016	0.018	0.010	0.015	0.009	0.005	0.016	0.004	0.006	0.009	0.011	0.015																							
23	0.000	0.030	0.023	0.017	0.012	0.017	0.017	0.020	0.020	0.015	0.017	0.013	0.005	0.013	0.019	0.013	0.011	0.010	0.005	0.006	0.004	0.006	0.009																								
24	0.000	0.026	0.023	0.016	0.015	0.021	0.016	0.009	0.018	0.015	0.011	0.012	0.014	0.012	0.019	0.009	0.014	0.012	0.005	0.006	0.004	0.006																									
25	0.000	0.020	0.020	0.025	0.015	0.025	0.017	0.019	0.017	0.013	0.013	0.016	0.013	0.011	0.005	0.007	0.005	0.003	0.005	0.006	0.012	0.006																									
26	0.000	0.024	0.023	0.018	0.018	0.014	0.016	0.015	0.019	0.014	0.013	0.015	0.014	0.008	0.005	0.007	0.005	0.003	0.005	0.006	0.015	0.004																									
27	0.000	0.030	0.017	0.014	0.021	0.013	0.022	0.018	0.017	0.017	0.007	0.015	0.018	0.009	0.005	0.007	0.005	0.003	0.005	0.006	0.004																										
28	0.000	0.022	0.023	0.017	0.012	0.017	0.015	0.013	0.012	0.011	0.019	0.009	0.005	0.010	0.005	0.007	0.005	0.003	0.005	0.006	0.004																										
29	0.000	0.026	0.023	0.016	0.016	0.016	0.013	0.009	0.015	0.010	0.011	0.011	0.005	0.004	0.005	0.007	0.005	0.003	0.005	0.006																											
30	0.000	0.026	0.016	0.013	0.011	0.018	0.009	0.011	0.007	0.007	0.010	0.013	0.003	0.004	0.005	0.007	0.005	0.003	0.005	0.006																											
31	0.000	0.026	0.012	0.014	0.017	0.011	0.015	0.016	0.013	0.012	0.008	0.004	0.003	0.004	0.005	0.007	0.005	0.003	0.005																												
32	0.000	0.026	0.017	0.017	0.014	0.021	0.021	0.007	0.010	0.010	0.007	0.004	0.003	0.009	0.005	0.007																															
33	0.000	0.026	0.026	0.020	0.014	0.018	0.009	0.009	0.011	0.004	0.004	0.004	0.003	0.010	0.005																																
34	0.000	0.026	0.011	0.009	0.010	0.008	0.013	0.012	0.004	0.010	0.007	0.004	0.003	0.004																																	
35	0.000	0.026	0.011	0.005	0.011	0.008	0.013	0.013	0.004	0.010	0.007	0.004																																			
36	0.000	0.028	0.011	0.008	0.011	0.011	0.009	0.002	0.004	0.010	0.007	0.007																																			
37	0.000	0.028	0.011	0.010	0.008	0.014	0.007	0.007	0.004	0.010																																					
38	0.000	0.026	0.011	0.010	0.011	0.008	0.007	0.002	0.004																																						
39	0.000	0.026	0.011	0.010	0.003	0.008	0.007	0.002																																							
40	0.000	0.026	0.011	0.010	0.003	0.008	0.007																																								
41	0.000	0.026	0.011	0.010	0.003	0.008																																									

DESCRIPTION: Selected Reserve Reentrant Rates -- Members have a prior entry date.
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Increment rate that a member enters reserve status during the fiscal year.
For PEBD YOS greater than 15, if the reentrant rate > loss rate then set the reentrant rate equal to the loss rate.
Additional adjustments are made in an open group valuation in order to prevent the population from becoming "over-strengthed" relative to DoD-Comptroller projected endstrengths.
Values for certain cells in above rate table may represent little to no exposure in the population, hence have minimal or no impact on results.
Blank cells should be considered a value of zero (0.000).

Officer Selected Reserve Net Separation Rates (Non-Transfer/Retirement)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.012	-0.306	-0.605	-0.128	-0.269	-0.542	-0.294	-0.323	-0.323	-0.335	-0.226	-0.222	-0.154	-0.227	-0.218	-0.128	-0.159	-0.100	-0.196	-0.291	-0.116	-0.135	-0.195	-0.175	-0.262	-0.199	-0.161	-0.112	-0.154	-0.187	-0.251	-0.093	-0.133	-0.187	-0.180	-0.209	-0.173	-0.168	-0.161	-0.172	-0.214	-0.219	-0.085	-0.167	0.066	-0.267	1.000
1	0.000	0.012	-0.306	-0.605	-0.307	-0.250	-0.240	-0.126	-0.084	-0.064	-0.022	-0.018	-0.046	0.033	-0.002	0.010	0.028	0.025	-0.009	0.048	0.047	0.027	0.044	0.007	0.035	0.008	0.012	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	0.078	0.067	0.025	0.020	0.154	0.072	0.305	1.000	
2	0.000	0.012	-0.306	-0.507	-0.182	-0.077	-0.161	-0.134	-0.073	-0.205	-0.057	-0.126	-0.029	-0.015	-0.009	-0.003	0.045	0.045	0.041	0.048	0.039	0.035	0.030	0.033	0.036	0.041	0.032	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	0.078	0.067	0.025	0.020	0.154	0.072	1.000		
3	0.000	0.012	-0.234	-0.180	-0.050	-0.003	-0.278	-0.496	-0.321	-0.135	-0.063	-0.126	-0.064	-0.010	0.018	-0.003	0.019	0.044	0.011	0.051	0.038	0.054	0.032	0.081	0.065	0.107	0.082	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	0.078	0.067	0.025	0.020	0.154	1.000			
4	0.000	0.012	-0.061	-0.020	0.008	0.008	-0.337	-0.513	-0.333	-0.135	-0.142	-0.106	-0.044	-0.053	0.007	0.012	-0.019	-0.019	0.025	0.046	0.024	0.048	0.043	0.052	0.031	0.055	0.115	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	0.078	0.067	0.025	0.020	1.000				
5	0.000	0.012	0.013	0.028	0.015	0.004	-0.175	-0.226	-0.089	-0.065	-0.017	-0.057	0.028	-0.008	0.036	0.006	0.048	-0.009	0.023	0.046	0.053	0.049	0.092	0.087	0.033	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	0.078	0.067	0.025	1.000					
6	0.000	0.012	0.008	0.013	0.011	-0.015	-0.124	-0.120	-0.099	-0.093	-0.040	-0.041	-0.071	-0.006	0.015	0.018	0.006	0.012	0.003	0.020	0.015	0.050	0.015	0.057	0.057	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	0.078	0.067	1.000						
7	0.000	0.012	0.008	-0.003	0.031	-0.014	-0.047	-0.047	-0.077	-0.046	-0.049	-0.041		0.027	0.032	-0.035	0.043	0.004	0.004	0.051	0.071	0.104	0.119	0.059	0.052	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	0.078	1.000							
8	0.000	0.014	0.024	0.031	0.031	0.007	-0.037	-0.021	-0.052	-0.018	-0.007	0.008	0.040	0.036	0.019	0.094	0.094	0.074	0.042		0.090	0.093	0.114	0.092	0.105	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	0.071	1.000								
9	0.000	0.054	0.054	0.021	0.023	0.028	-0.022	-0.057	-0.020	0.011	-0.045	-0.039	0.022	0.029	0.025	-0.021	-0.009	0.042	0.029		0.051	0.090	0.137	0.055	0.030	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	0.066	1.000									
10	0.000	0.048	0.032	0.031	0.047	0.041	-0.015	-0.028	-0.012	0.012	-0.001	0.015	-0.002	0.013	-0.006	0.055	0.076	0.014	0.062	0.031	0.086	0.077	0.072	0.059	0.031	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	0.030	1.000										
11	0.000	0.050	0.042	0.014	0.019	0.019	0.005	0.018	0.014	-0.015	0.009	-0.003	0.008	-0.003	0.035	0.028	-0.005	0.040	0.016		0.072	0.066	0.011	0.040	0.088	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	0.059	1.000											
12	0.000	0.039	0.038	0.033	0.034	0.009	0.009	0.016	0.035	0.018	0.029	0.041	0.032	0.030	0.058		0.014	0.045	0.011	0.006	-0.005	0.026	0.011	0.012	0.013	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	0.023	1.000												
13	0.000	0.017	0.035	0.024	0.043	0.028	0.031	0.029	0.021	0.022	0.023	-0.003	0.033	0.047		0.033	0.028	0.048	-0.035	0.019	-0.005	0.002	0.011	0.012	0.013	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	0.052	1.000													
14	0.000	0.063	0.044	0.027	0.015	0.021	0.043	0.037	0.028	0.021	0.012	0.037	0.043	0.033	-0.011	0.027	0.024	0.056	0.040	0.026	-0.005	0.002	0.011	0.012	0.013	0.035	0.037	0.070	0.071	0.061	0.082	0.076	0.090	1.000														
15	0.000	0.068	0.040	0.041	0.026	0.029	0.034	0.041	0.041	0.041	0.033	0.016	0.019	0.046	0.003	0.045	0.029	0.033	0.016	0.009	0.009	0.002	0.011	0.012	0.013	0.035	0.037	0.070	0.071	0.061	0.082	0.076	1.000															
16	0.000	0.043	0.036	0.030	0.031	0.029	0.034	0.032	0.041	0.013	0.028	0.027	0.033	0.025	0.042		0.038	0.008	0.013	0.025	0.025	0.002	0.011	0.012	0.013	0.035	0.037	0.070	0.071	0.061	0.082	1.000																
17	0.000	0.018	0.047	0.030	0.030	0.019	0.035	0.034	0.030	0.035	0.024	0.028	0.035	0.030	0.005	0.005	0.029	0.007	0.023	0.023	0.016	0.002	0.011	0.012	0.013	0.035	0.037	0.070	0.071	0.061	1.000																	
18	0.000	0.018	0.021	0.024	0.023	0.040	0.025	0.027	0.028	0.024	0.010	0.040	0.030	0.025	0.014		0.010	0.013	0.023	0.035	0.040	0.002	0.011	0.012	0.013	0.035	0.037	0.070	0.071	1.000																		
19	0.000	0.033	0.047	0.041	0.035	0.041	0.032	0.022	0.014	0.028	0.025	0.037	0.021	0.020	0.015	0.023	0.034	0.026	0.021	0.040		0.012	0.011	0.012	0.013	0.035	0.037	0.070	1.000																			
20	0.000	0.068	0.065	0.060	0.036	0.028	0.022	0.024	0.009	0.010	0.011	0.014	0.032	0.028	0.021	0.002	0.027	0.005	0.015	0.003	0.003	0.002	0.011	0.012	0.013	0.035	0.037																					
21	0.000	0.020	0.041	0.044	0.034	0.034	0.009	0.012	0.018	0.019	0.014	0.014	0.017	0.004			0.010	0.004	0.013	0.003	0.003	0.002		0.012	0.013	0.035																						
22	0.000	0.036	0.045	0.047	0.029	0.020	0.010	0.016	0.011	0.018	0.009	0.009		0.023			0.009	0.013		0.003	0.003	0.002		0.012																								
23	0.000	0.039	0.010	0.014	0.007	0.010	0.004	0.003	0.003		0.011	0.011	0.024	0.026	0.003	0.003	0.009	0.013		0.003	0.003	0.002																										
24	0.000	0.035	0.010	0.023					0.003		0.009	0.009	0.007				0.009	0.013																														
25	0.000	0.021	0.024	0.024		0.020			0.006				0.009	0.008	0.001	0.019	0.009	0.013		0.003		0.002																										
26	0.000		0.013	0.018							0.021	0.007	0.012	0.012	0.002	0.020	0.009	0.013		0.003	0.013																										
27	0.000		0.004	0.008		0.001	0.003	0.014	0.005		0.002	0.027	0.005	0.008	0.013	0.003	0.009	0.013		0.003	0.013																										
28	0.000		0.001	0.006			0.014	0.009	0.014	0.021		0.016	0.012	0.012		0.003	0.009	0.013		0.003																												
29	0.000	0.002				0.005	0.004	0.003	0.003	0.002	0.017			0.017	0.012		0.009	0.013																														
30	0.000		0.003	0.006		0.009		0.012	0.008		0.021	0.016		0.017			0.009																															
31	0.000	0.015		0.001	0.009			0.033	0.008	0.017	0.017			0.017																																		
32	0.000			0.004				0.015	0.012	0.014	0.013			0.017																																		
33	0.000		0.008		0.015			0.036	0.015	0.012	0.013																																					
34	0.000			0.004	0.015	0.009	0.006	0.014	0.007		0.013																																				
35	0.000	0.000	0.024	0.035	0.019	0.012	0.012		0.004	0.007	0.013																																				
36	0.000	0.000	0.024	0.031	0.008	0.025	0.003	0.012	0.004	0.003	0.013																																				
37	0.000	0.000	0.024	0.020	0.003	0.020	0.003	0.003	0.004																																						
38	0.000	0.000	0.024	0.032	0.002	0.006	0.015	0.003																																							
39	0.000	0.000	0.024	0.033	0.006	0.006	0.015	0.003																																							
40	0.000	0.024	0.024		0.002	0.006	0.006	0.015																																							
41	0.000	0.024	0.024		0.002	0.006	0.015	0.015																																							

DESCRIPTION: Selected Reserve Net Separation Rates
    Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
    Probability that a member exits the status (due to non-retirement causes)
    offset by the rate that a member reenters during the fiscal year.
    For PEBD YOS greater than 15, if reentrant rate > loss rate, then reentrant is set equal to
    the loss rate (i.e., to not allow any negative net loss).
    Blank cells should be considered a value of zero (0.000).

Enlisted Selected Reserve Net Separation Rates (Non-Transfer/Retirement)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.007	0.139	0.135	0.115	0.113	0.112	0.113	0.118	0.104	0.116	0.110	0.105	0.130	0.119	0.118	0.130	0.098	0.112	0.111	0.107	0.088	0.109	0.114	0.093	0.045	0.053	0.071	-0.010	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000
1	0.000	0.227	0.202	0.119	0.100	0.098	0.097	0.098	0.096	0.097	0.107	0.100	0.107	0.109	0.107	0.102	0.099	0.088	0.099	0.106	0.089	0.130	0.103	0.107	0.090	0.032	0.062	0.023	0.016	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000	
2	0.000	0.151	0.112	0.068	0.057	0.054	0.058	0.048	0.054	0.062	0.065	0.068	0.072	0.075	0.071	0.054	0.064	0.086	0.047	0.055	0.062	0.032	0.063	0.055	0.027	-0.099	-0.260	-0.185	-0.205	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000		
3	0.000	0.091	0.043	-0.028	-0.047	-0.056	-0.057	-0.064	-0.057	-0.061	-0.019	-0.017	-0.011	0.010	0.007	-0.006	-0.011	-0.012	-0.006	0.001	0.015	0.034	0.025	-0.002	-0.104	-0.315	-0.466	-0.404	-0.108	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000			
4	0.000	0.071	0.029	-0.009	-0.009	-0.001	0.001	0.001	-0.006	0.001	-0.004	0.019	0.019	0.019	0.043	0.042	0.041	0.041	0.030	0.033	0.045	0.031	0.013	0.016	0.015	-0.094	-0.180	-0.081	-0.127	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000				
5	0.000	0.201	0.220	0.201	0.209	0.201	0.182	0.176	0.164	0.161	0.156	0.146	0.154	0.161	0.120	0.137	0.119	0.096	0.051	0.022	-0.022	-0.177	-0.384	-0.517	-0.732	-1.003	-1.018	-0.737	-0.801	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000					
6	0.000	0.183	0.112	0.091	0.072	0.066	0.042	0.045	0.034	0.032	0.008	0.034	-0.022	-0.048	-0.018	-0.018	-0.053	-0.056	-0.028	-0.013	-0.011	-0.030	-0.037	-0.054	-0.039	-0.101	-0.038	-0.012	-0.253	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000						
7	0.000	0.177	0.205	0.182	0.138	0.089	0.051	0.002	-0.029	-0.087	-0.181	-0.174	-0.243	-0.309	-0.343	-0.401	-0.368	-0.235	-0.160	-0.092	-0.061	-0.068	-0.058	-0.073	-0.039	-0.114	-0.121	-0.075	-0.012	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000							
8	0.000	0.212	0.191	0.164	0.133	0.124	0.103	0.121	0.103	0.097	0.086	0.085	0.073	0.056	0.045	0.044	0.044	0.044	0.058	0.058	0.062	0.066	0.006	0.022	0.003	0.032	-0.016	-0.075	-0.081	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000								
9	0.000	0.151	0.122	0.109	0.102	0.097	0.090	0.095	0.087	0.081	0.083	0.071	0.084	0.051	0.059	0.055	0.065	0.037	0.040	0.058	0.028	0.064	0.041	0.032	-0.012	0.027	-0.066	0.086	0.052	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000									
10	0.000	0.113	0.098	0.100	0.100	0.105	0.096	0.098	0.072	0.080	0.086	0.088	0.057	0.063	0.084	0.064	0.062	0.057	0.053	0.041	0.042	0.031	0.034	0.048	0.034	-0.028	0.062	0.086	0.052	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000										
11	0.000	0.151	0.128	0.096	0.096	0.094	0.087	0.092	0.082	0.077	0.084	0.072	0.059	0.041	0.041	0.053	0.042	0.047	0.046	0.053	0.039	0.012	0.050	0.052	0.056	0.041	0.062	0.086	0.052	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	-0.028	1.000											
12	0.000	0.129	0.096	0.082	0.082	0.076	0.079	0.085	0.071	0.073	0.058	0.060	0.045	0.037	0.037	0.027	0.048	0.034	0.026	0.032	0.054	0.053	0.015	0.032	0.016	-0.001	0.062	0.086	0.052	-0.009	-0.028	-0.028	-0.028	-0.028	-0.028	1.000												
13	0.000	0.118	0.095	0.080	0.093	0.087	0.095	0.083	0.076	0.077	0.062	0.076	0.065	0.053	0.057	0.052	0.050	0.043	0.037	0.040	0.059	0.042	0.005	0.042	0.017	0.038	0.062	0.086	0.052	-0.009	-0.028	-0.028	-0.028	-0.028	1.000													
14	0.000	0.071	0.071	0.072	0.065	0.058	0.060	0.063	0.051	0.069	0.069	0.061	0.050	0.044	0.025	0.012	0.045	0.032	0.050	0.058	0.030	0.045	0.036	0.048	0.044	0.109	0.062	0.086	0.052	-0.009	-0.028	-0.028	-0.028	1.000														
15	0.000	0.060	0.071	0.058	0.062	0.058	0.053	0.061	0.054	0.079	0.071	0.076	0.075	0.083	0.072	0.083	0.037	0.065	0.059	0.053	0.038	0.042	0.052	0.005	0.060	0.109	0.062	0.086	0.052	0.052	-0.009	-0.028	1.000															
16	0.000	0.071	0.052	0.056	0.056	0.053	0.054	0.046	0.040	0.040	0.047	0.044	0.053	0.038	0.049	0.023	0.034	0.024	0.032	0.037	0.064	0.038	0.038	0.045	0.064	0.109	0.062	0.086	0.052	0.052	-0.009	1.000																
17	0.000	0.056	0.077	0.047	0.047	0.046	0.037	0.049	0.046	0.038	0.040	0.078	0.022	0.042	0.032	0.035	0.051	0.027	0.037	0.049	0.028	0.029	0.047	0.037	0.030	0.109	0.062	0.086	0.052	0.052	1.000																	
18	0.000	0.081	0.067	0.036	0.035	0.046	0.037	0.035	0.028	0.028	0.035	0.078	0.068	0.071	0.056	0.079	0.074	0.087	0.084	0.084	0.014	0.022	0.017	-0.001	0.030	0.109	0.062	0.086	0.052	1.000																		
19	0.000	0.077	0.057	0.025	0.025	0.055	0.060	0.056	0.046	0.056	0.047	0.066	0.072	0.077	0.066	0.084	0.100	0.047	0.050	0.017	0.069	0.069	0.017	-0.001	0.030	0.109	0.062	0.086	1.000																			
20	0.000	0.133	0.099	0.082	0.081	0.082	0.080	0.086	0.075	0.079	0.071	0.076	0.075	0.083	0.072	0.083	0.078	0.067	0.079	0.070	0.050	0.067	0.047	0.030	0.030	0.109	0.062	1.000																				
21	0.000	0.114	0.089	0.074	0.062	0.053	0.047	0.067	0.069	0.069	0.072	0.050	0.069	0.047	0.075	0.094	0.054	0.069	0.091	0.049	0.059	0.047	0.012	0.058	0.030	0.109	1.000																					
22	0.000	0.097	0.077	0.066	0.070	0.070	0.052	0.073	0.054	0.060	0.064	0.078	0.076	0.071	0.069	0.079	0.076	0.082	0.098	0.049	0.024	0.026	0.017	-0.001	0.030	1.000																						
23	0.000	0.081	0.081	0.059	0.064	0.069	0.064	0.064	0.056	0.060	0.065	0.078	0.068	0.056	0.057	0.079	0.074	0.087	0.086	0.084	0.014	0.022	0.017	-0.001	1.000																							
24	0.000	0.090	0.057	0.060	0.060	0.055	0.055	0.057	0.047	0.046	0.048	0.053	0.072	0.077	0.066	0.084	0.100	0.047	0.050	0.017	0.069	0.069	0.017	1.000																								
25	0.000	0.059	0.058	0.048	0.053	0.056	0.056	0.051	0.058	0.051	0.064	0.057	0.051	0.043	0.072	0.078	0.087	0.057	0.020	0.070	0.050	0.069	1.000																									
26	0.000	0.075	0.040	0.042	0.036	0.047	0.047	0.046	0.040	0.040	0.045	0.050	0.055	0.047	0.089	0.094	0.054	0.009	0.015	0.057	0.036	1.000																										
27	0.000	0.065	0.039	0.036	0.031	0.044	0.033	0.030	0.038	0.038	0.057	0.056	0.051	0.064	0.077	0.064	0.076	0.013	0.020	0.057	1.000																											
28	0.000	0.048	0.021	0.030	0.025	0.031	0.029	0.031	0.035	0.036	0.022	0.042	0.068	0.040	0.057	0.003	0.074	0.087	0.086	1.000																												
29	0.000	0.035	0.024	0.025	0.025	0.035	0.024	0.035	0.027	0.023	0.048	0.032	0.036	0.032	0.015	0.018	0.100	0.013	1.000																													
30	0.000	0.026	0.024	0.027	0.031	0.026	0.040	0.020	0.036	0.043	0.029	0.034	0.017	0.007	0.006	0.018	0.078	1.000																														
31	0.000	0.026	0.021	0.018	0.020	0.021	0.020	0.024	0.034	0.029	0.014	0.018	0.010	0.017	0.006	0.018	1.000																															
32	0.000	0.026	0.015	0.019	0.029	0.016	0.032	0.032	0.038	0.036	0.014	0.020	0.007	0.017	0.006	1.000																																
33	0.000	0.026	0.017	0.002	0.002	0.027	0.032	0.032	0.035	0.023	0.012	0.017	0.017	0.013	1.000																																	
34	0.000	0.026	0.026	0.024	0.030	0.041	0.037	0.037	0.027	0.008		0.017	0.007	1.000																																		
35	0.000	0.026	0.026	0.022	0.031	0.026	0.030	0.016	0.022	0.014	0.012	0.017	1.000																																			
36	0.000	0.026	0.026	0.020	0.020	0.030	0.020	0.015	0.014	0.020	0.012	1.000																																				
37	0.000	0.028	0.026	0.020	0.029	0.020	0.001	0.021	0.017	0.007	1.000																																					
38	0.000	0.026	0.015	0.002	0.010	0.017	0.001	0.021	0.017	1.000																																						
39	0.000	0.026	0.015	0.017	0.010	0.003	0.001	0.021	1.000																																							
40	0.000	0.026	0.015	0.015	0.010	0.003	0.003	1.000																																									
41	0.000	0.026	0.015	0.017	0.010	0.003	1.000																																										

DESCRIPTION: Selected Reserve Net Separation Rates

  Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
  Probability that a member exits the status (due to non-retirement causes)
  offset by the rate that a member reenters during the fiscal year.
  For PEBD YOS greater than 15, if reentrant rate > loss rate, then reentrant is set equal to
  the loss rate (i.e., to not allow any negative net loss).
  Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Officer Selected Reserve Paygrade Transfer Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	27	28	29	38	39	40	41
Under 1	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
2	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
3	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
4	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
5	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
6	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
7	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
8	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
9	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
10	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
11	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
12	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
13	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
14	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
15	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
16	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
17	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
18	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
19	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
20	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
21	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
22	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
23	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
24	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001		
25	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
26	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
27	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
28	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
29	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
30	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
31	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
32	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
33	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
34	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
35	0.000	0.001	0.001	0.001	0.001	0.001	0.001		0.001					
36	0.000	0.001	0.001	0.001	0.001	0.001	0.001							
37	0.000	0.001	0.001	0.001	0.001	0.001	0.001							
38	0.000	0.001	0.001	0.001	0.001	0.001	0.001							
39	0.000	0.001	0.001	0.001	0.001	0.001	0.001							
40	0.000	0.001	0.001	0.001	0.001	0.001	0.001							
41	0.000	0.001	0.001	0.001	0.001	0.001	0.001							

DESCRIPTION: Selected Reserve Paygrade Transfer Rates
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Probability that a member transfers from officer to enlisted during the fiscal year.
Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Enlisted Selected Reserve Paygrade Transfer Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000																																															
1	0.000		0.001	0.001	0.002	0.004	0.009	0.010	0.010	0.012	0.015	0.017	0.012	0.013	0.010	0.012	0.009	0.011	0.012	0.012	0.011	0.009	0.009	0.013	0.011	0.015																						
2	0.000	0.001	0.002	0.001	0.005	0.013	0.015	0.012	0.010	0.011	0.014	0.014	0.012	0.018	0.017	0.018	0.011	0.018	0.016	0.019	0.016	0.018	0.014	0.008	0.014	0.020																						
3	0.000	0.002	0.004	0.004	0.009	0.016	0.014	0.013	0.013	0.013	0.015	0.011	0.013	0.013	0.009	0.008	0.013	0.015	0.007	0.016	0.014	0.006		0.011																								
4	0.000	0.004	0.005	0.006	0.007	0.008	0.006	0.009	0.007	0.008	0.009	0.013	0.012	0.008	0.008	0.008	0.008	0.008	0.005	0.006	0.005	0.006																									
5	0.000	0.007	0.006	0.006	0.005	0.006	0.006	0.006	0.010	0.007	0.010	0.010	0.008	0.009	0.009	0.010	0.006	0.008	0.008	0.010	0.008																										
6	0.000	0.011	0.008	0.007	0.007	0.007	0.009	0.008	0.006	0.008	0.010	0.010	0.010	0.008	0.010	0.005	0.006	0.010	0.006	0.006	0.004																										
7	0.000	0.013	0.009	0.009	0.008	0.008	0.011	0.007	0.009	0.012	0.011	0.007	0.008	0.008	0.010	0.010	0.008	0.007	0.005	0.006	0.004																										
8	0.000	0.014	0.010	0.011	0.010	0.010	0.008	0.010	0.012	0.012	0.010	0.010	0.010	0.011	0.014	0.006	0.006	0.007		0.006	0.004																										
9	0.000	0.019	0.012	0.011	0.011	0.010	0.010	0.011	0.009	0.013	0.012	0.012	0.010	0.010	0.006	0.004	0.004			0.006	0.004																										
10	0.000	0.016	0.013	0.011	0.012	0.012	0.010	0.011	0.011	0.008	0.010	0.010	0.010	0.011	0.006	0.006	0.005	0.004		0.006	0.004																										
11	0.000	0.015	0.012	0.011	0.012	0.012	0.007	0.005	0.005	0.005	0.010	0.007	0.008	0.006	0.005	0.006	0.005	0.004		0.006	0.004																										
12	0.000	0.017	0.016	0.012	0.010	0.009	0.009	0.010	0.009	0.009	0.007	0.013	0.007	0.004	0.006	0.006	0.005	0.004																													
13	0.000	0.012	0.013	0.013	0.011	0.011	0.013	0.008	0.010	0.005	0.006	0.007	0.005	0.007																																	
14	0.000	0.017	0.014	0.010	0.011	0.009	0.010	0.006	0.009	0.007	0.007	0.007	0.005	0.005																																	
15	0.000	0.012	0.010	0.009	0.008	0.008	0.008	0.006	0.007	0.007	0.004	0.007	0.005	0.004	0.007																																
16	0.000	0.011	0.012	0.009	0.008	0.008	0.009	0.007	0.006	0.005	0.006	0.006	0.005	0.004																																	
17	0.000		0.010	0.008	0.005	0.005	0.005	0.005	0.003	0.003	0.004	0.007	0.005	0.005																																	
18	0.000		0.008	0.006	0.005	0.005	0.006	0.004	0.004	0.003																																					
19	0.000		0.008	0.006	0.006	0.005	0.003	0.002	0.003	0.003																																					
20	0.000		0.005	0.004	0.003	0.003	0.003																																								
21	0.000		0.006	0.003	0.003	0.004																																									
22	0.000		0.004	0.003	0.002	0.003		0.004																																							
23	0.000		0.004	0.003		0.004			0.005																																						
24	0.000		0.005																																												
25	0.000		0.003	0.002	0.003	0.003																																									
26	0.000																																														
27	0.000																																														
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DESCRIPTION: Selected Reserve Paygrade Transfer Rates

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Probability that a member transfers from enlisted to officer during the fiscal year.
Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Officer Non-Selected Reserve with 20 Good Years Separation Rates (Non-Retirement Causes)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000																																															
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17	0.000																																															
18	0.000																																															
19	0.000	0.018	0.018	0.034	0.037	0.035	0.115	0.021	0.026	0.022	0.031	0.030	0.013	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																			
20	0.000	0.018	0.018	0.037	0.037	0.035	0.015	0.021	0.020	0.033	0.031	0.030	0.013	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																				
21	0.000	0.018	0.018	0.034	0.037	0.035	0.028	0.027	0.020	0.033	0.045	0.034	0.013	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																					
22	0.000	0.018	0.018	0.034	0.042	0.041	0.032	0.022	0.022	0.028	0.031	0.049	0.013	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																						
23	0.000	0.018	0.018	0.037	0.029	0.026	0.031	0.022	0.025	0.030	0.031	0.028	0.047	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																							
24	0.000	0.018	0.018	0.044	0.043	0.033	0.025	0.030	0.019	0.025	0.030	0.029	0.018	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																								
25	0.000	0.018	0.018	0.031	0.016	0.032	0.023	0.022	0.021	0.029	0.022	0.017	0.017	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																									
26	0.000	0.018	0.018	0.024	0.037	0.021	0.022	0.021	0.023	0.015	0.028	0.020	0.016	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																										
27	0.000	0.018	0.018	0.031	0.019	0.021	0.019	0.015	0.016	0.022	0.032	0.022	0.016	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026																											
28	0.000	0.018	0.018	0.035	0.026	0.016	0.014	0.011	0.011	0.013	0.011	0.013	0.016	0.026	0.026	0.026	0.026	0.026	0.026	0.026																												
29	0.000	0.018	0.018	0.018	0.022	0.016	0.008	0.007	0.014	0.009	0.010	0.013	0.016	0.026	0.026	0.026	0.026	0.026	0.026																													
30	0.000	0.018	0.018	0.013	0.017	0.011	0.005	0.004	0.007	0.013	0.010	0.016	0.016	0.026	0.026	0.026	0.026	0.026																														
31	0.000	0.018	0.018	0.015	0.011	0.006	0.006	0.003	0.006	0.007	0.010	0.016	0.016	0.026	0.026	0.026	0.026																															
32	0.000	0.018	0.018	0.015	0.008	0.009	0.004	0.004	0.004	0.005	0.010	0.016	0.016	0.026	0.026	0.026																																
33	0.000	0.018	0.018	0.005	0.011	0.006	0.004	0.005	0.005	0.005	0.010	0.016	0.016	0.026	0.026																																	
34	0.000	0.018	0.018	0.009	0.011	0.006	0.003	0.003	0.005	0.017	0.010	0.016	0.016	0.026																																		
35	0.000	0.018	0.018	0.009	0.011	0.012	0.003	0.004	0.012	0.020	0.010	0.016	0.016																																			
36	0.000	0.018	0.018	0.007	0.011	0.012	0.003	0.012	0.021	0.033	0.010	0.016																																				
37	0.000	0.018	0.018	0.008	0.011	0.012	0.016	0.021	0.026	0.033	0.010																																					
38	0.000	0.018	0.018	0.008	0.011	0.012	0.020	0.013	0.026	0.033																																						
39	0.000	0.018	0.018	0.008	0.011	0.012	0.021	0.013	0.026																																							
40	0.000	0.018	0.018	0.008	0.011	0.012	0.021	0.013																																								
41	0.000	0.018	0.018	0.008	0.011	0.012	0.021																																									

DESCRIPTION: Non-Selected Reserve with 20 Good Years ("Grey Area") Separation Rates
 Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
 Probability that a member exits the status (due to non-retirement causes) during the fiscal year.
 Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Enlisted Non-Selected Reserve with 20 Good Years Separation Rates (Non-Retirement Causes)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.000																																														
1	0.000	0.000																																														
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17	0.000	0.000																																														
18	0.000	0.000																																														
19	0.000	0.008	0.008	0.013	0.009	0.008	0.015	0.016	0.009	0.016	0.008	0.008	0.007	0.007	0.009	0.006	0.012	0.011	0.014	0.017	0.026	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018																			
20	0.000	0.008	0.008	0.013	0.009	0.008	0.015	0.016	0.009	0.016	0.008	0.008	0.007	0.007	0.009	0.006	0.012	0.011	0.014	0.017	0.026	0.018	0.018	0.018	0.018	0.018	0.018	0.018																				
21	0.000	0.008	0.008	0.011	0.008	0.008	0.011	0.016	0.009	0.016	0.008	0.008	0.007	0.007	0.009	0.006	0.012	0.011	0.014	0.017	0.026	0.018	0.018	0.018	0.018	0.018	0.018																					
22	0.000	0.008	0.009	0.009	0.008	0.007	0.008	0.009	0.009	0.013	0.008	0.008	0.007	0.007	0.009	0.006	0.012	0.011	0.014	0.017	0.026	0.018	0.018	0.018	0.018	0.018																						
23	0.000	0.008	0.009	0.008	0.006	0.006	0.012	0.008	0.010	0.010	0.008	0.008	0.007	0.007	0.009	0.006	0.012	0.011	0.014	0.017	0.026	0.018	0.018	0.018	0.018																							
24	0.000	0.008	0.009	0.007	0.007	0.008	0.010	0.009	0.009	0.009	0.008	0.008	0.007	0.007	0.009	0.006	0.012	0.011	0.014	0.017	0.026	0.018	0.018	0.018																								
25	0.000	0.008	0.007	0.005	0.006	0.006	0.011	0.006	0.006	0.009	0.008	0.008	0.007	0.007	0.009	0.006	0.012	0.011	0.014	0.017	0.026	0.018	0.018																									
26	0.000	0.008	0.006	0.006	0.005	0.006	0.006	0.007	0.006	0.006	0.008	0.008	0.007	0.007	0.009	0.009	0.012	0.014	0.024	0.063	0.026	0.018																										
27	0.000	0.008	0.004	0.005	0.005	0.005	0.007	0.003	0.006	0.006	0.006	0.006	0.007	0.005	0.009	0.008	0.011	0.031	0.024	0.063	0.026																											
28	0.000	0.008	0.006	0.005	0.004	0.004	0.003	0.004	0.006	0.005	0.008	0.005	0.007	0.005	0.004	0.020	0.027	0.036	0.024	0.063																												
29	0.000	0.008	0.004	0.004	0.004	0.004	0.005	0.006	0.008	0.005	0.004	0.004	0.007	0.007	0.018	0.018	0.027	0.036	0.024																													
30	0.000	0.008	0.005	0.004	0.003	0.004	0.003	0.002	0.005	0.005	0.004	0.003	0.004	0.024	0.036	0.024	0.027	0.036																														
31	0.000	0.008	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.004	0.004	0.007	0.021	0.034	0.014	0.024	0.027																															
32	0.000	0.008	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.005	0.004	0.023	0.031	0.048	0.014	0.024																																
33	0.000	0.008	0.005	0.003	0.003	0.004	0.005	0.004	0.003	0.004	0.025	0.029	0.049	0.048	0.014																																	
34	0.000	0.008	0.003	0.004	0.003	0.004	0.004	0.004	0.006	0.027	0.035	0.027	0.049	0.048																																		
35	0.000	0.008	0.005	0.003	0.003	0.003	0.005	0.006	0.027	0.045	0.036	0.027	0.049																																			
36	0.000	0.008	0.005	0.002	0.004	0.005	0.005	0.024	0.041	0.038	0.036	0.027																																				
37	0.000	0.008	0.003	0.005	0.004	0.004	0.028	0.040	0.041	0.038	0.036																																					
38	0.000	0.008	0.003	0.005	0.004	0.025	0.035	0.014	0.041	0.038																																						
39	0.000	0.008	0.003	0.006	0.023	0.040	0.007	0.014	0.041																																							
40	0.000	0.008	0.003	0.013	0.023	0.007	0.007	0.014																																								
41	0.000	0.008	0.003	0.013	0.023	0.007	0.007																																									

DESCRIPTION: Non-Selected Reserve with 20 Good Years ("Grey Area") Separation Rates
 Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
 Probability that a member exits the status (due to non-retirement causes) during the fiscal year.
 Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Officer Selected Reserve to Non-Selected Reserve with 20 Good Years Transfer Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Under 1	0.000																											
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18	0.000																											
19	0.000	0.068	0.022	0.025	0.029	0.028	0.038	0.047	0.048	0.054	0.044	0.055	0.047	0.037	0.074	0.072	0.054	0.060	0.071	0.074	0.087	0.076	0.076	0.101	0.016	0.016	0.016	0.016
20	0.000	0.068	0.049	0.054	0.059	0.052	0.065	0.068	0.077	0.073	0.090	0.077	0.070	0.066	0.075	0.082	0.070	0.093	0.109	0.151	0.132	0.122	0.189	0.085	0.016	0.016	0.016	
21	0.000	0.035	0.056	0.056	0.064	0.063	0.063	0.080	0.089	0.071	0.096	0.096	0.062	0.086	0.098	0.085	0.093	0.134	0.099	0.116	0.070	0.105	0.036	0.009	0.016	0.016		
22	0.000	0.037	0.053	0.047	0.057	0.066	0.085	0.090	0.075	0.086	0.085	0.095	0.098	0.083	0.099	0.088	0.083	0.095	0.111	0.051	0.074	0.024	0.036	0.009	0.016			
23	0.000	0.065	0.050	0.058	0.051	0.051	0.095	0.105	0.112	0.081	0.095	0.072	0.081	0.053	0.111	0.098	0.093	0.126	0.135	0.129	0.048	0.048	0.036	0.009				
24	0.000	0.063	0.047	0.048	0.057	0.064	0.088	0.095	0.101	0.102	0.087	0.074	0.081	0.102	0.110	0.084	0.114	0.102	0.079	0.078	0.048	0.024	0.036					
25	0.000	0.045	0.049	0.053	0.062	0.077	0.106	0.105	0.088	0.094	0.110	0.116	0.106	0.097	0.127	0.110	0.104	0.070	0.037	0.007	0.048	0.024						
26	0.000	0.045	0.056	0.061	0.057	0.093	0.110	0.098	0.116	0.101	0.110	0.102	0.121	0.116	0.105	0.112	0.144	0.029	0.037	0.007	0.048							
27	0.000	0.045	0.060	0.058	0.084	0.105	0.198	0.227	0.210	0.185	0.185	0.190	0.136	0.147	0.164	0.157	0.043	0.029	0.037	0.007								
28	0.000	0.045	0.058	0.061	0.083	0.107	0.146	0.148	0.142	0.119	0.147	0.137	0.165	0.110	0.150	0.104	0.043	0.029	0.037									
29	0.000	0.045	0.072	0.076	0.097	0.122	0.367	0.380	0.271	0.267	0.252	0.219	0.236	0.193	0.127	0.008	0.043	0.029										
30	0.000	0.045	0.078	0.099	0.085	0.140	0.201	0.176	0.176	0.189	0.197	0.170	0.167	0.084	0.007	0.008	0.043											
31	0.000	0.045	0.061	0.089	0.114	0.112	0.139	0.160	0.159	0.166	0.146	0.151	0.086	0.028	0.007	0.008												
32	0.000	0.045	0.092	0.087	0.120	0.126	0.170	0.157	0.157	0.136	0.163	0.042	0.009	0.028	0.007													
33	0.000	0.045	0.112	0.102	0.101	0.132	0.240	0.176	0.150	0.129	0.059	0.042	0.009	0.028														
34	0.000	0.045	0.091	0.110	0.139	0.148	0.164	0.152	0.140	0.044	0.059	0.042	0.009															
35	0.000	0.045	0.085	0.137	0.144	0.133	0.180	0.193	0.051	0.044	0.059	0.042																
36	0.000	0.045	0.121	0.164	0.161	0.134	0.189	0.189	0.051	0.044	0.059																	
37	0.000	0.045	0.133	0.123	0.119	0.115	0.053	0.048	0.051	0.044																		
38	0.000	0.045	0.210	0.148	0.134	0.035	0.053	0.048	0.051																			
39	0.000	0.045	0.130	0.147	0.035	0.035	0.053	0.048																				
40	0.000	0.045	0.095	0.026	0.035	0.035	0.053																					
41	0.000	0.045	0.095	0.026	0.035	0.035																						

DESCRIPTION: Selected Reserve to Non-Selected Reserve with 20 Good Years ("Grey Area") Transfer Rates
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Probability that a member transfers to the Grey Area from the Selected Reserve status during the fiscal year.
Blank cells should be considered a value of zero (0.000).

Enlisted Selected Reserve to Non-Selected Reserve with 20 Good Years Transfer Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000																																															
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19	0.000	0.063	0.039	0.050	0.056	0.051	0.048	0.066	0.047	0.041	0.043	0.051	0.044	0.032	0.048	0.033	0.052	0.059	0.051	0.044	0.065	0.067	0.063	0.031	0.031	0.031	0.031	0.031																				
20	0.000	0.063	0.094	0.095	0.089	0.090	0.081	0.066	0.082	0.079	0.083	0.092	0.075	0.071	0.092	0.084	0.094	0.064	0.090	0.111	0.089	0.078	0.085	0.031	0.031	0.031	0.031																					
21	0.000	0.070	0.091	0.101	0.090	0.090	0.091	0.093	0.086	0.095	0.085	0.098	0.085	0.096	0.082	0.097	0.097	0.102	0.110	0.109	0.077	0.084	0.075	0.031	0.031	0.031																						
22	0.000	0.096	0.090	0.095	0.095	0.089	0.095	0.089	0.093	0.089	0.095	0.080	0.087	0.098	0.099	0.112	0.104	0.117	0.107	0.099	0.091	0.067	0.004	0.031	0.031																							
23	0.000	0.098	0.107	0.106	0.105	0.100	0.111	0.099	0.110	0.108	0.109	0.107	0.120	0.118	0.138	0.119	0.138	0.121	0.144	0.112	0.010	0.007	0.004	0.031																								
24	0.000	0.081	0.085	0.085	0.091	0.094	0.090	0.097	0.106	0.093	0.093	0.119	0.111	0.106	0.097	0.113	0.115	0.123	0.130	0.087	0.010	0.007	0.004																									
25	0.000	0.083	0.078	0.096	0.086	0.087	0.087	0.089	0.086	0.095	0.104	0.082	0.087	0.125	0.133	0.131	0.114	0.107	0.088	0.006	0.010	0.007																										
26	0.000	0.093	0.084	0.080	0.077	0.082	0.084	0.095	0.091	0.096	0.104	0.111	0.105	0.128	0.099	0.109	0.132	0.079	0.003	0.006	0.010																											
27	0.000	0.081	0.080	0.077	0.084	0.098	0.080	0.095	0.096	0.105	0.101	0.118	0.124	0.107	0.093	0.143	0.042	0.003	0.003	0.006																												
28	0.000	0.096	0.073	0.080	0.084	0.088	0.087	0.089	0.085	0.083	0.082	0.108	0.108	0.107	0.122	0.072	0.042	0.003	0.003																													
29	0.000	0.110	0.087	0.094	0.103	0.116	0.116	0.104	0.120	0.116	0.120	0.105	0.109	0.131	0.073	0.003	0.042	0.003																														
30	0.000	0.080	0.101	0.092	0.100	0.088	0.101	0.106	0.107	0.132	0.144	0.130	0.148	0.067	0.006	0.003	0.042																															
31	0.000	0.074	0.088	0.083	0.086	0.097	0.095	0.104	0.136	0.138	0.129	0.138	0.078	0.006	0.006	0.003	0.042																															
32	0.000	0.074	0.074	0.136	0.147	0.134	0.172	0.191	0.219	0.226	0.230	0.083	0.006	0.006	0.006																																	
33	0.000	0.074	0.077	0.099	0.091	0.136	0.147	0.141	0.148	0.128	0.079	0.063	0.006	0.006	0.006																																	
34	0.000	0.074	0.080	0.081	0.126	0.168	0.150	0.126	0.148	0.096	0.011	0.063	0.006																																			
35	0.000	0.074	0.116	0.145	0.226	0.174	0.154	0.164	0.080	0.010	0.011	0.063																																				
36	0.000	0.074	0.172	0.266	0.152	0.139	0.143	0.063	0.007	0.010	0.011																																					
37	0.000	0.074	0.220	0.191	0.193	0.140	0.050	0.003	0.007	0.010																																						
38	0.000	0.074	0.181	0.173	0.146	0.078	0.050	0.003	0.007																																							
39	0.000	0.074	0.138	0.160	0.047	0.003	0.050	0.003																																								
40	0.000	0.074	0.077	0.038	0.047	0.003	0.050																																									
41	0.000	0.074	0.077	0.038	0.047	0.003																																										

DESCRIPTION: Selected Reserve to Non-Selected Reserve with 20 Good Years ("Grey Area") Transfer Rates
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Probability that a member transfers to the Grey Area from the Selected Reserve status
during the fiscal year.
Blank cells should be considered a value of zero (0.000).

Officer Selected Reserve Retirement Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Under 1	0.000																												
1	0.000																												
2	0.000																												
3	0.000																												
4	0.000																												
5	0.000																												
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13	0.000																												
14	0.000																												
15	0.000																												
16	0.000																												
17	0.000																												
18	0.000																												
19	0.000																												
20	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.168	0.482	0.400	0.533	1.000	
21	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.170	0.504	0.400	0.533	1.000		
22	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.171	0.525	0.400	0.533	1.000			
23	0.000	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.175	0.554	0.400	0.533	1.000				
24	0.000	0.001	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.195	0.591	0.400	0.533	1.000					
25	0.000	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.228	0.625	0.400	0.533	1.000						
26	0.000	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.267	0.652	0.400	0.533	1.000							
27	0.000	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.295	0.686	0.400	0.533	1.000								
28	0.000	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.305	0.670	0.400	0.533	1.000									
29	0.000	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.307	0.675	0.400	0.533	1.000										
30	0.000	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.311	0.687	0.400	0.533	1.000											
31	0.000	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.316	0.708	0.400	0.533	1.000												
32	0.000	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.317	0.734	0.400	0.533	1.000													
33	0.000	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.318	0.746	0.400	0.533	1.000														
34	0.000	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.325	0.740	0.400	0.533	1.000															
35	0.000	0.004	0.004	0.004	0.004	0.003	0.003	0.012	0.335	0.725	0.400	0.533	1.000																
36	0.000	0.004	0.004	0.004	0.003	0.003	0.012	0.348	0.713	0.400	0.533	1.000																	
37	0.000	0.004	0.004	0.003	0.003	0.012	0.361	0.716	0.400	0.533	1.000																		
38	0.000	0.004	0.003	0.003	0.012	0.362	0.711	0.400	0.533	1.000																			
39	0.000	0.003	0.003	0.012	0.368	0.721	0.400	0.533	1.000																				
40	0.000	0.000	0.012	0.388	0.723	1.000	1.000																						
41	0.000	0.000		1.000	1.000																								

Columns 45 through 62 and >62 are blank for all rows.

DESCRIPTION: Selected Reserve Retirement Rates
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Probability that a member retires during the fiscal year.
Rates for all ages except 59-60 are constant across all years of service.
Ages 59-60 were graduated ('smoothed') by age and years of service.
Blank cells should be considered a value of zero (0.000).

Enlisted Selected Reserve Retirement Rates

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000																																															
1	0.000																																															
2	0.000																																															
3	0.000																																															
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15	0.000																																															
16	0.000																																															
17	0.000																																															
18	0.000																																															
19	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.018	0.246	0.548	0.586	0.764	1.000																			
20	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.018	0.284	0.608	0.586	0.764	1.000																				
21	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.002	0.002	0.018	0.310	0.671	0.586	0.764	1.000																					
22	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.002	0.018	0.336	0.735	0.586	0.764	1.000																						
23	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.018	0.372	0.796	0.586	0.764	1.000																							
24	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.018	0.402	0.848	0.586	0.764	1.000																								
25	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.018	0.423	0.913	0.586	0.764	1.000																									
26	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.018	0.422	0.926	0.586	0.764	1.000																										
27	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.018	0.413	0.926	0.586	0.764	1.000																											
28	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.018	0.425	0.933	0.586	0.764	1.000																												
29	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.018	0.415	0.933	0.586	0.764	1.000																													
30	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.018	0.407	0.933	0.586	0.764	1.000																														
31	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.018	0.412	0.933	0.586	0.764	1.000																															
32	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.018	0.413	0.932	0.586	0.764	1.000																																
33	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.018	0.422	0.926	0.586	0.764	1.000																																	
34	0.000	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.018	0.423	0.913	0.586	0.764	1.000																																		
35	0.000	0.002	0.002	0.003	0.003	0.003	0.018	0.405	0.928	0.586	0.764	1.000																																				
36	0.000	0.002	0.002	0.003	0.003	0.018	0.426	0.926	0.586	0.764	1.000																																					
37	0.000	0.002	0.002	0.003	0.018	0.377	0.925	0.586	0.764	1.000																																						
38	0.000	0.002	0.002	0.018	0.410	0.925	0.586	0.764	1.000																																							
39	0.000	0.002	0.018	0.424	0.928	0.586	0.764	1.000																																								
40	0.000	0.002	0.018	0.515	0.932	0.586	0.764	1.000																																								
41	0.000	1.000	1.000	1.000																																												

DESCRIPTION: Selected Reserve Retirement Rates
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Probability that a member retires during the fiscal year.
Rates for all ages except 59-60 are constant across all years of service.
Ages 59-60 were graduated ('smoothed') by age and years of service.
Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Selected Reserve Disability Retirement Rates

By Disability Type and Paygrade

PEBD Years of Service	Permanent		Temporary	
	Officer	Enlisted	Officer	Enlisted
Under 1	0.00000	0.00008	0.00000	0.00028
1	0.00000	0.00017	0.00000	0.00021
2	0.00000	0.00058	0.00000	0.00038
3	0.00000	0.00074	0.00000	0.00050
4	0.00065	0.00079	0.00014	0.00055
5	0.00065	0.00110	0.00026	0.00065
6	0.00063	0.00129	0.00039	0.00070
7	0.00070	0.00111	0.00051	0.00073
8	0.00069	0.00122	0.00058	0.00071
9	0.00074	0.00165	0.00057	0.00078
10	0.00096	0.00201	0.00055	0.00093
11	0.00098	0.00227	0.00047	0.00115
12	0.00076	0.00242	0.00042	0.00124
13	0.00075	0.00253	0.00039	0.00115
14	0.00092	0.00247	0.00037	0.00106
15	0.00099	0.00224	0.00035	0.00109
16	0.00087	0.00210	0.00039	0.00102
17	0.00077	0.00210	0.00049	0.00101
18	0.00089	0.00220	0.00048	0.00100
19	0.00126	0.00292	0.00046	0.00107
20	0.00177	0.00384	0.00052	0.00109
21	0.00215	0.00403	0.00043	0.00118
22	0.00228	0.00486	0.00043	0.00140
23	0.00188	0.00582	0.00060	0.00149
24	0.00175	0.00628	0.00090	0.00153
25	0.00237	0.00669	0.00101	0.00156
26	0.00302	0.00706	0.00096	0.00172
27	0.00342	0.00745	0.00086	0.00185
28	0.00333	0.00810	0.00088	0.00178
29	0.00317	0.00831	0.00090	0.00164
30	0.00331	0.00874	0.00091	0.00156
31	0.00327	0.00907	0.00090	0.00151
32	0.00321	0.00869	0.00094	0.00142
33	0.00311	0.00786	0.00096	0.00132
34	0.00259	0.00744	0.00091	0.00127
35	0.00157	0.00785	0.00087	0.00132
36	0.00000	0.00807	0.00093	0.00144
37	0.00000	0.00753	0.00108	0.00155
38	0.00000	0.00643	0.00120	0.00158
39	0.00000	0.00504	0.00127	0.00152
40	0.00000	0.00000	0.00000	0.00000
41	0.00000	0.00000	0.00000	0.00000

DESCRIPTION: Selected Reserve Disability Retirement Rates
Arrayed by disability type (Permanent/Temporary), completed PEBD YOS,
and paygrade (officer/enlisted).
Probability that a member receives a disability retirement during the fiscal year.

Non-Selected Reserve with 20 Good Years Retirement Rates

By Paygrade

Age	Officer	Enlisted
17	0.000	0.000
18	0.000	0.000
19	0.000	0.000
20	0.000	0.000
21	0.000	0.000
22	0.000	0.000
23	0.000	0.000
24	0.000	0.000
25	0.000	0.000
26	0.000	0.000
27	0.000	0.000
28	0.000	0.000
29	0.000	0.000
30	0.000	0.000
31	0.000	0.000
32	0.000	0.000
33	0.000	0.000
34	0.000	0.000
35	0.000	0.000
36	0.000	0.000
37	0.000	0.000
38	0.000	0.000
39	0.000	0.000
40	0.000	0.000
41	0.001	0.000
42	0.000	0.000
43	0.002	0.000
44	0.002	0.000
45	0.001	0.000
46	0.001	0.000
47	0.001	0.000
48	0.001	0.000
49	0.001	0.000
50	0.002	0.000
51	0.001	0.000
52	0.002	0.000
53	0.001	0.000
54	0.001	0.000
55	0.001	0.000
56	0.000	0.000
57	0.000	0.000
58	0.001	0.001
59	0.470	0.450
60	0.950	0.930
61	0.289	0.303
62	0.199	0.186
>62	1.000	1.000

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area') Retirement Rates
Arrayed by age and paygrade (officer/enlisted).
Probability that a member retires from the Grey Area during the fiscal year.

Officer Selected Reserve Average Points Per Year

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0	87	117	117	116	121	131	136	140	142	134	131	120	116	108	96	99	97	93	99	97	94	99	93	113	87	97	88	90	87	86	87	94	94	78	88	78	74	74	74	74	74	74	74	74	74	74	74
1	0	87	117	117	116	121	131	136	140	142	134	131	120	116	108	96	99	97	93	99	97	94	99	93	113	87	97	88	90	87	86	87	94	94	78	88	78	74	74	74	74	74	74	74	74	74	74	
2	0	87	117	117	116	121	131	131	140	142	134	131	120	116	108	96	99	97	93	99	97	94	99	93	108	87	97	88	90	87	86	87	94	94	78	88	78	74	74	74	74	74	74	74	74	74	74	
3	0	87	115	100	128	135	132	127	137	130	131	116	110	97	107	93	94	97	93	88	96	94	98	93	89	90	97	96	92	65	81	76	78	78	78	88	78	74	74	74	74	74	74	74	74			
4	0	87	112	131	138	132	127	117	126	120	116	107	101	94	93	83	91	89	94	89	92	94	81	90	87	74	86	82	77	65	93	89	84	78	78	88	78	74	74	74	74	74	74	74				
5	0	135	127	135	132	134	112	108	119	122	122	108	97	95	89	81	90	88	90	84	95	73	89	86	76	82	76	71	81	90	84	77	75	67	78	88	78	74	74	74	74	74						
6	0	148	139	138	130	130	110	106	117	112	108	104	92	96	89	82	82	90	88	89	90	82	79	86	93	76	78	75	81	87	77	82	84	116	78	88	78	74	74	74	74	74						
7	0	152	137	139	131	119	108	105	109	110	111	100	97	90	84	90	82	89	86	84	87	82	85	85	94	88	67	91	78	95	76	106	89	90	78	88	78	74	74	74	74							
8	0	135	135	131	131	122	107	104	106	105	107	95	97	97	96	87	80	86	96	83	86	79	83	93	85	91	90	86	72	85	82	102	82	104	78	88	78	74	74	74								
9	0	128	126	131	121	120	104	104	108	107	99	99	97	92	96	97	97	86	96	90	82	87	74	84	78	86	86	89	93	72	82	78	73	104	78	88	78	74	74									
10	0	141	128	133	127	126	104	105	105	105	102	95	93	93	97	86	93	101	88	90	84	96	89	86	82	77	110	102	89	71	66	99	94	118	78	88	78	74										
11	0	125	120	131	124	121	107	105	102	108	105	100	92	87	93	97	86	89	93	87	86	93	86	75	86	93	108	101	82	98	56	99	96	82	78	88	78											
12	0	123	123	125	121	116	104	104	106	105	106	99	93	94	93	89	92	90	88	86	86	95	93	99	93	90	102	80	97	109	88	68	82	103	78	88												
13	0	118	127	120	116	112	105	105	107	107	103	94	98	85	99	95	92	82	88	92	85	95	101	89	87	88	104	96	82	102	81	110	85	95	78													
14	0	126	118	115	112	110	107	103	105	102	105	101	91	86	97	89	86	86	87	97	87	100	97	89	88	93	86	86	85	96	79	80	75	82														
15	0	119	119	116	113	112	108	105	106	103	105	103	92	97	90	88	92	91	90	90	93	90	90	87	90	101	95	85	88	91	91	100	70															
16	0	115	116	117	109	109	105	105	101	100	100	98	97	90	98	90	84	90	93	87	94	90	86	82	94	105	87	101	86	97	61																	
17	0	115	114	114	109	108	102	105	101	105	107	101	94	90	98	90	99	93	93	93	99	93	93	87	95	107	93	100	82	83																		
18	0	123	112	112	107	108	103	104	105	102	105	103	96	90	98	90	97	93	92	91	88	88	83	88	97	88	93	100	82																			
19	0	116	112	108	110	109	104	105	105	105	105	97	95	91	94	91	93	96	97	97	96	98	105	95	101	86	93																					
20	0	111	110	113	113	109	105	106	104	109	99	98	101	99	95	93	104	94	92	90	86	104	97	90	93	85																							
21	0	112	113	112	111	107	105	104	101	96	105	97	91	101	98	97	98	90	93	105	91	91	89	87	97	85																							
22	0	109	108	108	109	107	105	105	103	103	101	102	97	105	97	94	97	101	99	104	91	100	105	87																									
23	0	108	110	108	105	106	105	104	105	97	101	103	100	101	98	93	105	97	95	90	90	108	106	87																									
24	0	113	112	111	110	112	103	105	105	104	101	97	95	102	105	102	104	100	95	88	90	98	106																										
25	0	123	110	113	110	109	107	106	104	109	99	101	101	99	93	103	104	99	102	103	96	104	97																										
26	0	106	108	112	110	106	105	104	107	97	96	94	101	101	93	103	95	102	121	118	91	91																											
27	0	102	110	108	110	107	105	105	103	101	101	97	100	106	94	105	97	119	93	82																													
28	0	115	112	108	110	108	103	108	114	99	104	93	107	101	93	90	105	97	120																														
29	0	108	111	111	101	112	110	108	103	105	91	102	105	94	94	102	104	84	120																														
30	0	92	109	107	111	108	110	110	104	99	105	102	99	108	98	91	104	99	102																														
31	0	102	108	108	108	106	109	108	107	97	110	101	107	88	114	93	95	102	121																														
32	0	131	116	108	114	102	113	112	102	115	113	115	92	72	114	93	100	119	93																														
33	0	133	116	106	108	97	110	125	114	99	104	105	93	72	114	90	103	97	120																														
34	0	88	107	94	106		109	125	110	104	91	102	93	72				84		84			106																									
35	0	129	97	107	103	108	110	112	113	124	91	86	93									93																									
36	0	108	99	105	108	105	113	111	121	148	110	86									100	93																										
37	0	116	104	108	103	108	122	125	123	104	91										100																											
38	0	107	116	116	108	108	111	125	130	104																																						
39	0	89	101	118	116																																											
40	0	89	117	111	132	124	111	125																																								
41	0	89	120	120	124	89	111																																									

DESCRIPTION: Selected Reserve Average Points Earned Per Year

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

Annual retirement points (for benefit purposes) accumulated by a Selected Reserve during a fiscal year.

The Average Points Earned Per Year above appear after a 21.1% reduction due to a "half-mobilization" assumption.

Blank cells should be considered a value of zero ('0').

Enlisted Selected Reserve Average Points Per Year

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0	123	151	135	120	122	120	121	122	125	118	121	112	119	123	97	102	109	90	101	101	87	75	81	91	82	71	105	92	105	93	98	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
1	0	108	111	109	107	107	107	107	108	108	108	107	109	107	106	106	108	105	105	106	102	101	97	103	97	118	111	102	47	105	93	98	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	
2	0	112	114	112	110	108	110	108	109	108	108	108	110	108	108	109	110	107	102	107	99	98	99	98	94	108	111	87	115	105	93	98	90	90	90	90	90	90	90	90	90							
3	0	112	112	107	103	104	103	103	112	101	101	103	101	100	101	101	101	105	97	104	99	90	88	88	99	93	91	94	103	105	93	98	90	90	90	90	90	90										
4	0	104	103	101	98	97	96	97	98	95	95	97	97	95	95	95	94	91	96	95	93	89	93	88	88	98	80	100	109	105	93	98																
5	0	104	105	102	101	100	100	100	98	98	97	97	97	97	93	94	98	94	93	93	97	87	87	89	90	103	93	103	102	105	93	98																
6	0	102	102	101	99	101	98	97	96	95	99	99	96	97	96	95	97	95	95	94	98	85	95	90	110	106	84	78	93	105	93	98																
7	0	105	108	105	103	102	104	101	99	101	102	98	100	96	103	98	102	99	91	102	98	95	106	103	108	102	116	103	109	105	93	98																
8	0	107	108	108	105	104	101	103	101	104	104	100	103	102	103	102	104	95	104	103	101	101	101	103	119	100	116	136	96	105	93	98																
9	0	107	107	102	104	105	100	105	102	106	105	105	105	106	105	105	107	104	105	105	102	101	107	101	97	129	102	148	105	105	93	98																
10	0	105	106	105	102	102	102	105	107	104	106	104	105	105	105	108	103	100	102	104	102	101	102	103	92	117	108	130	101	105	93	98	90	90	90	90	90	90	90	90	90							
11	0	101	105	103	103	104	102	102	106	102	102	101	102	105	106	103	105	101	102	101	96	105	105	106	108	101	120	177	114	105	93	98	90	90	90	90	90	90	90	90	90							
12	0	107	107	105	103	103	102	103	102	105	102	103	101	102	100	100	101	101	101	101	97	103	104	100	90	115	112	118	100	105	93	98	90	90	90	90	90	90	90	90	90							
13	0	104	103	103	102	101	104	103	105	102	101	103	101	103	103	100	101	104	100	99	103	97	95	96	100	94	93	97	121	105	93	98	90	90	90	90	90	90	90	90	90							
14	0	105	106	102	104	101	100	101	102	101	101	103	103	106	103	104	102	102	105	100	95	87	101	106	101	105	112	97	128	105	93	98	90															
15	0	107	106	105	101	102	103	101	101	98	101	102	105	101	99	100	97	98	95	100	96	91	95	95	89	94	83	85	128	105	93	98																
16	0	106	103	101	100	98	97	101	99	99	99	99	100	98	97	98	101	99	93	101	97	90	89	97	89	111	94	85	128	105	93	98																
17	0	104	102	100	97	98	97	98	97	97	98	99	100	99	97	96	98	101	102	102	97	93	98	93	92	99	94	85	128	105	93	98																
18	0	105	101	99	100	99	97	98	100	100	100	97	99	96	99	97	97	97	96	97	92	99	93	99	92	99	94	85	128	105	93	93																
19	0	105	100	99	100	100	99	98	100	98	100	97	99	106	101	104	98	102	96	100	92	99	93	99	101	105	94	85	128	105																		
20	0	112	102	101	100	102	99	101	98	100	97	97	100	97	98	97	97	98	91	93	98	103	95	99	92	99	94	85																				
21	0	110	104	102	101	101	103	101	100	98	100	99	101	98	97	94	101	99	93	101	97	95	95	99	92	99	94	85																				
22	0	108	108	102	102	102	97	97	100	97	98	99	101	99	99	99	99	98	102	103	99	95	95	99	92	99	94	85																				
23	0	105	105	104	104	103	98	101	103	104	98	104	105	98	99	104	100	101	101	102	97	95	95	99	92	99	94	85	128	105																		
24	0	106	106	105	103	103	98	98	102	100	100	98	99	106	101	103	98	101	101	100	92	99	93	99	101	105	94	85	128	105																		
25	0	108	107	101	101	101	98	103	100	99	99	101	103	101	98	104	101	101	101	97	97	103	95	99	99	99	94	94																				
26	0	102	102	104	102	102	99	101	105	102	97	98	94	101	99	94	101	101	101	94	95	95	95	99	92	101	94	94																				
27	0	106	106	102	103	102	98	100	98	103	100	99	101	99	99	104	100	97	101	98	97	95	95	99	92	99																						
28	0	118	108	99	102	102	97	98	103	98	100	100	101	100	99	104	100	101	101	94	97	95	95	99	92	99																						
29	0	106	106	101	100	103	99	98	101	101	99	101	97	100	99	103	98	101	101	94	97	95	95	99	92	99																						
30	0	100	107	101	101	101	96	99	98	98	99	103	101	101	98	104	97	98	91	103	97	95	95	99	99	99																						
31	0	95	103	102	99	102	99	103	105	102	101	98	94	101	98	94	94	101	93	101	94	95	95	99	92																							
32	0	99	104	100	99	100	102	103	102	103	98	98	101	98	98	104	100	97	101	101	98	95	95	99	92																							
33	0	89	98	99	100	98	97	101	102	103	100	100	94	98	99	104	101	101	101	101	97	95	95	99	100																							
34	0	99	105	101	97	102	98	98	102	100	101	100	94	100	99	104	98	101	101	103	97	95	95	99	94																							
35	0	112	97	96	104	104	99	97	103	98	106	103	101	101	99	104	97	101	101	104	97	95																									
36	0	112	100	100	100	100	96	100	105	103	101	98	94	98	99	104	97	101	101	103	97	95																									
37	0	112	106	102	101	103	102	103	105	98	101	100	94	98	99	104	97	101	101	104																											
38	0	112	105	99	105	104	112	103	102								97	97	101	101	100																										
39	0	112	107	101	106	102	112	88	103									97	101	101																											
40	0	112	108	120	117	104	112													101																											
41	0	112	93	194	49	104	112	88																																							

DESCRIPTION: Selected Reserve Average Points Earned Per Year

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

Annual retirement points (for benefit purposes) accumulated by a Selected Reserve during a fiscal year.

The Average Points Earned Per Year above appear after a 21.1% reduction due to a "half-mobilization" assumption.

Blank cells should be considered a value of zero ('0').

Officer Selected Reserve Career Points Adjustment

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.000	1.000	1.000	1.000	1.000	0.977	1.000	1.000	0.957	1.000	1.000	1.048	1.000	1.039	1.024	1.060	1.076	1.118	1.029	1.000	1.066	0.809	1.000	1.000	1.000	1.000	1.159	0.758	1.737	0.318	1.000	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.043	0.919	1.000	1.000	0.396	0.951	1.606	1.606	1.606
1	1.002	1.002	1.000	1.000	1.001	1.006	0.989	1.008	0.993	0.995	1.006	0.999	0.979	1.028	0.999	1.043	1.018	0.979	1.008	1.010	1.000	1.036	1.028	0.986	1.008	0.983	0.924	1.018	1.090	1.007	0.954	1.036	1.006	0.914	0.999	1.000	1.000	0.908	1.000	1.043	0.919	1.000	1.000	0.396	0.951	1.606	1.606	
2	1.002	1.002	1.000	1.000	1.000	1.000	1.000	0.992	0.993	1.003	1.002	1.002	1.013	0.985	1.004	1.000	1.024	1.011	1.024	1.006	1.012	1.026	0.996	0.993	0.986	1.043	0.979	1.014	0.943	1.019	0.968	0.968	1.018	1.018	1.013	0.968	1.000	0.926	0.925	1.043	0.919	1.000	1.000	0.396	0.951	1.606		
3	1.002	1.002	1.009	0.997	1.009	0.996	0.990	1.004	1.016	0.995	1.015	1.016	1.005	1.006	1.032	1.008	0.992	1.017	1.020	0.994	1.016	1.005	1.020	1.027	1.024	0.985	1.042	1.099	0.988	1.023	1.037	0.930	1.006	1.019	1.030	1.013	1.008	1.163	1.000	1.043	0.919	1.000	1.000	0.396	0.951			
4	1.002	1.002	1.009	1.030	1.009	1.007	0.984	1.003	1.001	1.013	1.001	1.001	0.996	1.021	1.010	0.980	1.001	0.999	1.010	1.019	1.018	1.013	1.031	1.005	0.999	1.031	0.953	0.983	1.004	1.006	0.998	1.001	1.000	1.004	1.000	1.017	1.008	1.000	0.978	1.043	0.919	1.000	1.000					
5	1.025	1.025	1.008	1.008	1.001	0.997	0.997	0.992	0.987	0.994	0.980	0.988	0.988	0.990	0.984	0.995	1.000	0.981	1.000	0.995	1.003	1.006	0.999	0.987	1.026	1.003	1.004	0.971	1.011	1.023	1.023	1.015	1.000	0.978	1.031	0.998	1.051	1.216	1.071	1.043	0.919							
6	0.997	1.006	1.008	1.011	0.997	1.000	0.971	0.976	0.995	0.995	0.989	0.994	1.006	0.998	1.000	1.013	0.992	0.986	0.980	0.997	1.039	1.021	1.011	1.009	0.967	1.048	0.994	1.072	1.069	0.955	1.042	1.013	0.999	1.049	1.053	1.062	1.055	1.022	1.420	1.043	0.919							
7	0.997	1.006	1.008	0.999	0.997	1.000	0.991	1.005	1.000	1.012	0.997	0.994	1.008	1.010	1.011	1.026	1.028	1.004	0.980	1.005	1.039	1.029	1.053	1.029	0.981	0.992	1.042	0.942	1.017	1.033	1.016	1.011	1.049	1.052	1.000	0.951	1.055	0.620	1.420	1.043	0.919							
8	0.993	1.006	1.008	1.002	1.005	1.008	0.995	1.013	1.015	1.015	1.012	1.013	1.007	1.013	1.026	1.010	1.010	1.019	1.032	1.030	1.017	1.070	1.058	1.018	1.017	0.975	0.995	1.039	1.009	1.028	0.981	1.002	1.031	0.987	1.000	1.000	1.055	1.000	1.420	1.043								
9	0.993	1.012	0.994	1.007	1.011	1.010	0.999	1.013	0.999	0.999	1.001	1.004	0.991	0.996	1.033	0.997	0.988	1.006	1.015	1.026	1.023	1.050	0.998	0.989	1.027	0.978	1.014	1.083	1.005	0.995	0.998	0.995	1.009	1.025	1.000	0.951	1.055	1.000	1.420									
10	0.986	0.986	0.992	1.001	0.989	1.009	1.008	0.998	1.001	0.989	0.997	1.003	1.007	1.020	0.993	1.007	0.968	1.005	1.019	0.982	1.035	1.027	1.003	0.991	1.008	1.057	1.020	0.999	0.984	0.991	1.044	0.979	1.026	1.025	1.000	0.951	1.055	1.000										
11	1.007	1.007	0.998	1.000	1.000	1.000	1.000	1.006	1.011	1.011	0.991	0.995	0.996	0.993	0.988	0.986	0.999	0.999	0.993	1.011	0.960	1.016	1.003	0.994	0.994	0.987	1.024	1.035	1.040	1.000	0.997	1.048	1.026	1.025	1.000	0.951	1.055											
12	1.012	1.012	1.006	1.003	1.006	0.991	1.003	0.994	1.007	0.998	0.988	0.988	0.998	0.996	0.993	0.973	1.018	0.995	0.975	1.019	1.003	1.003	0.996	1.027	1.027	0.998	1.010	1.028	1.016	1.006	1.011	1.091	1.028	1.025	1.000	0.951												
13	1.000	1.000	0.995	0.995	0.996	0.993	1.002	1.004	0.996	1.003	0.994	1.008	1.017	1.006	1.003	0.983	1.022	1.023	1.000	0.996	1.011	1.003	1.010	1.013	0.999	0.992	1.010	1.013	1.027	0.960	1.060	1.091	1.026	1.025	1.000													
14	0.961	0.961	0.992	0.990	0.990	0.995	1.001	1.001	1.002	0.999	1.005	0.989	0.991	0.996	0.988	1.001	0.988	1.005	0.991	1.004	0.997	1.002	0.998	1.005	1.010	0.978	1.014	0.990	1.016	1.013	1.060	1.091	1.009															
15	0.995	0.995	0.990	0.997	0.997	0.994	0.999	1.005	1.008	1.008	1.000	1.003	1.004	1.003	1.012	1.026	0.993	0.978	1.019	0.992	1.006	1.008	1.008	1.002	1.002	0.975	1.000	1.023	1.006	0.995	1.060	1.091	1.026			0.951	1.055											
16	0.997	0.997	0.990	0.996	0.995	0.995	0.998	0.998	0.996	0.996	1.002	0.992	1.002	0.998	1.016	1.000	0.999	0.996	0.995	1.015	0.998	1.004	1.006	1.006	1.003	1.018	1.009	1.035	1.052	0.995	1.060	1.091				0.951	1.055											
17	0.978	0.978	0.981	0.990	0.986	0.990	0.997	0.993	0.998	0.992	0.997	0.999	1.000	0.989	0.983	0.998	1.003	0.995	0.997	1.011	0.984	0.997	0.999	0.976	0.997	0.978	1.009	1.028	1.039	0.995	1.060					0.951												
18	0.959	0.959	0.990	0.990	0.984	0.988	0.988	1.001	0.994	0.992	0.994	0.990	0.989	0.989	0.993	0.996	1.009	1.006	1.001	1.008	1.002	0.997	0.994	1.000	1.011	1.024	1.058	0.973	1.039																			
19	0.983	0.983	0.986	0.993	0.993	0.992	0.995	0.986	0.991	0.992	0.998	0.995	1.004	1.006	0.985	0.999	1.004	0.982	0.991	1.006	0.997	1.002	0.986	1.028	1.028	1.055	0.977	0.973																				
20	0.975	0.975	0.988	0.990	0.991	0.990	0.997	0.994	0.998	0.997	0.995	0.991	1.016	0.988	0.997	1.013	1.007	1.018	1.012	1.002	0.992	0.987	0.991	0.984	0.921	1.030	1.000	0.973																				
21	0.965	0.965	0.987	0.989	0.992	0.995	0.998	0.993	0.996	0.988	0.997	0.992	0.994	0.990	0.988	1.000	0.987	0.983	0.985	0.996	0.998	0.980	0.948	1.018	0.901	1.030	0.977																					
22	0.979	0.979	0.984	0.980	0.986	0.980	0.990	0.993	0.997	0.992	0.993	1.003	0.988	0.990	1.009	0.992	1.006	0.990	1.005	0.999	1.004	1.021	1.035	1.097	1.097	1.030																						
23	0.983	0.983	0.987	0.985	0.985	0.981	0.992	0.997	0.994	0.997	0.999	0.999	0.985	0.998	0.993	0.993	0.969	1.005	1.001	0.997	1.002	0.997	0.981	1.097	0.901																							
24	0.971	0.971	0.990	0.982	0.982	0.979	0.991	0.995	0.977	0.981	0.996	0.990	0.981	0.975	0.996	0.997	0.998	0.993	0.989	1.009	0.977	0.965	0.981																									
25	0.981	0.981	0.981	0.984	0.984	0.988	0.995	0.994	0.996	0.996	0.976	0.989	0.994	0.987	1.002	1.001	0.994	1.008	1.005	0.955	1.040	0.987	0.965	0.981																								
26	0.970	0.970	0.984	0.985	0.987	0.995	0.982	0.999	0.996	0.985	0.998	1.004	1.003	0.983	0.981	0.986	0.991	0.990	0.860	0.980	1.040	0.965																										
27	0.981	0.981	0.981	0.980	0.981	0.989	0.990	0.995	0.980	0.997	1.003	0.995	0.988	0.979	0.970	1.000	1.006	0.942	1.046	0.999	1.040																											
28	0.977	0.977	0.992	0.985	0.981	0.981	0.992	0.995	0.983	1.003	0.978	0.980	0.975	0.970	0.996	0.998	0.969	0.962	1.046	0.997																												
29	1.015	1.015	0.989	0.982	0.982	0.979	0.991	0.975	0.977	0.989	0.962	0.993	0.981	0.959	0.963	0.997	0.998	0.962	1.046	1.009																												
30	0.983	0.983	0.979	0.983	0.965	0.976	0.996	0.992	0.894	0.968	0.937	0.985	0.999	0.839	0.909	1.003	0.856	0.962																														
31	0.886	0.886	0.974	0.984	0.992	0.988	1.005	0.999	0.980	0.998	0.995	0.958	0.962	0.917	1.016	1.003	0.856																															
32	1.000	1.000	0.981	0.979	0.979	0.999	1.005	0.973	0.997	0.987	1.005	0.995	0.990	0.924	1.016	1.003																																
33	0.994	0.994	0.983	0.982	0.992	0.980	1.005	0.991	0.997	1.003	1.026	0.993	0.884	0.924	1.016																																	
34	0.986	0.986	0.984	0.979	0.995	0.995	0.999	0.992	0.993	0.985	0.922	0.876	0.884	0.924																																		
35	0.986	0.986	0.992	0.989	0.996	0.985	0.976	0.997	0.990	0.898	0.841	0.876	0.884																																			
36	0.988	0.988	0.988	0.980	0.998	0.995	0.998	0.998	0.940	1.009	0.995	0.876																																				
37	0.988	0.988	0.964	0.975	0.984	0.990	0.955	0.973	0.997	0.890	0.841																																					
38	0.986	0.986	0.986	0.982	0.990	0.980	0.980	0.991	0.976	1.003	0.841																																					
39	0.986	0.986	1.010	0.992	1.005	0.962	0.984	0.982	0.993	0.985																																						
40	0.000	0.986	0.947	1.047	0.965	1.043	0.976	0.928	0.893	0.928																																						
41	0.000	0.986	0.891	1.047	1.013	0.945	1.044																																									

DESCRIPTION: Selected Reserve Career Points Adjustment

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted). Adjustment to Average Career Points for Selected Reserve members to capture the effect of losses (e.g., separation, retirement, transfer) during the fiscal year.

DoD Office of the Actuary

Enlisted Selected Reserve Career Points Adjustment

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	1.058	1.007	1.007	1.008	1.014	1.015	1.033	1.039	1.024	1.027	1.053	1.059	1.067	1.066	1.038	1.075	0.999	0.993	1.031	1.049	0.980	1.031	1.051	1.004	1.013	1.020	0.859	1.001	0.845	1.000	0.982	1.134	1.000	1.000	1.000	1.000	1.000	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093
1	0.000	1.048	1.050	1.034	1.027	1.028	1.032	1.031	1.029	1.031	1.032	1.032	1.042	1.037	1.030	1.038	1.030	1.030	1.033	1.027	1.022	1.027	1.036	1.035	1.012	0.993	1.011	1.083	1.072	1.109	0.907	1.057	1.000	0.705	1.000	1.126	1.000	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
2	0.000	1.026	1.018	1.018	1.013	1.013	1.016	1.016	1.020	1.018	1.019	1.014	1.013	1.014	1.022	1.026	1.012	1.014	1.016	1.012	1.011	1.009	1.016	1.022	1.008	0.971	1.020	1.045	1.089	1.106	1.085	1.089	1.000	1.190	1.000	0.926	1.000	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093		
3	0.000	1.009	1.008	1.004	1.003	1.004	1.002	1.002	1.003	1.002	1.005	1.014	1.006	1.012	1.010	1.010	1.010	1.010	1.008	1.008	0.998	1.010	1.016	0.986	0.996	0.986	1.102	0.904	1.034	1.003	0.966	0.844	0.868	0.440	1.000	1.000	1.769	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093			
4	0.000	1.010	0.996	0.995	0.994	0.986	0.988	0.987	0.988	0.987	0.994	0.994	0.998	0.999	0.999	1.002	0.993	1.003	0.994	0.995	0.997	0.991	0.989	0.986	0.984	0.929	0.968	1.045	1.078	1.000	1.000	1.045	0.868	1.739	1.000	1.000	1.769	1.093	1.093	1.093	1.093	1.093	1.093	1.093				
5	0.000	0.000	1.003	1.015	1.019	1.021	1.020	1.016	1.013	1.011	1.008	0.993	0.989	1.000	0.992	0.996	0.996	1.004	1.001	1.002	0.998	0.991	0.991	1.008	1.001	1.000	0.979	1.015	1.101	1.102	0.858	1.026	0.868	1.000	0.770	1.114	1.769	1.093	1.093	1.093	1.093	1.093	1.093					
6	0.000	0.000	1.008	0.995	0.998	1.006	1.005	1.006	0.991	0.998	0.996	0.995	1.001	1.002	0.997	0.998	1.006	1.009	1.000	1.000	0.998	1.013	0.992	0.983	1.017	0.994	1.022	0.977	1.015	0.726	0.550	1.228	0.868	0.949	0.770	1.114	1.769	1.093	1.093	1.093	1.093	1.093						
7	0.000	0.000	1.015	1.003	1.005	1.006	1.005	1.006	1.003	0.994	0.997	0.995	1.016	0.999	1.020	1.011	1.011	1.014	1.006	1.027	1.015	1.013	1.008	1.013	1.000	1.005	1.065	0.960	1.061	1.169	1.000	1.000	0.868	1.006	0.770	1.114	1.769	1.093	1.093	1.093	1.093							
8	0.000	0.000	1.015	1.010	1.003	1.003	1.006	1.005	1.002	1.007	0.998	0.998	1.004	1.008	1.007	0.996	1.004	1.001	1.001	0.993	1.008	1.011	0.999	1.004	1.036	1.024	0.981	1.036	0.977	0.905	1.266	1.030	0.868	1.006	0.770	1.114	1.769	1.093	1.093	1.093								
9	0.000	0.000	0.995	0.995	0.994	0.990	0.989	0.996	0.995	0.998	0.996	0.997	0.997	1.004	1.005	1.002	0.986	1.009	1.008	0.991	0.981	0.991	0.991	1.019	1.018	1.033	1.018	0.951	1.073	0.996	1.000	1.100	0.868	1.006	0.770	1.114	1.769	1.093	1.093									
10	0.000	0.000	0.000	0.985	0.989	0.993	0.991	0.997	1.002	1.009	1.002	0.996	1.011	0.997	1.003	1.010	0.998	1.003	0.996	1.001	1.009	1.006	0.985	0.965	1.011	0.976	1.076	1.035	1.309	1.023	1.058	1.100	0.868	1.006	0.770	1.114	1.769	1.093										
11	0.000	0.000	0.000	0.992	0.998	0.995	0.991	0.998	1.006	0.998	1.006	1.001	1.002	1.000	1.004	0.985	1.000	0.998	1.012	1.001	1.015	1.000	0.995	1.051	0.974	0.998	1.000	1.041	1.023	1.054	1.058	1.100	0.868	1.006	0.770	1.114	1.769											
12	0.000	0.000	0.000	0.992	0.997	0.993	0.993	1.002	0.996	0.997	0.997	0.995	0.998	1.002	0.996	1.005	1.011	0.989	1.001	1.000	1.017	0.984	0.993	0.999	0.999	0.997	1.018	0.994	0.853	1.054	1.058	1.100	0.868	1.006	0.770	1.114												
13	0.000	0.000	0.000	0.995	0.996	0.993	1.006	0.996	0.997	0.998	1.002	0.889	1.004	1.008	1.004	0.996	1.009	1.009	1.000	0.998	1.002	1.016	0.993	0.887	1.004	1.012	1.040	1.016	0.853	1.054	1.058	1.100	0.868	1.006														
14	0.000	0.000	0.000	0.996	1.001	0.997	0.997	1.003	1.003	0.991	1.004	1.003	0.997	1.004	1.001	1.008	1.000	0.994	0.994	0.985	0.984	0.984	0.985	0.992	1.007	0.978	1.002	0.977	0.853	1.054	1.058	1.100	0.868															
15	0.000	0.000	0.000	0.000	0.992	0.995	1.000	0.998	0.999	0.985	0.987	0.996	0.990	0.984	0.998	0.994	0.993	0.995	0.985	0.997	1.004	0.989	0.992	1.000	1.029	0.999	0.999	0.987	0.953	1.054	1.058	1.100	0.868															
16	0.000	0.000	0.000	0.000	0.998	0.995	0.997	0.986	0.991	0.993	0.996	0.996	0.993	1.000	1.000	0.985	0.999	1.008	1.012	0.995	0.999	0.995	0.994	1.010	0.974	1.010	1.000	1.074	0.953	1.054	1.058	1.100																
17	0.000	0.000	0.000	0.000	0.991	0.993	0.996	0.991	0.999	0.998	0.997	0.998	0.998	0.990	0.991	0.992	0.995	0.998	0.996	1.000	1.000	0.985	0.997	0.995	1.017	1.005	1.013	1.074	0.953	1.054	1.058																	
18	0.000	0.000	0.000	0.000	0.992	0.987	1.006	0.993	0.999	0.999	0.997	0.998	0.998	0.990	0.991	0.992	0.995	0.995	0.996	0.984	1.000	0.989	0.997	0.993	1.004	1.013	1.013	1.074	0.953																			
19	0.000	0.000	0.000	0.000	0.991	0.997	0.997	0.992	1.003	0.991	1.004	1.003	0.993	0.990	0.998	0.983	1.000	0.995	0.988	0.985	0.989	0.988	1.013	1.018	1.007	0.978	1.013	1.074																				
20	0.000	0.000	0.000	0.000	0.992	0.990	0.987	0.988	0.991	0.999	0.991	0.985	0.990	0.984	0.998	0.994	1.004	0.996	1.003	0.997	0.991	1.009	1.014	0.965	1.031	1.127	1.019	1.074																					
21	0.000	0.000	0.000	0.000	0.000	0.990	0.997	0.986	0.982	0.985	0.979	0.985	0.996	0.982	0.976	0.997	0.979	0.985	1.012	0.985	1.005	0.994	0.975	0.974	0.974	1.127	1.013																						
22	0.000	0.000	0.000	0.000	0.000	0.987	0.993	0.985	0.982	0.990	0.991	0.986	0.983	0.994	0.960	0.990	0.985	0.991	0.994	0.995	0.998	0.985	0.917	0.914	1.031	1.127																							
23	0.000	0.000	0.000	0.000	0.000	0.987	0.995	0.991	0.982	0.986	0.995	0.999	0.993	0.993	0.991	0.990	1.010	1.106	0.952	1.016	0.981	0.960	0.917	0.914	1.031																								
24	0.000	0.000	0.000	0.000	0.000	0.986	0.980	0.989	0.980	0.991	0.996	0.994	0.993	1.001	0.999	0.992	0.988	1.001	0.985	0.996	0.979	0.960	0.917	0.914	1.031																								
25	0.000	0.000	0.000	0.000	0.000	0.000	0.986	0.984	0.991	0.985	0.979	0.993	0.995	0.996	1.000	0.998	0.982	1.001	0.999	0.997	0.991	1.009	1.014	0.965																									
26	0.000	0.000	0.000	0.000	0.000	0.000	0.982	0.982	0.992	0.990	0.994	1.008	1.004	0.982	0.992	1.009	1.012	0.991	0.852	0.994	1.005	0.994	0.975	0.914																									
27	0.000	0.000	0.000	0.000	0.000	0.000	0.993	0.992	0.988	0.992	0.990	0.999	1.000	0.999	0.999	1.004	0.999	1.106	0.852	0.968	0.998	0.985	0.960	0.914																									
28	0.000	0.000	0.000	0.000	0.000	0.000	0.995	0.995	0.982	0.986	0.995	0.998	0.998	0.991	0.995	0.986	1.014	1.106	0.952	0.968	0.991	0.960	0.917	0.914																									
29	0.000	0.000	0.000	0.000	0.000	0.000	0.999	0.989	0.985	0.991	1.001	0.994	0.991	1.001	0.987	0.904	0.988	1.106	0.952	0.968	0.990	0.960	0.917	0.914																									
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.992	0.992	0.984	0.995	0.981	1.000	0.989	0.998	0.904	1.014	1.106		0.989	0.989	0.960	0.917																										
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.995	0.995	0.996	0.989	0.992	1.032	1.034	0.904	1.014			1.032																													
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.977	0.993	0.985	0.981	0.989	1.019	1.032	1.034	0.904				1.032																													
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.967	0.969	0.977	0.977	0.999	1.019	1.032	1.034																																		
34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.976	0.985	0.976	0.989	1.040	1.040	1.032																																			
35	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.982	0.965	0.992	1.040	1.019	1.040																																			
36	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.987	0.985	0.996	1.019	1.092																																				
37	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.984	0.987	0.996	1.019	1.092																																				
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.999	0.998	0.973	1.058																																					
39	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.973	0.982	0.972	1.058																																					
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.973	0.989	1.171	1.058																																				
41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.982	0.989	1.171	1.058	0.972																																			

DESCRIPTION: Selected Reserve Career Points Adjustment
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Adjustment to Average Career Points for Selected Reserve members to capture the effect
of losses (e.g., separation, retirement, transfer) during the fiscal year.

Officer Non-Selected Reserve with 20 Good Years Average Points Per Year

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Under 1	0																												
1	0																												
2	0																												
3	0																												
4	0																												
5	0																												
6	0																												
7	0																												
8	0																												
9	0																												
10	0																												
11	0																												
12	0																												
13	0																												
14	0																												
15	0																												
16	0																												
17	0																												
18	0	6	6																										
19	0	6	6	11	14	21	40	35	35	29	35	34	23	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
20	0	6	6	11	14	21	40	35	35	29	35	34	23	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
21	0	6	6	11	14	21	28	32	24	26	20	18	23	14	14	14	14	14	14	14	14	14	14	14	14	14	14		
22	0	6	6	11	13	13	24	23	21	25	28	17	23	14	14	14	14	14	14	14	14	14	14	14	14	14			
23	0	6	6	13	11	12	24	24	21	22	21	20	16	14	14	14	14	14	14	14	14	14	14	14	14				
24	0	6	6	9	10	12	23	22	20	20	19	24	22	14	14	14	14	14	14	14	14	14	14	14					
25	0	6	6	5	7	19	20	19	16	24	16	20	15	14	14	14	14	14	14	14	14	14	14						
26	0	6	6	7	9	13	17	16	18	15	18	13	12	14	14	14	14	14	14	14	14	14							
27	0	6	6	8	15	14	16	15	14	14	18	11	7	14	14	14	14	14	14	14	14								
28	0	6	6	7	9	10	10	11	10	12	14	8	7	14	14	14	14	14	14	14									
29	0	6	6	11	9	11	6	6	5	7	5	7	7	14	14	14	14	14	14										
30	0	6	6	5	9	10	5	4	4	5	5	4	7	14	14	14	14	14											
31	0	6	6	10	10	7	2	2	2	3	5	4	7	14	14	14	14												
32	0	6	6	6	8	6	2	1	2	3	5	4	7	14	14	14													
33	0	6	6	4	3	3	2	2	2	3	5	4	7	14	14														
34	0	6	6	4	3	3	1	2	2	3	5	4	7	14															
35	0	6	6	3	3	2	1	1	2	3	5	4	7																
36	0	6	6	5	3	2	1	3	2	3	5	4																	
37	0	6	6	3	3	2	4	3	2	3	5																		
38	0	6	6	3	3	2	4	3	2	3																			
39	0	6	6	3	3	2	4	3	2																				
40	0	6	6	3	3	2	4	3	4																				
41	0	6	6	3	3	2	4		4																				

(Columns for Entry Age 45 through 62 and >62 are blank.)

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area') Average Points Earned Per Year

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

Annual retirement points (for benefit purposes) accumulated by a Grey Area retiree during a fiscal year.

Blank cells should be considered a value of zero ('0').

Enlisted Non-Selected Reserve with 20 Good Years Average Points Per Year

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Under 1	0																												
1	0																												
2	0																												
3	0																												
4																													
5	0																												
6	0																												
7	0																												
8	0																												
9	0																												
10	0																												
11	0																												
12	0																												
13	0																												
14	0																												
15	0																												
16	0																												
17	0																												
18	0																												
19	0	4	8	13	7	8	14	10	4	6	3	4	4	4	5	4	5	4	6	7	9	8	8	8	8	8	8	8	8
20	0	4	8	13	7	8	14	10	4	6	3	4	4	4	5	4	5	4	6	7	9	8	8	8	8	8	8	8	
21	0	4	8	5	7	8	4	6	4	4	3	4	4	4	5	4	5	4	6	7	9	8	8	8	8	8			
22	0	4	4	5	4	5	4	4	4	4	4	4	4	4	5	4	5	4	6	7	9	8	8	8					
23	0	4	4	3	4	3	3	2	4	4	3	4	4	4	5	4	5	4	6	7	9	8	8						
24	0	4	3	3	3	3	4	1	3	5	3	4	4	4	5	4	5	4	6	7	9	8							
25	0	4	3	3	3	3	3	3	3	3	3	4	4	4	5	4	5	4	6	7	9	8							
26	0	4	3	2	2	3	3	3	3	3	3	3	4	4	5	2	4	6	3	7	9	8							
27	0	4	3	2	2	3	3	3	3	2	3	3	4	5	5	3	8	21	3		9								
28	0	4	2	2	2	3	2	3	3	2	3	2	4	2	4	4		3	3										
29	0	4	2	3	2	2	3	2	2	2	2	2	2	2	3	3		3	3										
30	0	4	2	2	2	1	3	3	2	2	2	2	1	3	16	10		3											
31	0	4	2	2	2	1	3	2	2	2	2	3	9		2														
32	0	4	3	2	1	2	2	2	2	2	2	4	2		2														
33	0	4	4	2	2	2	2	2	2	3	3	2	2																
34	0	4	3	1	1		1	1	2		6																		
35	0	4	2	2	2	1	1	1	3	1			2																
36	0	4	3	2	1	1	2	2																					
37	0	4	2	1	1	2	3	1																					
38	0	4	2	2	2	3																							
39	0	4	2	2	2																								
40	0	4	2	3	3																								
41	0	4	2	3	3																								

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area') Average Points Earned Per Year

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

Annual retirement points (for benefit purposes) accumulated by a Grey Area retiree during a fiscal year.

Blank cells should be considered a value of zero ('0').

Officer Reentering Selected Reserve Average Points

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0	34	34	34	34	124	152	164	209	156	182	168	217	142	83	101	77	51	63	46	79	60	57	53	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
1	0	79	79	79	79	142	380	433	402	415	462	363	370	305	110	174	102	163	134	176	185	235	67	83	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241	241
2	0	116	116	116	116	174	638	745	700	830	610	859	594	570	723	323	619	286	397	179	151	751	468	660	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415	415		
3	0	176	176	176	176	512	1,192	1,182	1,182	1,034	1,299	975	1,145	1,001	843	1,094	859	637	601	871	898	871	374	744	689	689	689	689	689	689	689	689	689	689	689	689	689	689	689	689	689	689						
4	0	343	343	343	343	813	1,381	1,408	1,411	1,431	1,452	1,268	1,273	1,296	804	1,047	1,391	933	1,243	1,107	916	1,044	1,321	1,348	618	618	618	618	618	618	618	618	618	618	618	618	618	618	618	618	618							
5	0	695	695	695	695	1,127	1,674	1,606	1,598	1,594	1,583	1,536	1,399	1,538	1,246	1,255	1,209	1,197	1,126	1,100	814	362	717	425	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014						
6	0	972	871	955	920	1,179	1,827	1,982	2,015	1,702	1,898	1,783	1,674	1,609	1,533	1,586	1,360	1,826	1,267	1,503	1,334	1,042	1,556	456	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743							
7	0	791	1,370	1,203	1,365	1,444	2,148	2,215	2,281	2,073	1,967	2,086	1,833	1,539	1,315	1,578	1,070	1,209	1,497	1,615	1,557	1,859	1,686	845	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399	1,399								
8	0	1,087	1,284	1,683	1,775	1,652	2,474	2,508	2,461	2,502	2,443	2,502	2,058	2,091	1,753	1,631	1,391	1,442	1,623	1,634	830	1,377	803	1,640	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487	1,487									
9	0	1,867	1,523	1,774	2,039	1,884	2,854	3,082	2,883	2,740	2,555	2,456	2,154	2,132	2,025	2,071	2,394	2,090	2,002	1,897	1,895	2,315	736	1,650	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058										
10	0	896	1,726	1,776	1,869	2,384	2,989	3,008	3,151	3,055	2,875	3,045	2,430	2,491	1,316	1,948	2,081	2,072	1,475	2,556	2,464		2,510	1,185	2,173	2,173	2,173	2,173	2,173	2,173	2,173	2,173	2,173	2,173	2,173	2,173	2,173	2,173										
11	0	1,449	1,801	2,046	2,144	2,384	3,083	3,238	3,298	3,304	3,006	2,827	2,472	2,351	2,436	1,984	2,148	1,831	2,062	1,555	2,674	3,807	362	1,560	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884	1,884											
12	0	869	2,076	2,475	2,602	2,515	3,152	3,477	3,188	2,901	3,085	3,273	2,431	2,466	2,942	2,556	2,385	1,997	2,783	3,355	1,070	3,102	3,930	3,498	2,643	2,643	2,643	2,643	2,643	2,643	2,643	2,643	2,643	2,643	2,643	2,643												
13	0	3,388	2,452	2,591	2,874	2,657	3,152	3,059	3,059	2,959	3,755	2,614	2,503	2,392	2,494	2,977	2,377	2,900	2,112	2,088	2,108	2,483	1,522	1,193	1,938	1,938	1,938	3,349	2,489	2,489	2,489	2,489	2,489	2,489	2,489	2,643												
14	0	1,406	2,753	2,744	2,441	2,915	3,436	3,436	3,518	2,858	3,268	2,986	2,775	3,111	3,233	1,590	3,270	2,003	1,075	2,149	2,206	1,480	3,175	1,995	2,639	1,226	1,638	1,638	1,226	1,690	1,638	1,638	1,638	1,638	1,638													
15	0	3,136	2,813	2,845	2,947	3,196	3,457	3,528	3,530	3,045	3,804	3,160	2,336	3,208	2,910	2,735	2,300	2,433	2,051	2,085	2,266	3,401	2,276	2,750	2,639	1,972	1,603	3,349	1,226	1,690	1,638	1,638	1,638															
16	0	3,294	3,088	2,973	3,336	3,230	3,303	3,662	3,378	3,295	3,132	2,488	2,590	3,298	2,820	2,018	3,146	2,136	3,081	2,034	2,490	2,414	2,750	2,639	1,972	1,603	3,349	1,226	1,690	1,638	1,638																
17	0	1,788	3,165	3,459	3,413	3,396	3,802	3,859	3,319	3,562	3,207	2,777	3,412	2,494	2,949	2,344	2,074	2,513	1,856	2,552	2,191	1,269	2,750	2,639	1,972	1,603	3,349	1,226	1,690																	
18	0	3,498	3,486	3,170	3,271	3,449	3,638	3,748	3,960	3,396	3,560	3,210	2,489	2,709	2,818	2,651	2,294	2,207	2,489	2,207	1,364	2,750	2,639	1,972	1,603	3,349	1,226	1,690																		
19	0		3,526	3,962	3,630	3,866	3,845	3,734	3,542	3,434	3,626	3,722	3,464	2,698	2,726	2,789	2,569	2,722	2,569	1,791	5,279	1,202	2,750	2,750	2,639	1,972	1,603	3,349	1,226																			
20	0	3,378	3,900	3,808	3,721	3,388	3,457	3,937	3,422	3,463	3,804	3,160	2,882	3,754	3,319	2,724	3,721	2,722	3,073	2,856	1,376	1,544	2,750	2,750	2,639	1,972	1,603																					
21	0	3,297	4,050	3,660	3,813	3,663	4,175	4,202	3,875	3,883	4,112	3,523	3,000	4,317	2,872	3,395	3,204	2,722	2,419	1,989	1,803	3,195	2,750	2,750	2,639	1,972	1,603																					
22	0	4,080	4,081	4,246	3,564	3,900	4,277	4,510	4,369	4,094	4,527	3,373	3,841	3,532	3,459	3,809	3,204	2,722	2,632	1,912	3,205	3,459	2,750	2,750	2,639	1,972	1,603																					
23	0	4,295	4,619	4,064	3,672	3,722	4,277	4,510	4,389	4,795	4,044	3,560	3,841	3,532	4,291	3,958	3,204	2,722	3,276	2,334	1,938	4,751	2,750	2,750	2,639	1,972	1,603																					
24	0	4,402	4,574	4,574	4,140	4,370	4,733	4,743	4,606	4,626	4,139	3,722	4,020	4,332	3,800	2,436	3,204	2,722	2,779	3,568	1,938	4,751	2,750	2,750																								
25	0	3,796	4,866	4,694	4,399	4,560	4,988	4,711	4,762	4,540	4,365	4,288	4,276	4,503	4,076	3,672	3,204	2,722	5,592	5,729	1,938	4,751	2,750																									
26	0	4,014	4,517	4,906	5,178	4,446	4,536	5,124	4,921	4,322	4,480	5,048	4,366	4,299	4,082	4,717	3,204	2,722	5,592	5,729																												
27	0	6,949	5,592	5,193	5,223	4,988	5,219	5,391	4,815	4,751	5,652	4,337	4,515	4,177	4,763	3,927	3,204	2,722	5,592	5,729																												
28	0	7,008	5,496	4,886	6,222	5,038	5,403	5,184	4,882	4,804	4,044	4,185	4,515	4,177	3,923	3,927	3,204	2,722	5,592	5,729																												
29	0	6,154	5,711	6,574	5,414	5,229	4,789	5,840	4,752	4,791	5,013	4,366	3,291	4,032	3,923	3,927	3,204	2,722	5,592																													
30	0	8,691	5,692	5,376	4,967	5,011	4,802	5,297	3,954	3,861	4,218	4,940	4,276	4,032	3,923	3,672	3,204	2,722																														
31	0	4,387	6,249	4,590	6,126	5,887	5,852	5,417	4,261	3,427	4,323	4,506	4,404	4,032	3,923	4,717	3,204																														
32	0	4,137	5,988	5,193	6,222	5,403	5,483	4,489	4,871	4,675	6,080	3,863	4,404	4,032	3,923	3,927																															
33	0	7,008	4,329	4,886	6,222	4,701	5,483	4,004	4,616	4,804	6,080	3,863	4,404	4,032	3,923																																
34	0	4,137	5,713	6,574	5,414	5,348	5,473	4,205	3,375	4,804	6,080	3,863	4,404	4,032																																	
35	0	4,137	7,181	5,086	5,170	5,032	4,828	4,118	3,998	4,804	6,080	3,863	4,404																																		
36	0	4,137	4,867	5,509	4,602	5,168	4,872	5,417	8,428	4,804	6,080	3,863																																			
37	0	4,137	6,535	6,014	4,973	5,376	5,553	6,217	8,428	4,804	6,080																																				
38	0	4,137	5,828	5,828	4,974	5,505	5,553	6,217	8,428	4,804																																					
39	0	4,137	6,307	5,284	5,760	5,348	5,553	6,217	8,428																																						
40		4,137	5,928	5,390	5,744	5,505	5,553	6,217																																							
41		4,137	5,928	5,390	5,744	5,505	5,553																																								

DESCRIPTION: Average Career Points Transferred to the Selected Reserve via Reentering Members

Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

Career retirement points (for benefit purposes) accumulated by reentrants transferring to the Selected Reserve during a fiscal year.

Blank cells should be considered a value of zero ('0').

Enlisted Reentering Selected Reserve Average Points

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0	87	104	208	252	252	256	249	248	250	238	239	216	225	236	269	257	230	213	248	255	249	224	224	226	193	269	179	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
1	0	153	495	568	598	596	609	601	602	595	588	572	533	537	556	581	625	582	511	592	451	513	546	372	505	570	559	418	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	
2	0	505	736	879	977	964	971	975	949	936	933	931	841	873	914	819	815	815	790	856	875	808	749	704	719	718	722	733	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111		
3	0	679	1,179	1,307	1,343	1,334	1,332	1,312	1,328	1,311	1,311	1,282	1,278	1,260	1,245	1,202	1,233	1,136	1,141	1,246	1,092	992	1,089	1,112	1,085	1,069	1,167	980	954	954	954	954	954	954	954	954	954	954	954	954	954	954	954	954	954			
4	0	763	1,378	1,464	1,485	1,477	1,461	1,461	1,484	1,460	1,447	1,407	1,430	1,403	1,408	1,236	1,291	1,229	1,313	1,150	1,180	1,014	979	1,201	1,198	1,663	1,255	1,293	528	528	528	528	528	528	528	528	528	528	528	528	528	528	528	528				
5	0	1,099	1,538	1,673	1,672	1,656	1,663	1,663	1,660	1,627	1,573	1,556	1,511	1,496	1,373	1,301	1,352	1,268	1,240	1,114	1,140	1,072	1,109	1,112	1,097	1,100	1,113	1,165	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633	1,633					
6	0	876	1,396	1,603	1,629	1,600	1,618	1,608	1,580	1,522	1,518	1,487	1,456	1,384	1,445	1,445	1,428	1,347	1,301	1,325	1,141	1,085	1,378	1,208	1,403	1,486	1,413	1,204	922	922	922	922	922	922	922	922	922	922	922	922	922	922						
7	0	1,183	1,628	1,837	1,806	1,759	1,662	1,589	1,523	1,392	1,374	1,320	1,279	1,296	1,247	1,243	1,249	1,204	1,282	1,313	1,444	1,318	1,184	1,538	1,761	1,414	1,550	955	3,132	3,132	3,132	3,132	3,132	3,132	3,132	3,132	3,132	3,132	3,132	3,132	3,132							
8	0	1,708	2,210	2,323	2,295	2,242	2,242	2,064	2,084	1,962	1,741	1,615	1,650	1,512	1,467	1,483	1,567	1,468	1,715	1,636	1,342	1,612	1,761	1,821	1,966	1,483	2,193	1,918	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301								
9	0	1,908	2,438	2,571	2,671	2,482	2,284	2,286	2,206	1,968	2,066	2,078	2,055	1,776	1,855	1,904	1,852	1,934	1,880	1,862	1,758	1,775	2,035	1,884	2,142	2,285	2,025	2,172	899	899	899	899	899	899	899	899	899	899	899									
10	0	2,091	2,401	2,601	2,608	2,594	2,309	2,428	2,219	2,091	2,087	1,949	1,790	1,790	1,883	1,976	1,989	2,387	2,479	1,791	1,912	2,093	2,239	1,939	2,101	1,973	247	3,557	647	647	647	647	647	647	647	647	647	647										
11	0	2,041	2,558	2,753	2,756	2,700	2,388	2,405	2,246	2,230	2,226	2,116	2,122	2,096	2,101	1,972	1,618	1,901	2,172	1,940	1,718	1,766	2,267	1,723	2,158	2,001	2,508	1,832	422	422	422	422	422	422	422	422	422											
12	0	2,387	2,689	2,876	2,846	2,609	2,590	2,479	2,519	2,315	2,419	2,313	2,194	2,194	2,334	2,376	2,401	2,547	2,711	2,492	2,113	2,218	2,419	2,709	2,468	2,136	2,383	1,832	4,166	4,166	4,166	4,166	4,166	4,166	4,166													
13	0	2,686	2,629	2,959	2,876	2,923	2,584	2,630	2,415	2,561	2,602	2,426	2,522	2,228	2,196	2,581	2,533	2,641	2,919	2,849	2,248	2,673	3,167	2,064	2,468	4,226	3,476	1,832	4,166	4,166	4,166	4,166	4,166	4,166														
14	0	2,706	2,864	3,150	3,173	3,131	2,775	2,637	2,701	2,615	2,819	2,688	2,736	2,736	2,331	2,318	2,561	2,291	2,734	2,551	2,748	2,583	2,612	1,767	904	2,373	2,612	1,832	4,166	4,166	4,166	4,166	4,166															
15	0	2,240	3,178	3,146	2,996	2,840	2,910	2,795	2,728	3,019	2,715	2,762	2,793	2,382	2,716	2,957	3,410	2,969	3,088	2,899	2,308	2,358	2,817	2,898	2,974	2,373	1,759	1,832	4,166	4,166	4,166	4,166																
16	0	3,122	3,266	3,320	3,187	2,896	2,956	2,791	2,976	2,777	3,296	2,990	3,197	2,730	2,658	2,697	3,463	2,285	2,481	3,676	2,805	1,743	3,009	4,149	2,974	2,373	1,759	1,832	4,166	4,166	4,166																	
17	0	3,457	3,431	3,314	3,398	2,869	3,099	3,232	3,080	3,517	3,097	2,847	3,200	2,602	2,843	3,277	3,348	3,061	3,168	3,502	3,263	3,629	2,667	4,149	2,974	2,373	1,759	1,832	4,166	4,166																		
18	0	3,980	3,663	3,640	3,646	3,635	3,099	3,563	3,669	3,260	3,144	3,103	3,317	3,080	3,000	3,567	3,688	3,317	3,646	2,701	3,235	1,995	2,799	4,149	2,974	2,373	1,759	1,832	4,166																			
19	0	3,128	3,862	3,715	3,495	3,665	3,649	3,570	3,823	3,490	3,256	3,683	3,280	3,490	3,833	3,844	3,387	2,675	3,605	2,968	1,953	2,495	2,799	4,149																								
20	0	2,907	4,304	4,098	3,667	4,314	3,954	3,649	3,663	3,482	3,403	3,095	3,573	3,680	3,769	3,787	2,264	3,217	3,217	3,090	2,017	4,115	2,799	4,149	2,974	2,373	1,759	1,832																				
21	0	4,224	4,280	4,332	4,242	3,884	3,908	4,070	4,028	3,520	3,810	3,354	3,429	4,029	3,333	3,985	2,617	2,478	3,462	1,669	3,446	4,115	2,799	4,149	2,974	2,373	1,759																					
22	0	4,249	4,786	4,528	4,651	3,908	3,908	4,115	4,589	2,996	3,898	3,334	3,696	4,365	2,062	3,461	3,472	4,782	3,168	4,348	2,019	4,115	2,799	4,149	2,974	2,373	1,759																					
23	0	5,625	4,958	4,669	4,217	4,355	4,349	4,203	4,437	4,020	3,898	4,334	4,334	3,437	5,015	2,062	3,472	4,782	4,517	4,015	2,019	4,115	2,799	4,149	2,974	2,974																						
24	0	3,628	4,910	5,213	4,766	4,729	4,630	4,654	4,000	4,345	4,479	4,439	5,035	3,470	4,788	4,228	4,228	4,782	4,415	4,015	1,953	4,115	2,799	4,149																								
25	0	5,089	5,125	4,462	4,999	4,741	5,060	4,108	4,715	5,613	4,256	4,652	4,030	3,614	4,227	3,392	4,622	4,782	4,415	4,015	2,019	4,115																										
26	0	5,452	5,363	4,974	5,319	5,319	5,080	4,738	4,371	4,610	5,355	4,105	4,105	4,247	5,244	3,333	4,622	4,782	4,415	4,015	2,019	4,115																										
27	0	5,500	5,411	5,449	5,206	5,202	5,064	4,963	3,930	4,533	4,777	4,414	3,612	6,674	4,254	4,218	4,622	4,782	4,415	4,015	2,019																											
28	0	4,504	5,259	5,632	4,555	5,276	4,750	5,561	5,184	5,451	5,815	4,369	6,099	5,089	4,517	7,843	4,622	4,782	4,415	4,015																												
29	0	4,332	5,508	5,053	5,263	5,227	6,065	4,977	4,985	5,843	3,050	6,348	3,967	3,888	3,927	4,788	4,622	4,782	4,415	4,015																												
30	0	5,302	4,998	5,660	5,281	5,707	4,233	4,041	5,017	4,504	4,041	4,523	4,030	3,614	4,227	3,392	4,622	4,782	4,415	3,460	2,019	4,115																											
31	0	8,028	6,520	5,283	5,775	5,707	5,275	6,170	5,662	4,670	4,142	5,229	5,026	4,247	5,244	7,843	4,622	4,782	4,415	3,460	2,019																												
32	0	5,271	4,214	4,793	5,917	5,538	4,850	5,947	4,614	5,102	5,102	5,229	5,026	6,099	4,254	4,218	4,622	4,782	4,415	3,460	2,019																												
33	0	5,271	5,072	5,650	6,091	5,132	4,486	3,050	4,667	5,731	5,731	5,229	5,026	6,099	3,460	7,843	4,622	4,782	4,415	3,460																													
34	0	5,271	7,132	5,067	4,735	4,740	4,939	5,721	3,570	5,721	6,522	5,295	5,026	3,121	3,460	7,843	4,622	4,782	4,415																														
35	0	5,271	4,946	7,663	5,519	6,305	5,004	6,098	6,484	5,295	6,522	5,229	5,026	3,121	3,460																																		
36	0	5,271	3,074	4,869	6,710	6,439	5,890	4,880	6,484	5,295	6,522	5,229	5,026	3,121	3,460																																		
37	0	5,271	5,164	3,924	6,996	6,014	5,473	4,880	6,484	5,295	6,522	5,229	5,026	3,121	3,460																																		
38	0	5,271	6,968	5,769	6,276	5,238	6,473	4,880	6,484	5,295			5,026	3,121																																		
39	0	5,271	7,132	5,067	7,146	6,001	6,473	4,880	6,484																																							
40	0	5,271	8,551	9,123	7,146	6,001	6,473	4,880																																								
41	0	5,271	5,572	6,383	7,146	6,001	6,473																																									

DESCRIPTION: Average Career Points Transferred to the Selected Reserve via Reentering Members
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Career retirement points (for benefit purposes) accumulated by reentrants transferring to
the Selected Reserve during a fiscal year.
Blank cells should be considered a value of zero ('0').

DoD Office of the Actuary

Non-Selected Reserve with 20 Good Years Blow-up Factors

By Modeling Type and Paygrade

Age	Person		Pay	
	Officer	Enlisted	Officer	Enlisted
17	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000
31	0.000	0.000	0.000	0.000
32	0.000	0.000	0.000	0.000
33	0.000	0.000	0.000	0.000
34	0.000	0.000	0.000	0.000
35	0.000	0.000	0.000	0.000
36	0.000	0.000	0.000	0.000
37	0.000	0.000	0.000	0.000
38	0.000	0.000	0.000	0.000
39	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000
41	0.000	0.000	0.000	0.000
42	0.000	0.000	0.000	0.000
43	0.000	0.000	0.000	0.000
44	0.000	0.000	0.000	0.000
45	0.000	0.000	0.000	0.000
46	0.000	0.000	0.000	0.000
47	0.000	0.000	0.000	0.000
48	0.000	0.000	0.000	0.000
49	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000
52	0.000	0.000	0.000	0.000
53	0.000	0.000	0.000	0.000
54	0.000	0.000	0.000	0.000
55	0.000	0.000	0.000	0.000
56	0.000	0.000	0.000	0.000
57	0.000	0.000	0.000	0.000
58	0.000	0.000	0.000	0.000
59	1.083	1.154	0.990	0.977
60	1.105	1.190	0.986	0.977
61	2.331	2.589	0.910	0.917
62	4.536	4.919	0.823	1.045
>62	4.026	4.888	0.969	0.976

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area') Nondisabled Retirement Ratios ("Blow-up" factors or "Loads")
Arrayed by modeling type (person/pay), age, and paygrade (officer/enlisted).
These factors are applied to each year's new-retirement-from-the-Grey-Area projections to account for new retirees who
were not present in the prior year's reserve data files.

DoD Office of the Actuary

Officer Selected Reserve to Non-Selected Reserve with 20 Good Years Transfer Blow-up Factors

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Under 1	0.000																												
1	0.000																												
2	0.000																												
3	0.000																												
4	0.000																												
5	0.000																												
6	0.000																												
7	0.000																												
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9	0.000																												
10	0.000																												
11	0.000																												
12	0.000																												
13	0.000																												
14	0.000																												
15	0.000																												
16	0.000																												
17	0.000																												
18	0.000																												
19	0.000	0.247	0.390	0.411	0.298	0.367	0.925	0.928	0.830	0.700	0.667	0.700	0.857	0.917	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173
20	0.000	0.247	0.126	0.148	0.135	0.325	0.620	0.597	0.411	0.513	0.309	0.245	0.278	0.400	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173
21	0.000	0.247	0.129	0.112	0.155	0.226	0.348	0.392	0.310	0.342	0.303	0.241	0.333	0.308	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	
22	0.000	0.247	0.143	0.217	0.153	0.108	0.211	0.202	0.248	0.136	0.177	0.298	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173		
23	0.000	0.247	0.179	0.189	0.174	0.212	0.218	0.197	0.132	0.258	0.333	0.141	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173	0.173	0.173	0.173			
24	0.000	0.247	0.127	0.153	0.132	0.104	0.200	0.172	0.115	0.182	0.224	0.188	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173	0.173	0.173				
25	0.000	0.247	0.217	0.159	0.252	0.192	0.114	0.112	0.212	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173	0.173					
26	0.000	0.247	0.217	0.125	0.252	0.209	0.149	0.138	0.100	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173	0.173						
27	0.000	0.247	0.217	0.161	0.252	0.143	0.049	0.114	0.096	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173	0.173	0.173							
28	0.000	0.247	0.217	0.360	0.252	0.204	0.175	0.114	0.122	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173	0.173								
29	0.000	0.247	0.217	0.207	0.252	0.204	0.204	0.059	0.049	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158	0.183	0.173	0.173									
30	0.000	0.247	0.217	0.108	0.252	0.204	0.161	0.152	0.234	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158	0.183	0.173										
31	0.000	0.247	0.217	0.157	0.252	0.204	0.135	0.181	0.234	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158	0.183											
32	0.000	0.247	0.217	0.200	0.252	0.204	0.221	0.146	0.234	0.127	0.136	0.115	0.092	0.107	0.141	0.127	0.158												
33	0.000	0.247	0.217	0.368	0.252	0.204	0.210	0.275	0.234	0.127	0.136	0.115	0.092	0.107	0.141	0.127													
34	0.000	0.247	0.217	0.278	0.252	0.204	0.186	0.409	0.234	0.127	0.136	0.115	0.092	0.107	0.141														
35	0.000	0.247	0.217	0.340	0.252	0.204	0.258	0.133	0.234	0.127	0.136	0.115	0.092																
36	0.000	0.247	0.217	0.340	0.252	0.204	0.329	0.788	0.234	0.127	0.136	0.115																	
37	0.000	0.247	0.217	0.340	0.252	0.204	0.364	0.788	0.234	0.127	0.136																		
38	0.000	0.247	0.217	0.340	0.252	0.204	0.364	0.788	0.234	0.127																			
39	0.000	0.247	0.217	0.340	0.252	0.204	0.364	0.788	0.234																				
40	0.000	0.247	0.217	0.340	0.252	0.204	0.364	0.788																					
41	0.000	0.247	0.217	0.340	0.252	0.204	0.364																						

Columns for entry ages 45 through 62 and >62 contain no values (all blank).

DESCRIPTION: Selected Reserve to Non-Selected Reserve with 20 Good Years ('Grey Area') Transfer Rate Ratios ("Blow-up" factors or "Loads") -- Count-Based.
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Increment rates to account for "unanticipated" (i.e., not in the Selected Reserve the prior year) transfers to Grey Area.
Blank cells should be considered a value of zero ('0.000').

Enlisted Selected Reserve to Non-Selected Reserve with 20 Good Years Transfer Blow-up Factors

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000																																															
1	0.000																																															
2	0.000																																															
3	0.000																																															
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14	0.000																																															
15	0.000																																															
16	0.000																																															
17	0.000																																															
18	0.000																																															
19	0.000	0.105	0.088	0.066	0.048	0.042	0.070	0.066	0.095	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182	0.133	0.104																								
20	0.000	0.105	0.029	0.053	0.069	0.023	0.043	0.039	0.052	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182	0.100	0.104	0.104																								
21	0.000	0.105	0.059	0.046	0.033	0.040	0.051	0.058	0.049	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182	0.100	0.104	0.104	0.104																							
22	0.000	0.105	0.077	0.060	0.048	0.052	0.099	0.075	0.038	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182	0.100	0.104	0.104	0.104	0.104																						
23	0.000	0.105	0.062	0.035	0.052	0.044	0.059	0.075	0.034	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182	0.100	0.104	0.104	0.104	0.104	0.104																					
24	0.000	0.105	0.070	0.069	0.081	0.065	0.092	0.079	0.059	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182	0.100	0.104	0.104	0.104	0.104	0.104	0.104																				
25	0.000	0.105	0.075	0.060	0.072	0.083	0.072	0.085	0.047	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182	0.100																									
26	0.000	0.105	0.092	0.128	0.101	0.070	0.103	0.106	0.088	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083	0.182																									
27	0.000	0.105	0.163	0.144	0.134	0.065	0.104	0.148	0.093	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081	0.083																										
28	0.000	0.105	0.141	0.193	0.153	0.203	0.180	0.125	0.151	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067	0.081																											
29	0.000	0.105	0.192	0.168	0.160	0.092	0.160	0.130	0.126	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083	0.067																												
30	0.000	0.105	0.158	0.140	0.187	0.295	0.173	0.121	0.098	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102	0.083																													
31	0.000	0.105	0.211	0.303	0.200	0.212	0.160	0.134	0.239	0.092	0.100	0.090	0.084	0.075	0.096	0.094	0.102																														
32	0.000	0.105	0.211	0.123	0.140	0.157	0.088	0.089	0.059	0.092	0.100	0.090	0.084	0.075	0.096	0.094																															
33	0.000	0.105	0.130	0.156	0.225	0.156	0.206	0.185	0.161	0.092	0.100	0.090	0.084	0.075	0.096																																
34	0.000	0.105	0.194	0.253	0.119	0.124	0.149	0.253	0.284	0.092	0.100	0.090	0.084	0.075																																	
35	0.000	0.105	0.122	0.115	0.085	0.137	0.218	0.138	0.256	0.128	0.100	0.090	0.084	0.075																																	
36	0.000	0.105	0.118	0.113	0.223	0.255	0.161	0.270	0.256	0.128	0.100	0.090	0.084																																		
37	0.000	0.105	0.233	0.113	0.149	0.258	0.310	0.270	0.256	0.128	0.100	0.090																																			
38	0.000	0.105	0.182	0.113	0.315	0.258	0.310	0.270	0.256	0.128	0.100																																				
39	0.000	0.105	0.182	0.113	0.315	0.258	0.310	0.270	0.256	0.128																																					
40	0.000	0.105	0.182	0.113	0.315	0.258	0.310	0.270																																								
41	0.000	0.106	0.182	0.113	0.315	0.258	0.310	0.270																																								

DESCRIPTION: Selected Reserve to Non-Selected Reserve with 20 Good Years ('Grey Area') Transfer Rate Ratios ("Blow-up" factors or "Loads") -- Count-Based.
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Increment rates to account for "unanticipated" (i.e., not in the Selected Reserve the prior year) transfers to Grey Area.
Blank cells should be considered a value of zero (0.000).

Officer Non-Selected Reserve with 20 Good Years Career Points Adjustment Due To Transfer Blow-ups

By Entry Age

Note: Column headers continue through ages 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, >62 — all cells in those columns are blank.

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Under 1	0.000																												
1	0.000																												
2	0.000																												
3	0.000																												
4	0.000																												
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15	0.000																												
16	0.000																												
17	0.000																												
18	0.000																												
19	0.000	0.907	0.907	0.920	0.901	0.869	0.943	0.957	0.976	0.958	0.957	0.938	0.956	0.996	1.036	0.977	0.959	0.985	0.992	1.033	1.033	1.033	1.033	1.033	1.033	1.033	1.033	1.033	1.033
20	0.000	0.968	0.968	0.924	0.923	0.933	1.001	1.001	0.978	1.001	0.980	0.958	0.908	0.922	1.016	0.927	0.908	0.825	1.023	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.982	
21	0.000	0.958	0.958	0.985	0.936	0.936	1.002	1.002	0.973	0.979	0.980	0.981	1.040	1.036	0.993	1.017	0.956	0.980	1.030	1.023	1.023	1.023	1.023	1.023	1.023	1.023	1.023		
22	0.000	0.979	0.979	0.972	0.990	0.993	1.002	0.998	0.995	1.003	0.974	0.961	0.998	0.894	0.995	1.003	0.968	1.000	0.992	0.896	0.896	0.896	0.896	0.896	0.896	0.896			
23	0.000	0.962	0.962	0.964	0.989	0.989	0.992	0.992	1.002	0.995	0.989	0.995	0.994	1.000	1.006	1.000	0.999	0.995	0.999	1.000	1.000	1.000	1.000	1.000	1.000				
24	0.000	0.980	0.980	0.994	1.004	0.969	1.024	0.994	1.007	1.030	0.990	0.975	0.976	1.003	1.003	0.968	0.943	1.000	1.000	0.954	0.954	0.954	0.954	0.954					
25	0.000	0.984	0.984	0.978	0.993	0.972	1.009	1.003	0.985	0.996	1.007	1.022	1.011	0.975	0.981	1.007	1.000	1.014	1.000	0.954	0.954	0.954	0.954						
26	0.000	1.001	1.001	1.027	0.998	0.971	1.015	0.998	0.988	1.009	0.966	0.988	1.007	0.958	0.947	0.922	0.998	1.014	1.000	0.954	0.954	0.954							
27	0.000	0.995	0.995	1.009	1.000	0.999	0.999	0.997	1.002	0.977	1.014	0.981	0.974	0.979	0.989	0.990	0.998	1.014	1.000	0.954	0.954								
28	0.000	0.992	0.992	0.966	0.986	0.976	0.994	0.988	0.991	0.966	0.981	0.989	0.992	1.000	1.000	1.000	0.998	1.014	1.000	0.954									
29	0.000	1.002	1.002	1.005	1.008	0.989	0.996	1.000	1.004	0.999	1.022	0.953	1.000	0.990	0.965	1.000	0.990	1.014	1.000										
30	0.000	1.000	1.000	1.001	1.005	1.016	1.009	1.002	0.996	1.000	1.009	1.022	0.958	0.980	0.965	1.000	0.998	0.998											
31	0.000	0.970	0.970	1.036	1.015	1.013	1.006	1.018	0.991	0.998	1.004	0.966	1.000	0.990	0.965	1.000	0.998												
32	0.000	1.061	1.061	1.046	0.997	1.027	1.010	1.006	1.005	1.038	0.986	1.059	1.000	0.980	0.965	1.000													
33	0.000	1.036	1.036	1.026	1.026	1.016	1.010	0.982	0.995	1.023	0.986	1.059	1.059	0.980	0.965														
34	0.000	1.007	1.007	1.046	0.997	1.004	1.010	1.008	1.035	0.965	0.986	1.059	1.059	0.980															
35	0.000	1.043	1.043	1.041	1.013	0.985	1.010	1.005	1.035	0.965	0.986	1.059	1.000																
36	0.000	0.968	0.968	1.008	1.014	1.024	1.010	1.057	1.035	0.965	0.986	1.059																	
37	0.000	1.018	1.018	1.013	1.013	0.999	1.010	1.057	1.035	0.965	0.986																		
38	0.000	1.003	1.003	0.999	0.999	0.899	1.010	1.057	1.035	0.965																			
39	0.000	0.817	0.817	1.001	0.999	0.817	1.010	1.057	1.035																				
40	0.000	1.000	1.000	0.999	0.999	1.024	1.010	1.057																					
41	0.000	1.000	1.000	1.001	0.999	1.024	1.010																						

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area') Career Points Adjustment due to Transfer Blow-up factors
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Adjustment to Average Career Points for Grey Area retirees -- effect on Average Career Points of "unanticipated" (i.e., not in the Selected Reserve the prior year) transfers to Grey Area due to transfer blow-up factors.
Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

Enlisted Non-Selected Reserve with 20 Good Years Career Points Adjustment Due To Transfer Blow-ups

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000																																															
1	0.000																																															
2	0.000																																															
3	0.000																																															
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16	0.000																																															
17	0.000																																															
18	0.000																																															
19	0.998	0.998	0.998	0.988	0.999	0.997	0.987	0.994	1.007	0.970	0.983	0.999	0.988	1.006	0.985	0.982	1.006	0.987	0.977	0.991	1.196	0.918	1.254	0.951	1.046	0.937	0.937	0.937	0.937																			
20	0.000	0.996	0.996	0.991	0.996	1.002	0.996	0.991	0.984	0.999	0.972	0.995	1.010	0.977	0.971	1.006	0.993	0.960	0.975	1.129	1.069	1.047	0.910	0.825	1.046	0.937	0.937	0.937																				
21	0.000	0.992	0.992	0.995	1.001	0.996	0.993	0.993	0.999	0.992	0.999	0.989	0.999	1.004	0.999	0.932	0.979	1.001	0.886	1.038	1.014	1.007	1.007	1.421	1.046	0.937	0.937																					
22	0.000	0.993	0.993	0.997	1.000	1.000	0.988	0.992	0.995	0.994	0.981	0.994	1.008	1.004	0.999	0.991	0.997	1.046	1.007	1.036	0.978	0.941	0.953	1.421	1.046	0.937																						
23	0.000	1.000	1.000	1.020	1.029	1.010	0.994	0.989	0.989	1.009	0.998	1.001	1.001	1.001	0.986	1.007	1.020	1.083	1.083	1.021	0.923	0.953	0.953	1.421	1.046																							
24	0.000	1.000	1.000	1.004	0.997	0.997	0.995	1.007	0.996	0.996	1.003	0.998	0.991	1.000	1.000	1.009	0.935	1.024	0.985	0.975	1.123	1.413	0.953	1.421																								
25	0.000	0.999	0.999	0.998	0.997	0.997	1.005	0.998	0.994	0.987	0.994	0.998	0.994	0.985	0.971	1.050	0.948	0.981	1.022	1.652	1.123	1.413	0.953																									
26	0.000	1.005	1.000	0.989	1.027	1.053	1.053	0.999	0.997	0.997	0.984	1.006	0.994	1.010	0.939	0.979	1.028	1.001	1.022	1.652	1.123	1.413																										
27	0.000	1.007	1.007	1.001	0.981	1.017	1.017	0.990	0.975	0.997	0.990	0.998	0.998	0.961	0.996	1.010	0.962	1.455	1.022	1.652	1.123																											
28	0.000	0.994	0.994	1.000	1.001	1.002	1.002	1.006	1.012	1.012	0.987	1.011	0.985	1.002	1.001	0.994	0.962	1.455	1.022	1.652																												
29	0.000	0.992	0.992	1.002	0.996	0.995	0.995	1.004	0.991	1.007	0.994	1.006	1.035	0.998	1.014	0.994	0.962	1.455	1.022	1.652																												
30	0.000	1.005	1.005	0.993	1.019	1.003	1.009	1.011	0.997	1.005	0.987	0.982	0.999	0.981	1.158	0.994	0.962	1.455																														
31	0.000	1.008	1.008	1.009	1.015	0.993	0.982	1.007	0.991	1.001	1.024	0.981	1.000	1.073	1.158	0.994	0.962																															
32	0.000	0.987	0.987	1.000	0.998	1.000	1.002	0.992	1.004	1.004	0.996	1.040	0.824	1.073	1.158	0.994																																
33	0.000	1.012	1.012	1.020	1.029	1.010	1.012	1.015	1.015	1.014	0.980	1.040	0.824	1.073	1.158																																	
34	0.000	0.991	0.991	1.041	1.015	1.011	1.013	1.009	1.100	0.966	1.170	1.040	0.824	1.073																																		
35	0.000	1.017	1.017	0.995	1.019	1.021	1.012	1.039	1.019	1.148	1.170	1.040	0.824																																			
36	0.000	1.000	1.000	1.006	1.027	1.024	1.053	1.035	1.070	1.148	1.170	1.040																																				
37	0.000	1.024	1.024	1.000	1.009	0.981	0.992	1.035	1.070	1.148	1.170																																					
38	0.000	1.000	1.000	1.010	1.048	0.992	0.992	1.035	1.070	1.148																																						
39	0.000	0.996	0.996	1.131	0.983	0.992	0.992	1.035	1.070																																							
40	0.000	1.112	1.112	1.009	1.309	0.992	0.992	1.035																																								
41	0.000	0.939	0.939	1.009	1.309	0.992	0.992																																									

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area') Career Points Adjustment due to Transfer Blow-up factors
    Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
    Adjustment to Average Career Points for Grey Area retirees -- effect on Average Career Points of "unanticipated" (i.e., not in the
    Selected Reserve the prior year) transfers to Grey Area due to transfer blow-up factors.
    Blank cells should be considered a value of zero (0.000).

Officer Selected Reserve Promotion and Merit Increase Scales (PAMS)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.000	1.161	1.053	1.007	1.011	1.007	1.012	1.016	1.022	1.022	1.040	1.022	1.018	1.032	1.030	1.030	1.042	1.041	1.039	1.032	1.043	1.055	1.049	1.065	1.063	1.060	1.045	1.037	1.041	1.053	1.033	1.056	1.044	1.013	1.007	1.006	1.018	1.031	1.072	1.024	1.096	1.038	1.067	1.048	1.095	1.000	1.000
1	0.000	1.041	1.161	1.053	1.104	1.096	1.141	1.199	1.175	1.168	1.165	1.160	1.178	1.182	1.191	1.183	1.185	1.194	1.190	1.202	1.194	1.193	1.187	1.216	1.176	1.191	1.199	1.193	1.182	1.205	1.208	1.190	1.163	1.173	1.203	1.199	1.228	1.172	1.196	1.072	1.024	1.096	1.038	1.067	1.048	1.095	1.000	
2	0.000	1.041	1.161	1.220	1.211	1.242	1.242	1.247	1.264	1.266	1.251	1.235	1.204	1.200	1.185	1.171	1.178	1.181	1.182	1.162	1.168	1.179	1.137	1.152	1.153	1.144	1.142	1.148	1.125	1.129	1.153	1.135	1.136	1.094	1.106	1.110	1.067	1.101	1.082	1.072	1.024	1.096	1.038	1.067	1.048	1.095		
3	0.000	1.041	1.045	1.033	1.057	1.093	1.141	1.142	1.136	1.113	1.101	1.114	1.108	1.101	1.105	1.106	1.093	1.104	1.100	1.109	1.088	1.073	1.088	1.089	1.088	1.083	1.096	1.077	1.075	1.078	1.078	1.066	1.070	1.051	1.050	1.054	1.078	1.072	1.051	1.072	1.024	1.096	1.038	1.067	1.048			
4	0.000	1.041	1.081	1.060	1.076	1.077	1.081	1.071	1.075	1.061	1.062	1.056	1.041	1.043	1.032	1.030	1.031	1.027	1.028	1.026	1.024	1.018	1.018	1.010	1.014	1.017	1.015	1.026	1.015	1.012	1.019	1.019	1.035	1.016	1.022	1.019	1.026	1.000	1.040	1.072								
5	0.000	1.072	1.077	1.086	1.087	1.074	1.080	1.072	1.070	1.071	1.070	1.076	1.077	1.069	1.076	1.067	1.068	1.062	1.069	1.068	1.071	1.071	1.071	1.065	1.070	1.058	1.066	1.067	1.075	1.058	1.066	1.069	1.062	1.065	1.082	1.095	1.064	1.088	1.057	1.072	1.024	1.096	1.038					
6	0.000	1.073	1.073	1.034	1.065	1.061	1.032	1.027	1.032	1.032	1.034	1.034	1.024	1.056	1.030	1.030	1.044	1.047	1.053	1.062	1.060	1.056	1.057	1.052	1.051	1.065	1.062	1.050	1.061	1.047	1.052	1.059	1.071	1.046	1.041	1.033	1.025	1.054	1.037	1.072	1.024	1.096						
7	0.000	1.099	1.076	1.073	1.082	1.078	1.064	1.060	1.064	1.061	1.062	1.057	1.061	1.056	1.053	1.053	1.044	1.047	1.053	1.062	1.060	1.056	1.057	1.052	1.051	1.065	1.062	1.050	1.061	1.047	1.052	1.059	1.071	1.046	1.041	1.033	1.025	1.054	1.037	1.072	1.024							
8	0.000	1.051	1.066	1.055	1.055	1.066	1.064	1.060	1.026	1.025	1.025	1.025	1.029	1.029	1.017	1.017	1.020	1.021	1.015	1.013	1.023	1.009	1.010	1.018	1.007	1.007	1.016	1.023	1.037	1.034	1.012	1.008	1.008	1.014	1.016													
9	0.000	1.086	1.079	1.080	1.075	1.070	1.084	1.084	1.079	1.073	1.073	1.067	1.072	1.062	1.063	1.064	1.070	1.063	1.074	1.064	1.074	1.074	1.046	1.058	1.057	1.068	1.076	1.059	1.072	1.075	1.065	1.064	1.085	1.041	1.016													
10	0.000	1.075	1.070	1.065	1.053	1.051	1.040	1.037	1.038	1.040	1.032	1.039	1.040	1.038	1.035	1.026	1.019	1.017	1.021	1.027	1.014	1.019	1.032	1.024	1.013	1.028	1.019	1.023	1.022	1.016	1.030	1.021	1.038	1.041	1.016	1.033	1.025	1.000										
11	0.000	1.102	1.087	1.080	1.081	1.081	1.070	1.068	1.072	1.076	1.072	1.078	1.068	1.072	1.065	1.061	1.063	1.071	1.058	1.058	1.065	1.071	1.055	1.061	1.064	1.054	1.058	1.047	1.030	1.068	1.046	1.051	1.038	1.041	1.016	1.033	1.025											
12	0.000	1.070	1.073	1.061	1.063	1.054	1.021	1.024	1.029	1.030	1.033	1.029	1.025	1.021	1.023	1.021	1.027	1.015	1.011	1.016	1.007	1.019	1.009	1.014	1.012	1.010	1.008	1.002	1.037	1.008	1.040	1.035	1.038	1.041	1.016	1.033												
13	0.000	1.067	1.077	1.074	1.067	1.070	1.048	1.046	1.052	1.056	1.055	1.053	1.049	1.044	1.053	1.055	1.051	1.051	1.043	1.053	1.040	1.052	1.052	1.039	1.045	1.042	1.041	1.047	1.046	1.046	1.040	1.035	1.038	1.041													
14	0.000	1.037	1.051	1.050	1.054	1.044	1.022	1.017	1.022	1.020	1.020	1.017	1.020	1.028	1.017	1.017	1.017	1.017	1.022	1.020	1.013	1.010	1.012	1.009	1.022	1.012	1.012	1.003	1.003	1.015	1.015																	
15	0.000	1.044	1.057	1.051	1.051	1.050	1.043	1.043	1.041	1.041	1.046	1.041	1.045	1.050	1.046	1.039	1.047	1.045	1.051	1.048	1.045	1.045	1.056	1.049	1.048	1.044	1.050	1.049	1.044	1.053	1.040	1.035	1.038															
16	0.000	1.044	1.045	1.046	1.038	1.035	1.018	1.016	1.020	1.020	1.023	1.020	1.016	1.023	1.014	1.013	1.020	1.011	1.014	1.012	1.005	1.022	1.018	1.008	1.008	1.015	1.010	1.014	1.021	1.053	1.040	1.035																
17	0.000	1.026	1.039	1.051	1.046	1.052	1.034	1.034	1.019	1.018	1.037	1.015	1.014	1.016	1.012	1.014	1.018	1.016	1.011	1.010	1.040	1.035	1.035	1.010	1.041	1.039	1.030	1.048	1.044	1.053	1.040																	
18	0.000	1.035	1.039	1.032	1.052	1.028	1.034	1.019	1.019	1.018	1.025	1.015	1.014	1.012	1.012	1.034	1.018	1.035	1.011	1.012	1.015	1.035	1.012	1.010	1.041	1.035	1.041	1.023	1.044																			
19	0.000	1.045	1.050	1.035	1.033	1.030	1.035	1.035	1.032	1.013	1.036	1.031	1.007	1.008	1.011	1.038	1.017	1.039	1.045	1.019	1.038	1.045	1.037	1.009	1.041	1.036	1.044	1.023																				
20	0.000	1.021	1.032	1.031	1.025	1.024	1.023	1.023	1.029	1.022	1.014	1.023	1.019	1.025	1.020	1.023	1.024	1.019	1.016	1.020	1.024	1.018	1.021	1.049	1.044	1.050	1.044	1.048	1.017	1.033																		
21	0.000	1.027	1.030	1.029	1.023	1.033	1.046	1.045	1.042	1.010	1.042	1.041	1.014	1.021	1.035	1.042	1.047	1.029	1.033	1.036	1.043	1.048	1.043	1.014	1.021	1.010	1.010	1.053	1.053	1.053																		
22	0.000	1.026	1.031	1.017	1.025	1.020	1.020	1.018	1.019	1.015	1.015	1.010	1.015	1.029	1.019	1.006	1.007	1.014	1.015	1.013	1.040	1.022	1.035	1.048	1.044	1.053																							
23	0.000	1.033	1.032	1.026	1.032	1.015	1.026	1.024	1.023	1.013	1.025	1.021	1.015	1.029	1.025	1.020	1.010	1.014	1.034	1.018	1.040	1.023	1.059	1.023	1.044																								
24	0.000	1.065	1.045	1.027	1.019	1.019	1.014	1.014	1.017	1.001	1.010	1.003	1.007	1.008	1.011	1.020	1.010	1.014	1.017	1.019	1.017	1.022	1.037	1.023																									
25	0.000	1.021	1.032	1.034	1.032	1.030	1.032	1.031	1.030	1.024	1.012	1.003	1.024	1.025	1.037	1.030	1.031	1.024	1.016	1.020	1.031	1.024	1.021	1.018	1.068																								
26	0.000	0.994	1.025	1.016	1.026	1.013	1.002	1.009	1.010	1.003	1.002	1.009	1.014	1.021	1.006	1.017	0.999	0.996	1.022	1.003	1.014	1.048	1.043	1.016	1.035																								
27	0.000	1.042	1.026	1.006	1.019	1.006	1.011	1.015	1.003	1.018	1.015	0.986	1.019	1.020	1.019	1.018	1.014	1.014	1.035	1.003	1.010	1.022	1.059																										
28	0.000	1.003	1.026	1.021	1.017	1.006	1.008	1.015	1.007	1.018	1.008	0.989	1.019	1.010	1.007	1.020	1.016	1.046	1.058	1.035	1.000	1.082	1.063																										
29	0.000	1.065	1.027	1.019	1.023	1.005	1.009	1.010	1.013	0.996	1.009	1.003	1.007	1.010	1.004	1.022	1.010	1.046	1.035	1.003	1.006	1.063																											
30	0.000	1.024	1.020	1.020	1.012	1.003	1.012	1.007	0.997	0.988	1.012	1.003	1.007	1.037	1.004	1.030	0.969	0.996	1.024	1.037																												
31	0.000	0.994	1.016	1.016	1.014	1.013	1.011	1.009	1.007	1.002	1.002	1.009	1.006	1.017	1.005	1.026	1.006	0.996	1.022	1.033																												
32	0.000	1.042	1.021	1.006	1.021	1.006	1.001	1.013	1.016	0.999	1.002	1.007	1.019	1.016	1.003	1.026	1.014	0.996	1.017																													
33	0.000	1.003	1.025	1.010	1.007	1.013	1.017	1.017	1.014	1.014	1.014	1.018	1.014	1.011	1.014	1.046	1.046	1.046																														
34	0.000	1.025	1.010	1.020	1.016	1.006	1.017	1.019	1.015	1.016	1.001	1.034	1.022	1.064	1.064	1.064																																
35	0.000	1.025	1.012	1.009	1.012	1.010	1.010	1.004	1.010	0.992	0.988	1.063	1.068	1.003	1.003	1.003																																
36	0.000	1.025	1.009	1.004	1.013	1.013	1.009	1.018	1.028	1.002	0.988	0.988	1.014	1.014	1.014																																		
37	0.000	1.025	1.010	1.008	1.007	1.006	1.004	1.012	1.028	0.997			1.040	1.040																																		
38	0.000	0.982	1.012	1.019	1.005	1.005	1.019	1.041	1.058	1.086																																						
39	0.000	1.025	0.985	1.000	0.995	1.001	1.028	1.058	1.086																																							
40	0.000	1.025	0.992	0.999	0.999	1.053	0.992	0.997	1.137	1.058																																						
41	0.000	1.025	1.007	1.035	1.073	1.224	0.998	1.035	1.058																																							

DESCRIPTION: Selected Reserve Promotion and Merit Increase scales (PAMS)

 Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).

 Additional basic pay increases (beyond across-the-board) earned by a Selected Reserve during a fiscal year.

 Paygrade transfers are excluded in the development; Reentrants are included.

 Blank cells should be considered a value of zero (0.000).

Enlisted Selected Reserve Promotion and Merit Increase Scales (PAMS)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	>62
Under 1	0.000	0.000	1.090	1.095	1.090	1.084	1.082	1.077	1.077	1.074	1.075	1.075	1.074	1.074	1.071	1.074	1.072	1.074	1.074	1.073	1.079	1.069	1.074	1.077	1.075	1.097	1.097	1.140	1.133	1.152	1.154	1.211	1.201	1.233	1.261	1.063	1.275	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231
1	0.000	1.148	1.133	1.118	1.111	1.110	1.109	1.108	1.109	1.108	1.110	1.110	1.110	1.109	1.109	1.109	1.112	1.106	1.108	1.111	1.110	1.106	1.106	1.117	1.110	1.127	1.128	1.137	1.101	1.221	1.190	1.164	1.220	1.290	1.199	1.206	1.352	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231	
2	0.000	1.110	1.085	1.080	1.079	1.079	1.080	1.081	1.081	1.082	1.081	1.073	1.071	1.071	1.080	1.082	1.079	1.078	1.078	1.083	1.082	1.077	1.083	1.082	1.085	1.066	1.100	1.116	1.088	1.093	1.133	1.118	1.077	1.154	1.181	1.082	1.071	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231	1.231		
3	0.000	1.065	1.066	1.068	1.070	1.070	1.069	1.072	1.072	1.073	1.071	1.073	1.071	1.071	1.072	1.071	1.070	1.068	1.071	1.068	1.071	1.070	1.072	1.069	1.063	1.082	1.120	1.057	1.090	1.153	1.140	1.095	1.204	1.088	1.113	1.328	0.999	1.231	1.231	1.231	1.231	1.231	1.231	1.231				
4	0.000	1.020	1.021	1.023	1.024	1.023	1.024	1.025	1.023	1.023	1.025	1.024	1.024	1.023	1.023	1.024	1.024	1.023	1.024	1.024	1.019	1.025	1.028	1.028	1.034	1.045	1.038	1.022	1.049	1.024	1.044	1.050	1.061	1.024	1.246	1.218	0.999	1.231	1.231	1.231								
5	0.000	1.074	1.077	1.079	1.079	1.079	1.079	1.076	1.077	1.078	1.077	1.078	1.076	1.076	1.075	1.079	1.075	1.074	1.066	1.062	1.057	1.051	1.041	1.034	1.038	1.066	1.038	1.076	1.089	1.068	1.112	1.025	1.041	1.086	1.018	1.218		1.231	1.231	1.231	1.231	1.231	1.231					
6	0.000	1.022	1.020	1.019	1.021	1.024	1.016	1.016	1.014	1.015	1.012	1.012	1.012	1.009	1.008	1.008	1.027	1.010	1.015	1.019	1.020	1.021	1.022	1.023	1.033	1.076	1.041	1.011	1.024	1.088	1.026	1.049	1.132	1.120	1.018			1.231	1.231	1.231								
7	0.000	1.069	1.075	1.076	1.073	1.067	1.063	1.059	1.050	1.045	1.037	1.034	1.033	1.025	1.022	1.022	1.027	1.034	1.044	1.051	1.058	1.054	1.054	1.070	1.075	1.076	1.070	1.063	1.068	1.056	1.047	1.067	1.000	1.056	1.018			1.231	1.231	1.231								
8	0.000	1.034	1.062	1.030	1.031	1.031	1.029	1.029	1.030	1.031	1.031	1.026	1.026	1.034	1.029	1.029	1.031	1.031	1.028	1.033	1.029	1.028	1.037	1.023	1.023	1.028	1.020	1.044	1.034	1.034	1.000	1.024	1.089	1.056	1.018			1.231	1.231	1.231								
9	0.000	1.062	1.062	1.063	1.061	1.060	1.063	1.063	1.063	1.063	1.061	1.066	1.066	1.060	1.062	1.064	1.065	1.063	1.063	1.056	1.062	1.058	1.064	1.052	1.063	1.050	1.040	1.060	1.064	1.053	0.997	1.024	1.089	1.056				1.231										
10	0.000	1.026	1.023	1.023	1.025	1.026	1.028	1.029	1.029	1.030	1.034	1.028	1.030	1.030	1.028	1.032	1.027	1.027	1.028	1.028	1.020	1.020	1.019	1.026	1.024	1.023	1.027	1.025	1.061	0.997	0.994	1.024	1.089	1.056	1.018	1.218	0.999											
11	0.000	1.050	1.055	1.036	1.052	1.054	1.052	1.052	1.052	1.053	1.052	1.049	1.050	1.052	1.052	1.048	1.047	1.045	1.042	1.048	1.044	1.048	1.043	1.051	1.046	1.063	1.048	1.076	1.015	1.006	0.994	1.024	1.089	1.056	1.018	1.218												
12	0.000	1.030	1.027	1.024	1.027	1.027	1.028	1.027	1.027	1.027	1.029	1.029	1.025	1.026	1.023	1.023	1.023	1.021	1.023	1.024	1.023	1.018	1.024	1.022	1.023	1.024	1.061	1.018	0.992	1.006	0.994	1.024	1.089	1.056	1.018													
13	0.000	1.037	1.040	1.040	1.040	1.038	1.040	1.040	1.040	1.041	1.038	1.036	1.032	1.035	1.036	1.038	1.038	1.032	1.034	1.033	1.031	1.031	1.038	1.025	1.030	1.013	0.997	0.998	0.992	1.006	0.994	1.024																	
14	0.000	1.028	1.027	1.028	1.027	1.027	1.027	1.025	1.027	1.029	1.028	1.028	1.023	1.026	1.021	1.019	1.024	1.024	1.021	1.016	1.015	1.019	1.022	1.031	1.011	1.031	1.031	1.035	0.992	1.006	0.994																		
15	0.000	1.034	1.039	1.036	1.035	1.034	1.036	1.036	1.035	1.040	1.033	1.036	1.035	1.033	1.032	1.035	1.033	1.041	1.033	1.027	1.039	1.024	1.027	1.031	1.030	1.012	1.067	1.066	0.992	1.006	0.994	1.024	1.089																
16	0.000	1.022	1.023	1.023	1.023	1.022	1.025	1.022	1.023	1.022	1.024	1.023	1.021	1.025	1.025	1.018	1.021	1.015	1.024	1.020	1.024	1.020	1.024	1.022	1.018	1.018	1.002	1.000	0.992	1.006	0.994	1.024																	
17	0.000	1.036	1.031	1.021	1.040	1.037	1.020	1.023	1.035	1.022	1.038	1.024	1.023	1.019	1.018	1.021	1.019	1.016	1.022	1.019	1.021	1.031	1.031	1.021	1.035	1.023	0.997	1.000	0.992	1.006	0.994																		
18	0.000	1.025	1.021	1.021	1.021	1.023	1.023	1.023	1.026	1.022	1.024	1.024	1.023	1.031	1.026	1.029	1.024	1.021	1.022	1.019	1.021	1.029	1.008	1.023	1.009	1.033	0.997	1.000	0.992																				
19	0.000	1.028	1.031	1.028	1.027	1.034	1.025	1.025	1.025	1.027	1.025	1.026	1.031	1.028	1.026	1.024	1.024	1.021	1.029	1.011	1.024	1.019	1.022	1.023	1.008	1.033	1.031	1.035	0.992																				
20	0.000	1.065	1.024	1.024	1.022	1.025	1.022	1.023	1.021	1.021	1.023	1.024	1.024	1.021	1.019	1.019	1.022	1.026	1.021	1.020	1.021	1.027	1.027	1.004	1.028	1.033	0.997	1.000																					
21	0.000	1.048	1.050	1.049	1.021	1.048	1.047	1.044	1.045	1.045	1.042	1.045	1.043	1.043	1.045	1.024	1.021	1.040	1.024	1.050	1.051	1.037	1.024	1.024	1.024	1.033	0.997																						
22	0.000	1.021	1.031	1.023	1.026	1.028	1.027	1.025	1.023	1.023	1.031	1.025	1.027	1.023	1.023	1.018	1.018	1.023	1.030	1.023	1.030	1.011	1.041	1.024	1.035	1.033																							
23	0.000	1.023	1.013	1.019	1.039	1.040	1.041	1.039	1.041	1.037	1.040	1.013	1.019	1.039	1.046	1.021	1.045	1.040	1.048	1.046	1.031	0.980	0.917	1.024	1.009																								
24	0.000	1.011	1.007	1.027	1.026	1.026	1.021	1.026	1.024	1.028	1.025	1.034	1.031	1.031	1.017	1.029	1.022	1.025	1.026	1.011	1.042	0.980	0.917	1.024	1.028																								
25	0.000	1.028	1.014	1.067	1.067	1.014	1.018	1.065	1.065	1.068	1.061	1.061	1.064	1.057	1.069	1.056	1.022	1.067	1.067	1.028	1.042	1.027	1.027	1.004	1.028	1.033	0.997	1.000																					
26	0.000	1.015	1.013	1.021	1.021	1.024	1.013	1.018	1.019	1.020	1.027	1.020	1.020	1.019	1.023	1.025	1.022	1.001	0.906	1.028	1.042	1.037	1.016	1.024	1.028	1.033																						
27	0.000	1.030	1.020	1.023	1.024	1.016	1.021	1.021	1.024	1.024	1.022	1.024	1.018	1.027	1.018	1.027	1.018	0.881	0.906	1.028	1.042	1.011	0.917																										
28	0.000	0.998	1.013	1.019	1.017	1.027	1.021	1.017	1.017	1.018	1.016	1.013	1.019	1.020	1.017	1.016	1.045	0.881	0.906	1.028	1.042	0.980	0.917																										
29	0.000	1.011	1.007	1.031	1.026	1.009	1.012	1.006	1.024	1.011	1.027	1.034	1.035	1.031	1.013	1.024	1.022	0.881	0.906	1.011																													
30	0.000	1.028	1.014	1.015	1.010	1.014	1.018	1.013	1.012	1.013	1.024	1.021	1.012	1.003	0.923	1.024	1.045	0.881		0.881																												
31	0.000	1.015	1.013	1.016	1.018	1.010	1.013	1.013	1.015	1.015	1.017	1.008	0.996	1.030	0.923	1.024	1.045																															
32	0.000	1.030	1.020	1.012	1.016	1.016	1.009	1.005	1.008	1.030	1.013	0.995	1.045	1.030	0.923	1.024	1.045																															
33	0.000	0.998	1.019	1.027	0.999	1.027	1.040	1.025	1.022	1.022	1.013	1.050	1.043	0.923	0.923	1.024		0.881																														
34	0.000	1.000	1.007	1.014	1.015	1.009	1.012	1.006	1.006	1.011	0.936	1.050	1.043	0.923	0.906	0.906																																
35	0.000	1.000	1.006	1.009	1.008	1.008	1.011	1.005	1.012	0.938	0.936	1.050	1.043	1.030																																		
36	0.000	1.000	1.019	1.008	1.011	1.010	1.007	1.013	1.015	0.938	0.936	1.050	1.042	1.042																																		
37	0.000	1.000	1.016	1.031	1.025	1.019	1.009	1.005	1.030	0.938	0.936	0.995	0.980	0.980																																		
38	0.000	0.998	1.019	1.008	0.999	1.009	1.040	0.973	1.024	0.938																																						
39	0.000	1.000	1.006	1.008	1.025	1.087	1.040	0.973	1.024																																							
40	0.000	1.000	1.006	1.009	1.009	1.087	1.040	0.973	1.024																																							
41	0.000	1.000	1.006	1.008	1.009	1.087	1.040	0.973																																								

DESCRIPTION: Selected Reserve Promotion and Merit Increase scales (PAMS)
Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
Additional basic pay increases (beyond across-the-board) earned by a Selected Reserve during a fiscal year.
Paygrade transfers are excluded in the development; Reentrants are included.
Blank cells should be considered a value of zero (0.000).

Officer Non-Selected Reserve with 20 Good Years Promotion and Merit Increase Scales (PAMS)

By Entry Age

Columns for entry ages 45 through 62 and >62 are blank (no data) across all rows.

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Under 1	0.000																												
1	0.000																												
2	0.000																												
3	0.000																												
4	0.000																												
5	0.000																												
6	0.000																												
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13	0.000																												
14	0.000																												
15	0.000																												
16	0.000																												
17	0.000																												
18	0.000																												
19	0.000	1.000																											
20	0.000	0.983	1.006	1.008	1.006	1.001	1.005	1.005	1.005	1.008	1.007	1.005	1.002	0.997	1.009	1.002	1.002	1.007	1.008	1.007	1.000	1.000	0.992	0.992	0.992	0.992	0.992	0.992	0.992
21	0.000	0.983	1.006	1.008	1.011	1.012	1.019	1.019	1.018	1.018	1.019	1.018	1.015	1.015	1.015	1.027	1.021	1.019	1.027	1.020	1.015	1.015	0.992	0.992	0.992	0.992	0.992	0.992	
22	0.000	0.983	1.002	1.001	1.000	1.002	1.001	1.001	1.001	0.999	1.002	1.001	1.000	1.001	0.999	0.998	1.001	1.004	1.000	1.000	1.002	1.029	0.992	0.992	0.992	0.992	0.992		
23	0.000	0.999	1.003	1.000	1.000	1.002	1.002	1.001	1.001	1.001	1.001	1.004	1.000	0.999	1.003	1.005	1.004	1.003	1.005	0.999	1.009	1.029	0.992	0.992	0.992				
24	0.000	0.999	1.002	1.000	0.999	1.000	0.999	0.999	0.998	0.999	0.999	0.999	0.998	1.001	0.998	1.000	0.998	0.995	0.998	1.005	1.009	1.029	0.992						
25	0.000	1.003	1.002	1.004	1.002	1.002	1.005	1.005	1.003	1.003	1.006	1.009	1.006	1.003	1.007	1.011	1.000	1.009	0.999	1.005	1.009	1.029							
26	0.000	1.002	0.997	1.000	0.995	0.998	0.988	0.998	0.998	1.000	0.998	1.000	0.999	1.001	1.002	1.002	1.001	0.998	0.998	1.005	1.009								
27	0.000	1.005	0.999	0.998	0.998	0.996	0.998	0.998	0.998	0.999	0.996	0.998	1.002	0.999	0.995	0.993	0.996	0.998	0.999	1.005									
28	0.000	1.003	0.998	0.998	0.996	0.996	0.998	0.999	0.998	0.999	0.999	0.997	0.998	0.996	0.997	0.993	0.996	0.998	0.999										
29	0.000	1.003	1.001	0.997	0.997	0.999	1.003	1.002	1.003	1.002	1.002	1.003	1.001	1.004	0.995	0.993	0.996	0.998											
30	0.000	0.996	0.999	0.999	0.999	1.000	0.999	0.999	0.999	1.000	1.000	0.999	0.999	0.991	0.995	0.993	0.996	0.998											
31	0.000	1.000	0.999	1.000	1.000	0.998	1.000	1.000	1.000	0.999	1.001	0.999	1.002	0.991	0.995	0.993	0.996												
32	0.000	1.011	0.997	0.998	0.998	0.999	0.998	1.000	1.000	1.000	1.000	1.000	1.002	0.991	0.995	0.993													
33	0.000	0.978	1.000	1.000	0.999	0.999	0.998	1.000	1.000	1.000	0.997	1.000	1.002	0.991	0.995														
34	0.000	1.004	0.999	0.999	0.999	1.001	1.000	1.000	1.000	0.999	1.068	1.000	1.002	0.991															
35	0.000	1.000	1.000	0.998	1.000	1.000	1.000	1.000	1.006	1.017	1.068	1.000	1.002																
36	0.000	1.000	1.001	0.999	0.999	0.999	1.000	1.006	1.028	1.012	1.068																		
37	0.000	1.000	1.001	1.000	1.000	1.000	0.997	1.051	0.977	1.005																			
38	0.000	1.000	1.001	1.000	1.000	0.992	0.982	0.977	1.011																				
39	0.000	1.008	0.999	0.999	1.000	1.052	1.037	0.990																					
40	0.000	0.994	1.001	0.980	1.038	1.007	1.020	0.990																					
41	0.000	1.000	0.984	1.069	0.982	1.002	0.997																						

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area) Promotion and Merit Increase scales (PAMS)
  Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
  Additional basic pay increases (beyond across-the-board) earned in Grey Area status during a fiscal year.
  Paygrade transfers and Grey Area transfer blow-ups are excluded in the development.
  Blank cells should be considered a value of zero (0.000).

Enlisted Non-Selected Reserve with 20 Good Years Promotion and Merit Increase Scales (PAMS)

By Entry Age

PEBD Years of Service	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Under 1	0.000																												
1	0.000																												
2	0.000																												
3	0.000																												
4	0.000																												
5	0.000																												
6	0.000																												
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14	0.000																												
15	0.000																												
16	0.000																												
17	0.000																												
18	0.000																												
19	0.000	1.000	1.010	1.002	1.012	1.011	1.003	1.012	1.008	1.001	0.992	1.016	1.005	1.000	1.012	1.003	1.000	0.964	1.002	1.004	0.977	1.003	1.002	0.975	0.946				
20	0.000	1.021	0.999	1.000	1.001	1.000	1.001	1.000	1.001	1.001	0.997	1.001	1.000	1.000	0.989	1.003	0.995	1.000	1.003	1.001	0.996	0.995	1.000	0.975	0.946	0.946	0.946	0.946	0.946
21	0.000	1.021	1.020	1.000	1.020	1.000	1.017	1.019	1.017	1.000	1.016	1.014	0.999	1.015	1.023	1.018	1.014	1.017	1.017	1.019	1.017	1.013	0.976	0.975	0.946	0.946	0.946		
22	0.000	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.001	1.000	0.999	1.000	1.000	0.996	1.004	0.998	0.998	0.999	1.000	1.019	1.019	0.976	0.946	0.946			
23	0.000	1.014	1.011	1.000	1.000	1.000	1.011	1.010	1.009	1.010	1.010	1.010	1.006	1.010	1.010	1.010	1.011	1.011	1.010	1.010	1.005	0.939	0.976	0.975	0.946				
24	0.000	1.000	1.000	1.000	1.000	0.999	1.001	1.000	1.000	0.999	0.999	1.001	1.000	1.001	0.999	1.001	1.002	1.001	1.000	0.990	0.977	0.902	0.976	0.975					
25	0.000	1.037	1.035	1.034	1.033	1.033	1.032	1.031	1.031	1.030	1.029	1.031	1.030	1.027	1.031	1.034	1.033	1.035	1.029	1.029	0.927	0.975	0.976						
26	0.000	1.001	0.999	1.000	1.000	1.000	0.999	1.000	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	0.999	0.997	0.925	0.962	1.000	0.975							
27	0.000	1.002	1.000	1.000	1.000	0.999	1.000	1.000	1.000	0.999	0.999	1.000	0.999	1.000	1.000	1.000	0.998	0.930	0.965	0.962	1.000								
28	0.000	1.000	0.999	0.999	1.000	0.999	1.000	0.999	0.999	0.999	1.000	0.999	0.999	1.000	1.000	0.998	0.956	0.961	0.994	0.962									
29	0.000	1.005	1.005	0.999	1.004	1.003	1.004	1.003	1.003	1.004	1.005	1.005	1.005	1.005	0.994	0.915	0.980	0.994	0.994										
30	0.000	0.999	1.000	0.999	0.999	1.000	1.000	1.000	1.000	0.999	1.000	1.000	1.000	0.983	0.935	0.978	0.892	0.971											
31	0.000	0.997	1.000	0.998	0.998	1.000	1.000	1.000	1.000	0.990	0.990	0.999	0.990	0.981	0.978	1.069	0.997	0.980											
32	0.000	0.998	1.000	0.989	0.989	1.000	1.000	1.002	1.004	0.999	0.999	0.987	0.871	0.892	1.006	1.069	0.997												
33	0.000	1.002	1.003	1.004	1.003	1.003	1.002	1.004	1.011	1.003	0.911	0.890	1.022	1.006															
34	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.002	0.994	0.927	0.911	0.890	1.024	1.022														
35	0.000	0.997	1.000	0.999	1.000	1.000	1.000	1.000	1.007	0.949	1.015	1.025	1.000	0.949	0.933	0.917													
36	0.000	1.000	1.000	1.000	1.000	1.000	0.997	0.933	0.966	1.008	0.987	1.025	0.990	0.978															
37	0.000	1.005	1.006	1.006	1.005	1.000	0.922	0.966	1.009	0.987																			
38	0.000	1.000	0.999	1.000	0.996	0.917	0.981	1.012																					
39	0.000	1.000	1.000	1.000	0.996	0.911	0.967	1.002	1.012																				
40	0.000	1.000	1.000	0.986	0.889	0.984	0.917	0.982	0.994																				
41	0.000	1.002	0.964	0.889	0.984	0.994	1.002																						

DESCRIPTION: Non-Selected Reserve with 20 Good Years ('Grey Area') Promotion and Merit Increase scales (PAMS)
   Arrayed by entry age, completed PEBD YOS, and paygrade (officer/enlisted).
   Additional basic pay increases (beyond across-the-board) earned in Grey Area status during a fiscal year.
   Paygrade transfers and Grey Area transfer blow-ups are excluded in the development.
   Blank cells should be considered a value of zero (0.000).

DoD Office of the Actuary

APPENDIX I

RETIREE AND SURVIVOR RATES

RETIREE AND SURVIVOR RATES DESCRIPTION

The military retiree and survivor decrement rates are used to project death, "other" losses from pay status, and rates of transfer from temporary disability to permanent disability. The "other" losses consist primarily of returns to active duty and full waiver of retired pay to receive a higher annuity from the Veterans Affairs or Civil Service. In order to compute the normal cost contributions with and without regard to Concurrent Receipt benefits (Public Law (P.L.) 108-136), DoD- and Treasury-specific "other" loss rates, among others, are developed. The rates are arrayed by age nearest birthday for officers and enlisted separately, and by retirement type--nondisability, temporary disability, and permanent disability. For temporary disability retirees, select rates were created for each of the first five years of retirement. After a certain number of years, those who are still in the temporary disability status are transferred to a permanent disability status.[1]

The data for the retiree and survivor rates were taken from files maintained by the Defense Manpower Data Center (DMDC) as of September 30 for the years 2006 through 2012. These files were created by the Defense Finance and Accounting Service (DFAS), which has responsibility for sending monthly retired pay checks to military retirees. A military retiree can be in "paid status" or "nonpaid status." Nonpaid status indicates that a retiree has an entitlement to an annuity, but the annuity is fully reduced by offsets. Retirees who terminate from paid status during a fiscal year are on the retiree file at the end of that fiscal year with a termination code indicating the type of termination.

The rate development process begins by matching two consecutive fiscal year-end files by Social Security number. Cases no longer in paid status are categorized by type of loss. Cases returned to paid status (from non-paid status at the start of the year) are subtracted from a given type of loss. After following the above procedures, crude rates are created using the formulas given on the following pages. These rates are smoothed using a Whittaker-Henderson type B ("Method B") graduation, or by fitting a polynomial to the crude rates. Where there is reason to suspect valid discontinuities in the underlying rates, those segments are not smoothed. A summary of the years on which various rates are based is given on the page following the formulas.

<u>Note to Reader</u>:

Some death rates are greater than 1.00000 in this appendix because the death rates are expressed as central rates. These death rates should not be compared to other published rates or used for other purposes without carefully examining the exposure formula used in their derivation.

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[1]   P.L. 114-328 changed the maximum temporary disability period from five years to three years for members placed on temporary disability after January 1, 2017. Members placed on temporary disability prior to that date were grandfathered. Temporary disabled retirees in the starting census in this valuation with more than three years were set equal to three years, and the three year rates were applied to them. Hence, the temporary disability rates shown in this report only go through three years. Notwithstanding what is shown in the rates, those still remaining on temporary disability at the end of the temporary disability period are assumed to be transferred to permanent disability.

RETIREE AND SURVIVOR DECREMENT RATE FORMULAS

DEATH OF NONDISABILITY RETIREES (by age nearest birthday and retired from active/reserve duty)

$$\frac{\text{Nondisability deaths during the year}}{[\text{Number at beginning of year - ½ (Nondisability deaths + other losses)}]}$$

DEATH OF PERMANENT DISABILITY RETIREES (by age nearest birthday)

$$\frac{\text{Permanent disability deaths during the year}}{[\text{Number at beginning of year - ½ (Permanent disability deaths + other losses)}]}$$

DEATH OF TEMPORARY DISABILITY RETIREES (by age nearest birthday and years retired)

$$\frac{\text{Temporary disability deaths in category during the year}^2}{[\text{Number at beginning of year - ½ (Deaths + transfers + other losses)}]}$$

OTHER LOSSES FROM NONDISABILITY (by age nearest birthday and retired from active/reserve duty)

$$\frac{\text{Losses other than death during the year}}{\text{Number at beginning of year}}$$

OTHER AND NON-TRANSFER LOSSES FROM TEMPORARY DISABILITY (by age nearest birthday and years retired)

$$\frac{\text{Losses other than death or transfers to permanent disability during the year}}{\text{Number at beginning of year}}$$

TRANSFER FROM TEMPORARY TO PERMANENT DISABILITY (by age nearest birthday and years retired)

$$\frac{\text{Transfers to permanent disability during the year}}{\text{Number at beginning of year}}$$

OTHER LOSSES FROM PERMANENT DISABILITY (by age nearest birthday)

$$\frac{\text{Losses other than death during the year}}{\text{Number at beginning of year}}$$

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[2] Includes deaths of members who were temporarily disabled at the beginning of the year, then transferred to permanent disability, and later died before the end of the year. Determined for each year of the temporary disability retirement category.

RETIREE AND SURVIVOR DECREMENT RATE FORMULAS
(cont.)

DIVORCE OF RETIREE (weighted by coverage amount, by age nearest birthday)

$$\frac{\text{Net retiree divorces during the year}}{\text{Number at beginning of year}}$$

REMARRIAGE OF SURVIVING SPOUSE (by age nearest birthday)

$$\frac{\text{Surviving spouse remarriages during the year}}{\text{Number at beginning of year}}$$

TERMINATION OF SURVIVING CHILD (by age nearest birthday)

$$\frac{\text{Child terminations during the year}}{\text{Number at beginning of year}}$$

DEATH OF SURVIVING SPOUSE (by age nearest birthday) [3]

$$\frac{\text{Surviving spouse deaths during the year}}{\text{Number at beginning of year}}$$

OTHER LOSS OF SURVIVING SPOUSE (by age nearest birthday)

$$\frac{\text{Survivor losses other than deaths during the year}}{\text{Number at beginning of year}}$$

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[3] Death rates of spouses of living retirees who elected SBP spouse, or spouse & child, coverage are based on a standard actuarial mortality table based on female group annuitant, federal Civil Service Retirement System, and U.S. general population experience with margin. This table is published by the Society of Actuaries (SOA) as 1994 GAM Static - Female, ANB.

SUMMARY OF YEARS ON WHICH RETIREE AND SURVIVOR RATES ARE BASED

By Fiscal Year

DEATH RATES	2006	2007	2008	2009	2010	2011	2012
ND Officer/Enlisted					X	X	X
PD Officer/Enlisted	X	X	X				
TD Officer/Enlisted		X	X	X	X		
OTHER LOSS RATES							
ND Officer/Enlisted					X	X	X
PD Officer/Enlisted	X	X	X				
TD Officer/Enlisted		X	X	X	X		
TRANSFER RATES FROM TD TO PD							
Officer/Enlisted		X	X	X	X		
RETIREE DIVORCE			X	X			
SURVIVOR RATES							
Remarriage				X	X		
Child Coverage Termination				X	X		
Surviving Spouse Death				X	X		
Surviving Spouse Other Loss				X	X		

Key: ND = Nondisabled
        PD = Permanently Disabled
        TD = Temporarily Disabled

OFFICER RETIRED DEATH RATES

(Age Nearest Birthday)

Age	Non-Disability		Permanent Disability	Temporary Disability Year of Retirement		
	Active	Reserve		One	Two	Three
16	0.00034	0.00034	0.00339	0.00939	0.00890	0.00841
17	0.00034	0.00034	0.00339	0.00939	0.00890	0.00841
18	0.00034	0.00034	0.00339	0.00939	0.00890	0.00841
19	0.00034	0.00034	0.00339	0.00939	0.00890	0.00841
20	0.00034	0.00034	0.00339	0.00939	0.00890	0.00841
21	0.00034	0.00034	0.00348	0.00939	0.00890	0.00841
22	0.00034	0.00034	0.00358	0.00939	0.00890	0.00841
23	0.00034	0.00034	0.00368	0.00939	0.00890	0.00841
24	0.00034	0.00034	0.00380	0.00939	0.00890	0.00841
25	0.00034	0.00034	0.00391	0.00939	0.00890	0.00841
26	0.00034	0.00034	0.00403	0.00939	0.00890	0.00841
27	0.00034	0.00034	0.00415	0.00939	0.00890	0.00841
28	0.00034	0.00034	0.00428	0.00939	0.00890	0.00841
29	0.00034	0.00034	0.00440	0.00939	0.00890	0.00841
30	0.00034	0.00034	0.00450	0.00939	0.00890	0.00841
31	0.00036	0.00037	0.00458	0.00939	0.00890	0.00841
32	0.00038	0.00040	0.00463	0.00939	0.00890	0.00841
33	0.00040	0.00044	0.00465	0.00939	0.00890	0.00841
34	0.00042	0.00047	0.00465	0.00939	0.00890	0.00841
35	0.00044	0.00050	0.00462	0.00939	0.00890	0.00841
36	0.00046	0.00054	0.00455	0.00939	0.00890	0.00841
37	0.00047	0.00058	0.00445	0.00939	0.00890	0.00841
38	0.00048	0.00061	0.00433	0.00939	0.00890	0.00841
39	0.00050	0.00064	0.00421	0.00939	0.00890	0.00841
40	0.00051	0.00068	0.00409	0.00939	0.00890	0.00841
41	0.00053	0.00072	0.00399	0.00939	0.00890	0.00841
42	0.00055	0.00076	0.00392	0.00939	0.00890	0.00841
43	0.00057	0.00081	0.00387	0.00939	0.00890	0.00841
44	0.00059	0.00086	0.00384	0.00939	0.00890	0.00841
45	0.00061	0.00092	0.00385	0.00939	0.00890	0.00841
46	0.00063	0.00100	0.00388	0.00939	0.00890	0.00841
47	0.00067	0.00107	0.00393	0.00939	0.00890	0.00841
48	0.00074	0.00115	0.00399	0.00939	0.00890	0.00841
49	0.00084	0.00125	0.00407	0.00939	0.00890	0.00841
50	0.00096	0.00136	0.00449	0.00939	0.00890	0.00841
51	0.00110	0.00149	0.00479	0.00939	0.00890	0.00841
52	0.00127	0.00163	0.00513	0.00939	0.00890	0.00841
53	0.00147	0.00179	0.00552	0.00939	0.00890	0.00841
54	0.00169	0.00196	0.00594	0.00939	0.00890	0.00841
55	0.00194	0.00214	0.00638	0.00939	0.00890	0.00841
56	0.00222	0.00233	0.00685	0.00939	0.00890	0.00841
57	0.00253	0.00254	0.00736	0.00939	0.00890	0.00841
58	0.00287	0.00276	0.00789	0.00939	0.00890	0.00841
59	0.00324	0.00297	0.00846	0.00939	0.00890	0.00841
60	0.00365	0.00320	0.00911	0.00939	0.00890	0.00841
61	0.00410	0.00351	0.00983	0.00939	0.00890	0.00841
62	0.00458	0.00392	0.01064	0.00939	0.00890	0.00841
63	0.00514	0.00439	0.01159	0.00939	0.00890	0.00841
64	0.00576	0.00496	0.01267	0.00939	0.00890	0.00841
65	0.00645	0.00559	0.01393	0.00939	0.00890	0.00841

*** As noted in Item 2 in the Retiree section of Appendix F, additional adjustments are made for retirees who elect SBP spouse coverage.

OFFICER RETIRED DEATH RATES (continued)

(Age Nearest Birthday)

| Age | Non-Disability | | Permanent Disability | Temporary Disability Year of Retirement | | |
	Active	Reserve		One	Two	Three
66	0.00722	0.00629	0.01537			
67	0.00810	0.00710	0.01699			
68	0.00910	0.00800	0.01879			
69	0.01025	0.00903	0.02075			
70	0.01157	0.01020	0.02290			
71	0.01310	0.01154	0.02521			
72	0.01487	0.01308	0.02770			
73	0.01692	0.01484	0.03036			
74	0.01928	0.01687	0.03320			
75	0.02199	0.01922	0.03628			
76	0.02512	0.02197	0.03962			
77	0.02870	0.02516	0.04327			
78	0.03280	0.02887	0.04730			
79	0.03747	0.03320	0.05179			
80	0.04279	0.03822	0.05689			
81	0.04883	0.04402	0.06266			
82	0.05566	0.05071	0.06923			
83	0.06338	0.05837	0.07664			
84	0.07211	0.06713	0.08491			
85	0.08189	0.07702	0.09397			
86	0.09284	0.08818	0.10383			
87	0.10503	0.10061	0.11450			
88	0.11851	0.11432	0.12601			
89	0.13337	0.12932	0.13852			
90	0.14963	0.14556	0.15226			
91	0.16726	0.16290	0.16743			
92	0.18635	0.18138	0.18441			
93	0.20685	0.20086	0.20341			
94	0.22878	0.22135	0.22472			
95	0.25210	0.24275	0.24853			
96	0.27842	0.26658	0.27648			
97	0.30934	0.29510	0.30736			
98	0.34674	0.33056	0.34131			
99	0.39171	0.37413	0.37852			
100	0.44436	0.42593	0.40802			
101	0.50452	0.48561	0.43800			
102	0.57152	0.55231	0.46833			
103	0.64467	0.62515	0.49920			
104	0.72346	0.70341	0.53055			
105	0.80720	0.78640	0.56221			
106	0.89648	0.87481	0.59443			
107	0.99179	0.96951	0.62699			
108	1.09245	1.06989	0.63186			
109	1.19725	1.17482	0.63675			
110	1.30437	1.28253	0.64168			
111	1.41143	1.39072	1.93960			
112	1.51621	1.49712	1.95473			
113	1.61553	1.59853	1.96985			
114	1.70694	1.69237	1.98485			
115	1.78853	1.77657	2.00000			
116	1.84922	1.83991	2.00000			
117	1.89743	1.89055	2.00000			

NONE AFTER AGE 65

*** As noted in Item 2 in the Retiree section of Appendix F, additional adjustments are made for retirees who elect SBP spouse coverage.

ENLISTED RETIRED DEATH RATES

(Age Nearest Birthday)

Age	Non-Disability		Permanent Disability	Temporary Disability Year of Retirement		
	Active	Reserve		One	Two	Three
16	0.00043	0.00042	0.00185	0.00616	0.00565	0.00514
17	0.00043	0.00042	0.00185	0.00616	0.00565	0.00514
18	0.00043	0.00042	0.00185	0.00616	0.00565	0.00514
19	0.00043	0.00042	0.00185	0.00616	0.00565	0.00514
20	0.00043	0.00042	0.00185	0.00616	0.00565	0.00514
21	0.00043	0.00042	0.00189	0.00616	0.00565	0.00514
22	0.00043	0.00042	0.00195	0.00616	0.00565	0.00514
23	0.00043	0.00042	0.00200	0.00616	0.00565	0.00514
24	0.00043	0.00042	0.00206	0.00616	0.00565	0.00514
25	0.00043	0.00042	0.00213	0.00616	0.00565	0.00514
26	0.00043	0.00042	0.00219	0.00616	0.00565	0.00514
27	0.00043	0.00042	0.00226	0.00616	0.00565	0.00514
28	0.00043	0.00042	0.00233	0.00616	0.00565	0.00514
29	0.00043	0.00042	0.00239	0.00616	0.00565	0.00514
30	0.00043	0.00042	0.00245	0.00616	0.00565	0.00514
31	0.00046	0.00047	0.00249	0.00616	0.00565	0.00514
32	0.00050	0.00051	0.00252	0.00616	0.00565	0.00514
33	0.00054	0.00056	0.00253	0.00616	0.00565	0.00514
34	0.00058	0.00062	0.00253	0.00616	0.00565	0.00514
35	0.00063	0.00068	0.00251	0.00616	0.00565	0.00514
36	0.00067	0.00074	0.00248	0.00616	0.00565	0.00514
37	0.00072	0.00079	0.00242	0.00616	0.00565	0.00514
38	0.00077	0.00085	0.00236	0.00616	0.00565	0.00514
39	0.00081	0.00092	0.00277	0.00616	0.00565	0.00514
40	0.00085	0.00098	0.00283	0.00616	0.00565	0.00514
41	0.00090	0.00105	0.00295	0.00616	0.00565	0.00514
42	0.00095	0.00114	0.00309	0.00616	0.00565	0.00514
43	0.00101	0.00122	0.00330	0.00616	0.00565	0.00514
44	0.00107	0.00132	0.00356	0.00616	0.00565	0.00514
45	0.00114	0.00143	0.00386	0.00616	0.00565	0.00514
46	0.00123	0.00156	0.00422	0.00616	0.00565	0.00514
47	0.00135	0.00171	0.00463	0.00616	0.00565	0.00514
48	0.00150	0.00187	0.00509	0.00616	0.00565	0.00514
49	0.00168	0.00206	0.00561	0.00616	0.00565	0.00514
50	0.00193	0.00227	0.00618	0.00616	0.00565	0.00514
51	0.00224	0.00252	0.00681	0.00616	0.00565	0.00514
52	0.00261	0.00279	0.00753	0.00616	0.00565	0.00514
53	0.00303	0.00310	0.00831	0.00616	0.00565	0.00514
54	0.00353	0.00345	0.00918	0.00616	0.00565	0.00514
55	0.00412	0.00383	0.01013	0.00616	0.00565	0.00514
56	0.00477	0.00424	0.01116	0.00616	0.00565	0.00514
57	0.00552	0.00468	0.01227	0.00616	0.00565	0.00514
58	0.00638	0.00514	0.01345	0.00616	0.00565	0.00514
59	0.00732	0.00563	0.01469	0.00616	0.00565	0.00514
60	0.00836	0.00614	0.01596	0.00616	0.00565	0.00514
61	0.00950	0.00669	0.01727	0.00616	0.00565	0.00514
62	0.01071	0.00734	0.01863	0.00616	0.00565	0.00514
63	0.01202	0.00809	0.02006	0.00616	0.00565	0.00514
64	0.01340	0.00895	0.02157	0.00616	0.00565	0.00514
65	0.01486	0.00991	0.02318	0.00616	0.00565	0.00514

*** As noted in Item 2 in the Retiree section of Appendix F, additional adjustments are made for retirees who elect SBP spouse coverage.

DoD Office of the Actuary

ENLISTED RETIRED DEATH RATES (continued)

(Age Nearest Birthday)

Age	Non-Disability		Permanent Disability	Temporary Disability Year of Retirement		
	Active	Reserve		One	Two	Three
66	0.01641	0.01100	0.02494			
67	0.01806	0.01221	0.02686			
68	0.01982	0.01357	0.02899			
69	0.02173	0.01508	0.03134			
70	0.02380	0.01676	0.03395			
71	0.02607	0.01862	0.03682			
72	0.02857	0.02072	0.03997			
73	0.03136	0.02306	0.04344			
74	0.03448	0.02570	0.04724			
75	0.03797	0.02870	0.05141			
76	0.04191	0.03212	0.05603			
77	0.04632	0.03604	0.06108			
78	0.05129	0.04055	0.06667			
79	0.05684	0.04574	0.07282			
80	0.06304	0.05169	0.07959			
81	0.06991	0.05846	0.08700			
82	0.07751	0.06613	0.09512			
83	0.08587	0.07474	0.10396			
84	0.09509	0.08440	0.11355			
85	0.10517	0.09508	0.12390			
86	0.11616	0.10686	0.13504			
87	0.12810	0.11976	0.14697			
88	0.14099	0.13375	0.15969			
89	0.15489	0.14890	0.17324			
90	0.16979	0.16517	0.18765			
91	0.18567	0.18251	0.20288			
92	0.20258	0.20097	0.21904			
93	0.22049	0.22052	0.23609			
94	0.23945	0.24116	0.25410			
95	0.25941	0.26288	0.27309			
96	0.28202	0.28732	0.29468			
97	0.30819	0.31675	0.31875			
98	0.33935	0.35337	0.34317			
99	0.37619	0.39824	0.36807			
100	0.41861	0.45125	0.39322			
101	0.46625	0.51177	0.41880			
102	0.51844	0.57867	0.44465			
103	0.57451	0.65085	0.47096			
104	0.63405	0.72738	0.49769			
105	0.69660	0.80751	0.52467			
106	0.76293	0.89199	0.55213			
107	0.83387	0.98192	0.57986			
108	0.90946	1.07679	0.60811			
109	0.98946	1.17564	0.63675			
110	1.07341	1.27699	0.64168			
111	1.16052	1.37894	1.93960			
112	1.25016	1.47966	1.95473			
113	1.34091	1.57650	1.96985			
114	1.43153	1.66727	1.98485			
115	1.52077	1.75020	2.00000			
116	1.59874	1.81425	2.00000			
117	1.67131	1.86721	2.00000			

NONE AFTER AGE 65

*** As noted in Item 2 in the Retiree section of Appendix F, additional adjustments are made for retirees who elect SBP spouse coverage.

ACTIVE DUTY OTHER LOSSES FROM NONDISABILITY

(Age Nearest Birthday)

	DoD		Treasury			DoD		Treasury	
Age	Officer	Enlisted	Officer	Enlisted	Age	Officer	Enlisted	Officer	Enlisted
16	0.0000	0.0000	0.0000	0.0000	56	0.0001	0.0041	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000	57	0.0002	0.0043	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000	58	0.0003	0.0047	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000	59	0.0004	0.0051	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000	60	0.0005	0.0056	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000	61	0.0006	0.0061	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000	62	0.0007	0.0066	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000	63	0.0009	0.0072	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000	64	0.0010	0.0078	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000	65	0.0011	0.0083	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000	66	0.0013	0.0089	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000	67	0.0014	0.0094	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000	68	0.0015	0.0099	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000	69	0.0017	0.0104	0.0000	0.0000
30	0.0068	0.0363	0.0000	0.0000	70	0.0018	0.0108	0.0000	0.0000
31	0.0068	0.0363	0.0000	0.0000	71	0.0019	0.0111	0.0000	0.0000
32	0.0068	0.0363	0.0000	0.0000	72	0.0019	0.0114	0.0000	0.0000
33	0.0068	0.0363	0.0000	0.0000	73	0.0020	0.0116	0.0000	0.0000
34	0.0068	0.0363	0.0000	0.0000	74	0.0021	0.0117	0.0000	0.0000
35	0.0068	0.0363	0.0000	0.0000	75	0.0021	0.0117	0.0000	0.0000
36	0.0068	0.0363	0.0000	0.0000	76	0.0021	0.0116	0.0000	0.0000
37	0.0068	0.0363	0.0000	0.0000	77	0.0021	0.0114	0.0000	0.0000
38	0.0068	0.0363	0.0000	0.0000	78	0.0021	0.0111	0.0000	0.0000
39	0.0068	0.0313	0.0000	0.0000	79	0.0020	0.0107	0.0000	0.0000
40	0.0057	0.0269	0.0000	0.0000	80	0.0019	0.0102	0.0000	0.0000
41	0.0048	0.0230	0.0000	0.0000	81	0.0018	0.0095	0.0000	0.0000
42	0.0040	0.0196	0.0000	0.0000	82	0.0017	0.0088	0.0000	0.0000
43	0.0033	0.0166	0.0000	0.0000	83	0.0015	0.0078	0.0000	0.0000
44	0.0026	0.0140	0.0000	0.0000	84	0.0013	0.0068	0.0000	0.0000
45	0.0021	0.0118	0.0000	0.0000	85	0.0011	0.0056	0.0000	0.0000
46	0.0016	0.0099	0.0000	0.0000	86	0.0008	0.0042	0.0000	0.0000
47	0.0013	0.0083	0.0000	0.0000	87	0.0005	0.0027	0.0000	0.0000
48	0.0009	0.0070	0.0000	0.0000	88	0.0002	0.0010	0.0000	0.0000
49	0.0007	0.0060	0.0000	0.0000	89	0.0000	0.0000	0.0000	0.0000
50	0.0005	0.0052	0.0000	0.0000	90	0.0000	0.0000	0.0000	0.0000
51	0.0003	0.0046	0.0000	0.0000	91	0.0000	0.0000	0.0000	0.0000
52	0.0002	0.0042	0.0000	0.0000	92	0.0000	0.0000	0.0000	0.0000
53	0.0001	0.0039	0.0000	0.0000	93	0.0000	0.0000	0.0000	0.0000
54	0.0001	0.0038	0.0000	0.0000	94	0.0000	0.0000	0.0000	0.0000
55	0.0001	0.0039	0.0000	0.0000	95	0.0000	0.0000	0.0000	0.0000

*** The above DoD/Treasury distinction is needed for P.L. 108-136 calculations.
"Treasury" rates of '0.0000' are shown for effect.

*** As noted in Item 2 in the Retiree section of Appendix F, additional adjustments are made for retirees who elect SBP spouse coverage.

RESERVE DUTY OTHER LOSSES FROM NONDISABILITY

(Age Nearest Birthday)

	DoD		Treasury			DoD		Treasury	
Age	Officer	Enlisted	Officer	Enlisted	Age	Officer	Enlisted	Officer	Enlisted
16	0.0000	0.0000	0.0000	0.0000	56	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000	57	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000	58	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000	59	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000	60	0.0016	0.0115	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000	61	0.0034	0.0176	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000	62	0.0023	0.0184	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000	63	0.0028	0.0150	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000	64	0.0030	0.0114	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000	65	0.0032	0.0107	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000	66	0.0032	0.0085	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000	67	0.0037	0.0080	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000	68	0.0029	0.0061	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000	69	0.0027	0.0053	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	70	0.0025	0.0054	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000	71	0.0019	0.0029	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000	72	0.0020	0.0037	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000	73	0.0013	0.0029	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000	74	0.0018	0.0036	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	75	0.0020	0.0021	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000	76	0.0020	0.0027	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000	77	0.0017	0.0041	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000	78	0.0020	0.0031	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000	79	0.0025	0.0035	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000	80	0.0007	0.0040	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000	81	0.0007	0.0028	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000	82	0.0017	0.0026	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000	83	0.0010	0.0047	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000	84	0.0023	0.0013	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000	85	0.0016	0.0042	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000	86	0.0011	0.0043	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000	87	0.0008	0.0051	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000	88	0.0016	0.0019	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000	89	0.0016	0.0027	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000	90	0.0017	0.0011	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000	91	0.0030	0.0023	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000	92	0.0010	0.0042	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000	93	0.0021	0.0032	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000	94	0.0012	0.0049	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000	95	0.0000	0.0000	0.0000	0.0000

*** The above DoD/Treasury distinction is needed for P.L. 108-136 calculations.
    "Treasury" rates of '0.0000' are shown for effect.

*** As noted in Item 2 in the Retiree section of Appendix F, additional adjustments are made for retirees who elect SBP spouse
    coverage.

OTHER LOSS AND NONTRANSFER LOSSES FROM TEMPORARY DISABILITY ***

(Age Nearest Birthday)

	Officers			Enlisted		
	Year of Retirement			Year of Retirement		
Age	One	Two	Three	One	Two	Three
16	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
17	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
18	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
19	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
20	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
21	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
22	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
23	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
24	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
25	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
26	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
27	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
28	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
29	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
30	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
31	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
32	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
33	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
34	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
35	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
36	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
37	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
38	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
39	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
40	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
41	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
42	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
43	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
44	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
45	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
46	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
47	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
48	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
49	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
50	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
51	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
52	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
53	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
54	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
55	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
56	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
57	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
58	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
59	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
60	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
61	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
62	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
63	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
64	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598
65	0.0264	0.0881	0.2771	0.1740	0.2433	0.5598

Year of Retirement			Year of Retirement		
One	Two	Three	One	Two	Three
1.639	1.176	1.070	1.368	1.228	1.067

Example: The DoD-specific Other/Nontransfer Loss rate (across all ages) for Officers in Year One of Retirement would be 0.0433, the product of 0.0264 and 1.639.

DoD Office of the Actuary

TRANSFER RATES FROM TEMPORARY DISABILITY TO PERMANENT DISABILITY

(Age Nearest Birthday)

	Officers		Enlisted	
	Year of Retirement		Year of Retirement	
Age	One	Two	One	Two
16	0.1281	0.1740	0.0626	0.0947
17	0.1281	0.1740	0.0626	0.0947
18	0.1281	0.1740	0.0626	0.0947
19	0.1281	0.1740	0.0626	0.0947
20	0.1281	0.1740	0.0626	0.0947
21	0.1281	0.1740	0.0626	0.0947
22	0.1281	0.1740	0.0626	0.0947
23	0.1281	0.1740	0.0626	0.0947
24	0.1281	0.1740	0.0626	0.0947
25	0.1281	0.1740	0.0626	0.0947
26	0.1281	0.1740	0.0626	0.0947
27	0.1281	0.1740	0.0626	0.0947
28	0.1281	0.1740	0.0626	0.0947
29	0.1281	0.1740	0.0626	0.0947
30	0.1281	0.1740	0.0626	0.0947
31	0.1281	0.1740	0.0626	0.0947
32	0.1281	0.1740	0.0626	0.0947
33	0.1281	0.1740	0.0626	0.0947
34	0.1281	0.1740	0.0626	0.0947
35	0.1281	0.1740	0.0626	0.0947
36	0.1281	0.1740	0.0626	0.0947
37	0.1281	0.1740	0.0626	0.0947
38	0.1281	0.1740	0.0626	0.0947
39	0.1281	0.1740	0.0626	0.0947
40	0.1281	0.1740	0.0626	0.0947
41	0.1281	0.1740	0.0626	0.0947
42	0.1281	0.1740	0.0626	0.0947
43	0.1281	0.1740	0.0626	0.0947
44	0.1281	0.1740	0.0626	0.0947
45	0.1281	0.1740	0.0626	0.0947
46	0.1281	0.1740	0.0626	0.0947
47	0.1281	0.1740	0.0626	0.0947
48	0.1281	0.1740	0.0626	0.0947
49	0.1281	0.1740	0.0626	0.0947
50	0.1281	0.1740	0.0626	0.0947
51	0.1281	0.1740	0.0626	0.0947
52	0.1281	0.1740	0.0626	0.0947
53	0.1281	0.1740	0.0626	0.0947
54	0.1281	0.1740	0.0626	0.0947
55	0.1281	0.1740	0.0626	0.0947
56	0.1281	0.1740	0.0626	0.0947
57	0.1281	0.1740	0.0626	0.0947
58	0.1281	0.1740	0.0626	0.0947
59	0.1281	0.1740	0.0626	0.0947
60	0.1281	0.1740	0.0626	0.0947
61	0.1281	0.1740	0.0626	0.0947
62	0.1281	0.1740	0.0626	0.0947
63	0.1281	0.1740	0.0626	0.0947
64	0.1281	0.1740	0.0626	0.0947
65	0.1281	0.1740	0.0626	0.0947

*** Those still remaining on temporary disability at the end of the temporary disability period are
assumed to be transferred to permanent disability.

DoD Office of the Actuary

OTHER LOSSES FROM PERMANENT DISABILITY

(Age Nearest Birthday)

	DoD		Treasury			DoD		Treasury	
Age	Officer	Enlisted	Officer	Enlisted	Age	Officer	Enlisted	Officer	Enlisted
16	0.0703	0.4892	0.0294	0.4046	54	0.0110	0.0309	0.0070	0.0182
17	0.0703	0.4892	0.0294	0.4046	55	0.0106	0.0339	0.0066	0.0203
18	0.0703	0.4892	0.0294	0.4046	56	0.0101	0.0363	0.0062	0.0218
19	0.0703	0.4892	0.0294	0.4046	57	0.0098	0.0381	0.0058	0.0229
20	0.0703	0.4892	0.0294	0.4046	58	0.0095	0.0391	0.0055	0.0236
21	0.0703	0.4222	0.0294	0.4046	59	0.0092	0.0394	0.0052	0.0233
22	0.0703	0.3595	0.0294	0.4046	60	0.0090	0.0384	0.0050	0.0212
23	0.0703	0.3012	0.0294	0.3165	61	0.0089	0.0373	0.0048	0.0193
24	0.0703	0.2484	0.0294	0.2461	62	0.0087	0.0379	0.0046	0.0184
25	0.0703	0.2024	0.0294	0.1924	63	0.0086	0.0391	0.0044	0.0174
26	0.0703	0.1646	0.0294	0.1536	64	0.0085	0.0396	0.0043	0.0151
27	0.0703	0.1349	0.0294	0.1263	65	0.0085	0.0390	0.0041	0.0123
28	0.0703	0.1127	0.0294	0.1071	66	0.0084	0.0379	0.0041	0.0098
29	0.0703	0.0967	0.0294	0.0936	67	0.0083	0.0367	0.0040	0.0084
30	0.0703	0.0856	0.0294	0.0843	68	0.0082	0.0360	0.0039	0.0082
31	0.0703	0.0770	0.0294	0.0771	69	0.0080	0.0353	0.0039	0.0081
32	0.0317	0.0690	0.0294	0.0699	70	0.0079	0.0344	0.0039	0.0078
33	0.0301	0.0607	0.0294	0.0623	71	0.0077	0.0336	0.0039	0.0072
34	0.0286	0.0531	0.0294	0.0554	72	0.0075	0.0330	0.0040	0.0065
35	0.0272	0.0467	0.0294	0.0495	73	0.0072	0.0329	0.0040	0.0060
36	0.0258	0.0419	0.0294	0.0445	74	0.0070	0.0328	0.0035	0.0057
37	0.0246	0.0386	0.0294	0.0402	75	0.0067	0.0322	0.0030	0.0056
38	0.0234	0.0362	0.0294	0.0355	76	0.0065	0.0309	0.0025	0.0053
39	0.0223	0.0351	0.0294	0.0313	77	0.0062	0.0288	0.0020	0.0045
40	0.0212	0.0355	0.0166	0.0285	78	0.0060	0.0268	0.0015	0.0036
41	0.0203	0.0367	0.0156	0.0269	79	0.0058	0.0258	0.0022	0.0034
42	0.0193	0.0373	0.0148	0.0261	80	0.0056	0.0257	0.0029	0.0037
43	0.0185	0.0363	0.0139	0.0256	81	0.0054	0.0255	0.0035	0.0041
44	0.0176	0.0345	0.0131	0.0252	82	0.0053	0.0255	0.0038	0.0042
45	0.0169	0.0330	0.0123	0.0248	83	0.0053	0.0260	0.0038	0.0036
46	0.0161	0.0323	0.0116	0.0240	84	0.0052	0.0270	0.0035	0.0042
47	0.0154	0.0328	0.0109	0.0237	85	0.0052	0.0282	0.0033	0.0042
48	0.0147	0.0329	0.0102	0.0229	86	0.0053	0.0292	0.0034	0.0042
49	0.0140	0.0319	0.0096	0.0214	87	0.0053	0.0297	0.0039	0.0042
50	0.0133	0.0304	0.0090	0.0201	88	0.0054	0.0295	0.0044	0.0042
51	0.0127	0.0290	0.0084	0.0190	89	0.0056	0.0289	0.0053	0.0042
52	0.0121	0.0281	0.0079	0.0176	90	0.0057	0.0291	0.0068	0.0042
53	0.0116	0.0287	0.0074	0.0171					

*** The above DoD/Treasury distinction is needed for P.L. 108-136 calculations.

*** As noted in Item 2 in the Retiree section of Appendix F, additional adjustments are made for retirees who elect SBP spouse coverage.

RETIREE DIVORCE RATES ***

(Age Nearest Birthday)

Age	Active Officer	Active Enlisted	Reserve Officer	Reserve Enlisted	Age	Active Officer	Active Enlisted	Reserve Officer	Reserve Enlisted
16	0.0900	0.0900	0.0900	0.0900	50	0.0080	0.0080	0.0080	0.0080
17	0.0900	0.0900	0.0900	0.0900	51	0.0070	0.0070	0.0070	0.0070
18	0.0900	0.0900	0.0900	0.0900	52	0.0060	0.0060	0.0060	0.0060
19	0.0900	0.0900	0.0900	0.0900	53	0.0050	0.0050	0.0050	0.0050
20	0.0830	0.0830	0.0830	0.0830	54	0.0050	0.0050	0.0050	0.0050
21	0.0750	0.0750	0.0750	0.0750	55	0.0040	0.0040	0.0040	0.0040
22	0.0680	0.0680	0.0680	0.0680	56	0.0040	0.0040	0.0040	0.0040
23	0.0610	0.0610	0.0610	0.0610	57	0.0030	0.0030	0.0030	0.0030
24	0.0530	0.0530	0.0530	0.0530	58	0.0010	0.0010	0.0010	0.0010
25	0.0460	0.0460	0.0460	0.0460	59	0.0020	0.0020	0.0020	0.0020
26	0.0420	0.0420	0.0420	0.0420	60	0.0040	0.0040	0.0040	0.0040
27	0.0380	0.0380	0.0380	0.0380	61	0.0020	0.0020	0.0020	0.0020
28	0.0360	0.0360	0.0360	0.0360	62	0.0030	0.0030	0.0030	0.0030
29	0.0360	0.0360	0.0360	0.0360	63	0.0010	0.0010	0.0010	0.0010
30	0.0330	0.0330	0.0330	0.0330	64	0.0010	0.0010	0.0010	0.0010
31	0.0310	0.0310	0.0310	0.0310	65	0.0000	0.0000	0.0000	0.0000
32	0.0280	0.0280	0.0280	0.0280	66	0.0000	0.0000	0.0000	0.0000
33	0.0240	0.0240	0.0240	0.0240	67	0.0000	0.0000	0.0000	0.0000
34	0.0200	0.0200	0.0200	0.0200	68	0.0000	0.0000	0.0000	0.0000
35	0.0210	0.0210	0.0210	0.0210	69	0.0000	0.0000	0.0000	0.0000
36	0.0240	0.0240	0.0240	0.0240	70	0.0000	0.0000	0.0000	0.0000
37	0.0310	0.0310	0.0310	0.0310	71	0.0000	0.0000	0.0000	0.0000
38	0.0390	0.0390	0.0390	0.0390	72	0.0000	0.0000	0.0000	0.0000
39	0.0420	0.0420	0.0420	0.0420	73	0.0000	0.0000	0.0000	0.0000
40	0.0370	0.0370	0.0370	0.0370	74	0.0000	0.0000	0.0000	0.0000
41	0.0300	0.0300	0.0300	0.0300	75	0.0000	0.0000	0.0000	0.0000
42	0.0250	0.0250	0.0250	0.0250	76	0.0000	0.0000	0.0000	0.0000
43	0.0190	0.0190	0.0190	0.0190	77	0.0000	0.0000	0.0000	0.0000
44	0.0170	0.0170	0.0170	0.0170	78	0.0000	0.0000	0.0000	0.0000
45	0.0140	0.0140	0.0140	0.0140	79	0.0000	0.0000	0.0000	0.0000
46	0.0130	0.0130	0.0130	0.0130	80	0.0000	0.0000	0.0000	0.0000
47	0.0110	0.0110	0.0110	0.0110	81	0.0000	0.0000	0.0000	0.0000
48	0.0100	0.0100	0.0100	0.0100	82	0.0000	0.0000	0.0000	0.0000
49	0.0080	0.0080	0.0080	0.0080					

*** Due to Section 647 of NDAA 2008 (P.L. 110-181) the reserve rates shown above apply in the early years of the projection. See Item 4 in the Reserve Duty section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

*** The "Retiree Divorce" rates are the same for officer/enlisted status, and by active/reserve. The rates are displayed for effect.

SURVIVING SPOUSE REMARRIAGE RATES

(Age Nearest Birthday)

Age	Rate	Age	Rate
16	0.0294	38	0.0278
17	0.0294	39	0.0278
18	0.0294	40	0.0110
19	0.0294	41	0.0110
20	0.0294	42	0.0110
21	0.0294	43	0.0110
22	0.0294	44	0.0110
23	0.0294	45	0.0061
24	0.0294	46	0.0061
25	0.0294	47	0.0061
26	0.0294	48	0.0061
27	0.0294	49	0.0061
28	0.0294	50	0.0035
29	0.0294	51	0.0035
30	0.0337	52	0.0035
31	0.0337	53	0.0035
32	0.0337	54	0.0035
33	0.0337	55	0.0035
34	0.0337	56	0.0000
35	0.0278	57	0.0000
36	0.0278	58	0.0000
37	0.0278	59	0.0000

DoD Office of the Actuary

SURVIVING CHILD COVERAGE TERMINATION RATES

(Age Nearest Birthday)

Age	Rate
0	0.005
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.000
7	0.000
8	0.000
9	0.000
10	0.000
11	0.000
12	0.000
13	0.000
14	0.000
15	0.000
16	0.000
17	0.198
18	0.333
19	0.127
20	0.036
21	0.365
22	0.578
23	0.146

DoD Office of the Actuary

SURVIVING SPOUSE DEATH RATES ***

(Age Nearest Birthday)

Age	Rate	Age	Rate
0	0.00544	60	0.00740
1	0.00049	61	0.00810
2	0.00032	62	0.00877
3	0.00024	63	0.00947
4	0.00018	64	0.01020
5	0.00016	65	0.01101
6	0.00015	66	0.01191
7	0.00014	67	0.01293
8	0.00013	68	0.01410
9	0.00012	69	0.01541
10	0.00012	70	0.01685
11	0.00013	71	0.01838
12	0.00014	72	0.01996
13	0.00015	73	0.02161
14	0.00018	74	0.02333
15	0.00021	75	0.02521
16	0.00017	76	0.02735
17	0.00019	77	0.02986
18	0.00020	78	0.03282
19	0.00020	79	0.03625
20	0.00020	80	0.04015
21	0.00020	81	0.04442
22	0.00021	82	0.04898
23	0.00022	83	0.05379
24	0.00023	84	0.05893
25	0.00024	85	0.06457
26	0.00026	86	0.07100
27	0.00027	87	0.07844
28	0.00029	88	0.08707
29	0.00032	89	0.09699
30	0.00036	90	0.10820
31	0.00041	91	0.12068
32	0.00044	92	0.13436
33	0.00047	93	0.14913
34	0.00048	94	0.16482
35	0.00050	95	0.18132
36	0.00052	96	0.19968
37	0.00054	97	0.21882
38	0.00057	98	0.23866
39	0.00059	99	0.25924
40	0.00062	100	0.28037
41	0.00066	101	0.30224
42	0.00070	102	0.32471
43	0.00073	103	0.34796
44	0.00075	104	0.37183
45	0.00078	105	0.39643
46	0.00082	106	0.42183
47	0.00088	107	0.44494
48	0.00096	108	0.46827
49	0.00107	109	0.49240
50	0.00121	110	0.97006
51	0.00138	111	0.97614
52	0.00161	112	0.98184
53	0.00186	113	0.98794
54	0.00214	114	0.99387
55	0.00245	115	1.00000
56	0.00364	116	1.00000
57	0.00475	117	1.00000
58	0.00575	118	1.00000
59	0.00663	119	1.00000

*** "Surviving Spouses" are defined as spouses of <u>deceased</u> retirees who elected
    SBP spouse, or spouse & child, coverage.
    Rates based on actual plan experience.

SPOUSE DEATH RATES ***

(Age Nearest Birthday)

Age	Rate	Age	Rate
0	0.00592	60	0.00321
1	0.00053	61	0.00359
2	0.00035	62	0.00403
3	0.00026	63	0.00454
4	0.00019	64	0.00514
5	0.00018	65	0.00580
6	0.00016	66	0.00652
7	0.00015	67	0.00727
8	0.00014	68	0.00801
9	0.00013	69	0.00874
10	0.00013	70	0.00955
11	0.00014	71	0.01052
12	0.00015	72	0.01177
13	0.00016	73	0.01324
14	0.00019	74	0.01489
15	0.00022	75	0.01677
16	0.00015	76	0.01894
17	0.00016	77	0.02146
18	0.00017	78	0.02425
19	0.00017	79	0.02732
20	0.00017	80	0.03074
21	0.00019	81	0.03463
22	0.00020	82	0.03909
23	0.00021	83	0.04403
24	0.00022	84	0.04935
25	0.00023	85	0.05530
26	0.00024	86	0.06203
27	0.00025	87	0.06969
28	0.00027	88	0.07846
29	0.00029	89	0.08815
30	0.00031	90	0.09871
31	0.00033	91	0.11015
32	0.00035	92	0.12239
33	0.00037	93	0.13550
34	0.00039	94	0.14947
35	0.00041	95	0.16442
36	0.00044	96	0.17997
37	0.00046	97	0.19640
38	0.00050	98	0.21389
39	0.00054	99	0.23244
40	0.00058	100	0.25180
41	0.00062	101	0.27193
42	0.00066	102	0.29244
43	0.00071	103	0.31425
44	0.00075	104	0.33725
45	0.00080	105	0.36053
46	0.00086	106	0.38320
47	0.00093	107	0.40433
48	0.00102	108	0.42560
49	0.00112	109	0.44750
50	0.00123	110	0.96959
51	0.00135	111	0.97555
52	0.00150	112	0.98154
53	0.00164	113	0.98786
54	0.00177	114	0.99392
55	0.00191	115	1.00000
56	0.00208	116	1.00000
57	0.00231	117	1.00000
58	0.00258	118	1.00000
59	0.00287	119	1.00000

*** "Spouses" are defined as spouses of <u>living</u> retirees who elected SBP spouse,
    or spouse & child, coverage.
    Rates based on standard actuarial mortality table -- *'1994 GAM Static - Female, ANB'*

SURVIVING SPOUSE OTHER LOSS RATES

(Age Nearest Birthday)

Age	Rate	Age	Rate
0	0.0000	55	0.0061
1	0.0000	56	0.0060
2	0.0000	57	0.0059
3	0.0000	58	0.0057
4	0.0000	59	0.0056
5	0.0000	60	0.0055
6	0.0000	61	0.0053
7	0.0000	62	0.0052
8	0.0000	63	0.0051
9	0.0000	64	0.0049
10	0.0000	65	0.0048
11	0.0000	66	0.0047
12	0.0000	67	0.0045
13	0.0000	68	0.0044
14	0.0000	69	0.0043
15	0.0000	70	0.0041
16	0.0000	71	0.0040
17	0.0000	72	0.0039
18	0.0000	73	0.0037
19	0.0000	74	0.0036
20	0.0000	75	0.0035
21	0.0000	76	0.0033
22	0.0000	77	0.0032
23	0.0000	78	0.0031
24	0.0000	79	0.0029
25	0.0101	80	0.0028
26	0.0100	81	0.0027
27	0.0099	82	0.0025
28	0.0097	83	0.0024
29	0.0096	84	0.0023
30	0.0095	85	0.0021
31	0.0093	86	0.0020
32	0.0092	87	0.0019
33	0.0091	88	0.0018
34	0.0089	89	0.0016
35	0.0088	90	0.0015
36	0.0087	91	0.0014
37	0.0085	92	0.0012
38	0.0084	93	0.0011
39	0.0083	94	0.0010
40	0.0081	95	0.0008
41	0.0080	96	0.0000
42	0.0079	97	0.0000
43	0.0077	98	0.0000
44	0.0076	99	0.0000
45	0.0075	100	0.0000
46	0.0073	101	0.0000
47	0.0072	102	0.0000
48	0.0071	103	0.0000
49	0.0069	104	0.0000
50	0.0068	105	0.0000
51	0.0067	106	0.0000
52	0.0065	107	0.0000
53	0.0064	108	0.0000
54	0.0063	109	0.0000

*** The above Other Loss rates are used to calculate both the DoD and Treasury
NCPs per P.L. 108-136.

DoD Office of the Actuary

APPENDIX J

MORTALITY IMPROVEMENT FACTORS

DoD Office of the Actuary

MORTALITY IMPROVEMENT FACTORS DESCRIPTION

Mortality rates in the valuation for active and reserve duty personnel, nondisabled retirees (from Active and Reserve Duty), disabled retirees, and survivors/spouses are decreased (or "improved") over time in order to reflect the long-term trend toward such declines, generally.

Mortality improvement factors are based on the Society of Actuaries (SOA) "Scale Mortality Projection 2015" (MP-2015), which are two-dimensional scales (by age and projection year for males and females) based on mortality improvement trends found in the U.S. general population[1]. Short-term improvement is based on 1951-2009 experience; long-term improvement is based on expert opinion (1% annual reduction of mortality for each age through age 85, and declining afterwards to 0% at age 115). Short and long-term improvement is blended smoothly over a 20-year transition period. This valuation adjusted MP-2015 to reflect the male/female mix of retirees (90% male, 10% female) and survivors (90% female, 10% male).

The following rationale highlights why MP-2015-based factors were adopted for this valuation:

- They're two-dimensional (unlike one-dimensional factors which vary by age only), reflecting both age/period and cohort effects; and

- The approach is sustainable in that the factors are based on expert demographic and actuarial analysis which the SOA expects to update on a regular, annual basis.

Projecting future mortality trends is an inherently uncertain exercise. Emerging experience will be monitored and new concepts developed by the research community reflected as appropriate, with due consideration of the inherent uncertainty and materiality of impact.

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[1] For an in-depth discussion of MP-2015, see:
https://www.soa.org/experience-studies/2015/research-2015-mp/

MORTALITY IMPROVEMENT FACTORS

Applied to: Nondisability Retirees, Permanent Disability Retirees, and Active/Reserve Duty Personnel

Gender Mix: 90% Male / 10% Female

(Age Nearest Birthday)

Age	Projection Year										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
< 21	0.99643	0.98851	0.97884	0.96913	0.96051	0.95801	0.95649	0.95577	0.95593	0.95670	0.95806
21	1.00124	0.99330	0.98368	0.97373	0.96484	0.96022	0.95860	0.95787	0.95784	0.95850	0.95975
22	1.00555	0.99777	0.98812	0.97821	0.96906	0.96463	0.96061	0.95987	0.95974	0.96029	0.96143
23	1.00924	1.00164	0.99215	0.98227	0.97322	0.96871	0.96505	0.96176	0.96161	0.96206	0.96300
24	1.01232	1.00498	0.99574	0.98609	0.97715	0.97274	0.96899	0.96608	0.96337	0.96371	0.96455
25	1.01467	1.00768	0.99888	0.98955	0.98084	0.97652	0.97278	0.96979	0.96754	0.96525	0.96608
26	1.01620	1.00975	1.00138	0.99258	0.98437	0.98007	0.97642	0.97334	0.97093	0.96915	0.96740
27	1.01683	1.01108	1.00342	0.99524	0.98765	0.98346	0.97982	0.97666	0.97425	0.97231	0.97101
28	1.01656	1.01159	1.00472	0.99745	0.99060	0.98657	0.98298	0.97993	0.97736	0.97535	0.97398
29	1.01539	1.01137	1.00539	0.99902	0.99292	0.98926	0.98582	0.98281	0.98016	0.97816	0.97662
30	1.01325	1.01018	1.00525	0.99979	0.99470	0.99133	0.98815	0.98527	0.98264	0.98056	0.97894
31	1.01043	1.00819	1.00423	0.99975	0.99558	0.99277	0.98985	0.98712	0.98470	0.98254	0.98083
32	1.00687	1.00545	1.00243	0.99892	0.99565	0.99329	0.99083	0.98843	0.98615	0.98409	0.98238
33	1.00293	1.00205	0.99987	0.99721	0.99472	0.99281	0.99087	0.98883	0.98686	0.98501	0.98331
34	0.99884	0.99830	0.99666	0.99465	0.99282	0.99167	0.99042	0.98898	0.98753	0.98599	0.98457
35	0.99496	0.99448	0.99318	0.99162	0.99024	0.98964	0.98908	0.98825	0.98731	0.98627	0.98507
36	0.99142	0.99080	0.98955	0.98813	0.98698	0.98684	0.98676	0.98662	0.98620	0.98568	0.98490
37	0.98859	0.98754	0.98605	0.98457	0.98336	0.98346	0.98373	0.98407	0.98424	0.98424	0.98397
38	0.98647	0.98480	0.98287	0.98114	0.97986	0.97980	0.98023	0.98092	0.98159	0.98209	0.98234
39	0.98506	0.98268	0.98031	0.97813	0.97649	0.97626	0.97664	0.97750	0.97854	0.97945	0.98021
40	0.98436	0.98135	0.97836	0.97583	0.97382	0.97306	0.97327	0.97409	0.97531	0.97669	0.97787
41	0.98426	0.98065	0.97712	0.97424	0.97187	0.97066	0.97044	0.97111	0.97238	0.97396	0.97561
42	0.98457	0.98063	0.97678	0.97355	0.97092	0.96908	0.96842	0.96875	0.96989	0.97154	0.97338
43	0.98537	0.98112	0.97713	0.97366	0.97079	0.96842	0.96723	0.96722	0.96803	0.96964	0.97166
44	0.98653	0.98228	0.97807	0.97457	0.97156	0.96877	0.96698	0.96645	0.96701	0.96830	0.97029
45	0.98814	0.98371	0.97960	0.97607	0.97303	0.97013	0.96775	0.96672	0.96677	0.96773	0.96948
46	0.98989	0.98559	0.98158	0.97797	0.97492	0.97200	0.96958	0.96769	0.96715	0.96777	0.96911
47	0.99205	0.98780	0.98374	0.98024	0.97711	0.97427	0.97174	0.96981	0.96832	0.96825	0.96926
48	0.99414	0.99005	0.98604	0.98258	0.97949	0.97665	0.97420	0.97216	0.97052	0.96950	0.96982
49	0.99624	0.99222	0.98837	0.98497	0.98203	0.97923	0.97680	0.97475	0.97310	0.97177	0.97104
50	0.99789	0.99422	0.99054	0.98731	0.98461	0.98188	0.97949	0.97745	0.97579	0.97444	0.97350
51	0.99909	0.99587	0.99254	0.98966	0.98714	0.98457	0.98232	0.98032	0.97867	0.97731	0.97624
52	0.99949	0.99697	0.99426	0.99174	0.98967	0.98737	0.98519	0.98323	0.98161	0.98025	0.97917
53	0.99911	0.99737	0.99545	0.99365	0.99194	0.99008	0.98807	0.98617	0.98459	0.98315	0.98208
54	0.99806	0.99717	0.99613	0.99493	0.99394	0.99253	0.99086	0.98911	0.98749	0.98609	0.98484
55	0.99627	0.99631	0.99612	0.99571	0.99532	0.99451	0.99327	0.99187	0.99029	0.98875	0.98753
56	0.99406	0.99482	0.99538	0.99571	0.99590	0.99579	0.99515	0.99407	0.99273	0.99124	0.98987
57	0.99152	0.99290	0.99400	0.99497	0.99572	0.99617	0.99621	0.99563	0.99462	0.99336	0.99194
58	0.98894	0.99057	0.99210	0.99351	0.99470	0.99570	0.99630	0.99631	0.99580	0.99476	0.99348
59	0.98632	0.98801	0.98978	0.99144	0.99305	0.99439	0.99545	0.99612	0.99609	0.99556	0.99450
60	0.98385	0.98551	0.98724	0.98913	0.99088	0.99255	0.99396	0.99499	0.99554	0.99550	0.99494
61	0.98169	0.98314	0.98484	0.98669	0.98848	0.99029	0.99185	0.99324	0.99426	0.99469	0.99463
62	0.97966	0.98099	0.98248	0.98430	0.98614	0.98791	0.98952	0.99107	0.99235	0.99335	0.99378
63	0.97801	0.97906	0.98053	0.98223	0.98404	0.98568	0.98735	0.98886	0.99031	0.99158	0.99248
64	0.97657	0.97752	0.97888	0.98047	0.98217	0.98378	0.98523	0.98680	0.98823	0.98967	0.99085
65	0.97533	0.97627	0.97763	0.97911	0.98071	0.98212	0.98355	0.98500	0.98638	0.98780	0.98915
66	0.97446	0.97531	0.97657	0.97805	0.97954	0.98095	0.98227	0.98360	0.98487	0.98626	0.98759
67	0.97379	0.97454	0.97580	0.97718	0.97867	0.98007	0.98130	0.98252	0.98377	0.98494	0.98624
68	0.97331	0.97405	0.97522	0.97660	0.97808	0.97939	0.98061	0.98183	0.98297	0.98403	0.98521
69	0.97302	0.97367	0.97482	0.97619	0.97768	0.97899	0.98021	0.98134	0.98246	0.98351	0.98457
70	0.97301	0.97355	0.97452	0.97589	0.97746	0.97877	0.97998	0.98111	0.98215	0.98319	0.98414
71	0.97309	0.97354	0.97440	0.97576	0.97733	0.97873	0.97994	0.98107	0.98202	0.98296	0.98391
72	0.97334	0.97361	0.97447	0.97573	0.97730	0.97869	0.97999	0.98103	0.98207	0.98292	0.98378
73	0.97368	0.97385	0.97462	0.97579	0.97736	0.97874	0.98004	0.98117	0.98212	0.98297	0.98383
74	0.97420	0.97419	0.97486	0.97604	0.97742	0.97889	0.98010	0.98122	0.98226	0.98311	0.98388
75	0.97470	0.97469	0.97528	0.97628	0.97766	0.97905	0.98025	0.98137	0.98231	0.98317	0.98393
76	0.97538	0.97519	0.97569	0.97669	0.97790	0.97920	0.98040	0.98152	0.98255	0.98340	0.98416
77	0.97604	0.97586	0.97619	0.97710	0.97832	0.97944	0.98064	0.98167	0.98270	0.98354	0.98430
78	0.97670	0.97643	0.97676	0.97759	0.97872	0.97976	0.98088	0.98191	0.98285	0.98369	0.98454
79	0.97745	0.97718	0.97742	0.97808	0.97912	0.98017	0.98120	0.98214	0.98308	0.98392	0.98468
80	0.97810	0.97783	0.97807	0.97864	0.97960	0.98056	0.98152	0.98246	0.98331	0.98415	0.98490
81	0.97885	0.97848	0.97872	0.97920	0.98008	0.98095	0.98182	0.98268	0.98353	0.98437	0.98512
82	0.97960	0.97923	0.97937	0.97985	0.98054	0.98133	0.98220	0.98297	0.98383	0.98458	0.98533
83	0.98036	0.97998	0.98003	0.98041	0.98109	0.98179	0.98257	0.98334	0.98402	0.98478	0.98544
84	0.98121	0.98073	0.98068	0.98096	0.98155	0.98215	0.98284	0.98362	0.98430	0.98497	0.98563
85	0.98208	0.98150	0.98144	0.98161	0.98201	0.98251	0.98310	0.98379	0.98447	0.98515	0.98581
86	0.98305	0.98246	0.98220	0.98218	0.98247	0.98286	0.98336	0.98404	0.98464	0.98522	0.98590
87	0.98411	0.98333	0.98297	0.98284	0.98293	0.98312	0.98361	0.98411	0.98470	0.98538	0.98597
88	0.98528	0.98440	0.98384	0.98351	0.98339	0.98348	0.98377	0.98427	0.98476	0.98536	0.98595
89	0.98654	0.98547	0.98471	0.98418	0.98386	0.98375	0.98394	0.98433	0.98482	0.98533	0.98592
90	0.98790	0.98663	0.98568	0.98495	0.98433	0.98411	0.98410	0.98439	0.98479	0.98529	0.98589
91	0.98926	0.98790	0.98675	0.98581	0.98490	0.98439	0.98427	0.98437	0.98476	0.98526	0.98577
92	0.99080	0.98925	0.98791	0.98669	0.98548	0.98476	0.98445	0.98444	0.98465	0.98514	0.98565
93	0.99235	0.99061	0.98908	0.98757	0.98616	0.98515	0.98464	0.98443	0.98463	0.98503	0.98553
94	0.99398	0.99206	0.99025	0.98854	0.98684	0.98563	0.98483	0.98453	0.98462	0.98492	0.98542
95	0.99561	0.99360	0.99160	0.98961	0.98763	0.98613	0.98513	0.98463	0.98462	0.98482	0.98522
96	0.99582	0.99391	0.99201	0.99011	0.98823	0.98682	0.98592	0.98542	0.98532	0.98552	0.98602
97	0.99602	0.99421	0.99241	0.99061	0.98883	0.98752	0.98662	0.98622	0.98612	0.98632	0.98672
98	0.99631	0.99451	0.99281	0.99112	0.98943	0.98822	0.98733	0.98692	0.98691	0.98711	0.98742
99	0.99651	0.99490	0.99330	0.99171	0.99012	0.98883	0.98812	0.98772	0.98762	0.98782	0.98822
100	0.99671	0.99520	0.99370	0.99221	0.99072	0.98953	0.98882	0.98851	0.98842	0.98861	0.98892
101	0.99691	0.99551	0.99410	0.99271	0.99132	0.99023	0.98962	0.98931	0.98921	0.98932	0.98971
102	0.99711	0.99581	0.99451	0.99321	0.99192	0.99092	0.99032	0.99002	0.99001	0.99011	0.99041
103	0.99740	0.99620	0.99491	0.99371	0.99261	0.99162	0.99111	0.99081	0.99072	0.99091	0.99112
104	0.99761	0.99650	0.99540	0.99430	0.99321	0.99232	0.99182	0.99161	0.99151	0.99161	0.99191
105	0.99781	0.99680	0.99580	0.99481	0.99381	0.99302	0.99261	0.99231	0.99231	0.99241	0.99261
106	0.99801	0.99710	0.99620	0.99531	0.99441	0.99372	0.99331	0.99311	0.99310	0.99320	0.99332
107	0.99821	0.99741	0.99661	0.99581	0.99501	0.99441	0.99402	0.99390	0.99381	0.99391	0.99411
108	0.99850	0.99780	0.99701	0.99631	0.99571	0.99511	0.99481	0.99461	0.99461	0.99470	0.99481
109	0.99870	0.99810	0.99750	0.99690	0.99631	0.99581	0.99551	0.99541	0.99540	0.99541	0.99560
110	0.99890	0.99840	0.99790	0.99740	0.99691	0.99661	0.99630	0.99620	0.99611	0.99620	0.99631
111	0.99910	0.99870	0.99830	0.99790	0.99751	0.99721	0.99701	0.99691	0.99691	0.99700	0.99701
112	0.99931	0.99900	0.99870	0.99841	0.99811	0.99791	0.99780	0.99770	0.99770	0.99770	0.99780
113	0.99960	0.99940	0.99920	0.99900	0.99880	0.99860	0.99850	0.99850	0.99850	0.99850	0.99850
114	0.99980	0.99970	0.99960	0.99950	0.99940	0.99930	0.99930	0.99920	0.99920	0.99920	0.99930
> 114	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

DoD Office of the Actuary

MORTALITY IMPROVEMENT FACTORS (continued)
Applied to: Nondisability Retirees, Permanent Disability Retirees, and Active/Reserve Duty Personnel
Gender Mix: 90% Male / 10% Female

(Age Nearest Birthday)

Age	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	>2028
< 21	0.95991	0.96226	0.96491	0.96775	0.97080	0.97385	0.97690	0.97985	0.98261	0.98498	0.98704	0.98862	0.98961	0.99000
21	0.96150	0.96364	0.96617	0.96882	0.97175	0.97459	0.97753	0.98028	0.98293	0.98528	0.98715	0.98872	0.98970	0.99000
22	0.96307	0.96501	0.96734	0.96987	0.97260	0.97533	0.97816	0.98080	0.98325	0.98549	0.98735	0.98873	0.98970	0.99000
23	0.96453	0.96636	0.96849	0.97091	0.97344	0.97606	0.97869	0.98122	0.98356	0.98570	0.98746	0.98883	0.98971	0.99000
24	0.96588	0.96760	0.96963	0.97194	0.97435	0.97678	0.97921	0.98163	0.98387	0.98591	0.98757	0.98883	0.98971	0.99000
25	0.96730	0.96883	0.97074	0.97286	0.97508	0.97749	0.97981	0.98204	0.98417	0.98611	0.98767	0.98893	0.98971	0.99000
26	0.96852	0.97003	0.97175	0.97376	0.97588	0.97810	0.98032	0.98244	0.98447	0.98622	0.98777	0.98894	0.98971	0.99000
27	0.96972	0.97105	0.97266	0.97457	0.97659	0.97861	0.98073	0.98275	0.98468	0.98642	0.98787	0.98903	0.98971	0.99000
28	0.97307	0.97217	0.97368	0.97539	0.97729	0.97929	0.98120	0.98320	0.98502	0.98665	0.98799	0.98904	0.98972	0.99000
29	0.97563	0.97510	0.97452	0.97612	0.97791	0.97979	0.98168	0.98347	0.98518	0.98678	0.98811	0.98915	0.98981	0.99000
30	0.97778	0.97716	0.97699	0.97673	0.97841	0.98019	0.98196	0.98374	0.98542	0.98691	0.98813	0.98916	0.98981	0.99000
31	0.97967	0.97887	0.97862	0.97872	0.97871	0.98047	0.98223	0.98389	0.98556	0.98695	0.98824	0.98917	0.98981	0.99000
32	0.98103	0.98024	0.97980	0.97982	0.98020	0.98053	0.98228	0.98403	0.98559	0.98697	0.98825	0.98917	0.98982	0.99000
33	0.98205	0.98115	0.98072	0.98066	0.98095	0.98161	0.98221	0.98395	0.98551	0.98698	0.98817	0.98918	0.98982	0.99000
34	0.98331	0.98241	0.98189	0.98174	0.98196	0.98254	0.98331	0.98401	0.98567	0.98705	0.98825	0.98917	0.98982	0.99000
35	0.98410	0.98329	0.98277	0.98253	0.98266	0.98317	0.98387	0.98476	0.98564	0.98704	0.98824	0.98917	0.98981	0.99000
36	0.98423	0.98352	0.98309	0.98294	0.98308	0.98351	0.98413	0.98503	0.98604	0.98701	0.98823	0.98916	0.98981	0.99000
37	0.98362	0.98322	0.98289	0.98284	0.98308	0.98352	0.98416	0.98508	0.98611	0.98714	0.98812	0.98915	0.98981	0.99000
38	0.98242	0.98243	0.98240	0.98246	0.98279	0.98333	0.98408	0.98493	0.98598	0.98712	0.98819	0.98905	0.98972	0.99000
39	0.98081	0.98124	0.98153	0.98189	0.98233	0.98297	0.98382	0.98478	0.98593	0.98710	0.98818	0.98908	0.98971	0.99000
40	0.97898	0.97984	0.98065	0.98123	0.98197	0.98271	0.98357	0.98463	0.98580	0.98698	0.98807	0.98908	0.98972	0.99000
41	0.97714	0.97843	0.97957	0.98065	0.98152	0.98247	0.98352	0.98458	0.98576	0.98695	0.98806	0.98907	0.98972	0.99000
42	0.97531	0.97711	0.97867	0.97999	0.98127	0.98234	0.98349	0.98465	0.98583	0.98702	0.98814	0.98907	0.98972	0.99000
43	0.97378	0.97588	0.97777	0.97951	0.98102	0.98230	0.98357	0.98474	0.98592	0.98711	0.98813	0.98906	0.98972	0.99000
44	0.97249	0.97480	0.97699	0.97904	0.98078	0.98237	0.98366	0.98493	0.98611	0.98721	0.98832	0.98916	0.98972	0.99000
45	0.97166	0.97405	0.97644	0.97870	0.98065	0.98237	0.98387	0.98515	0.98633	0.98742	0.98842	0.98925	0.98981	0.99000
46	0.97107	0.97343	0.97590	0.97827	0.98052	0.98235	0.98405	0.98544	0.98663	0.98762	0.98853	0.98926	0.98981	0.99000
47	0.97088	0.97302	0.97547	0.97793	0.98019	0.98232	0.98404	0.98554	0.98674	0.98783	0.98864	0.98936	0.98982	0.99000
48	0.97103	0.97293	0.97516	0.97751	0.97995	0.98209	0.98402	0.98563	0.98693	0.98793	0.98874	0.98937	0.98982	0.99000
49	0.97174	0.97323	0.97514	0.97744	0.97977	0.98191	0.98393	0.98564	0.98694	0.98804	0.98885	0.98947	0.98982	0.99000
50	0.97306	0.97395	0.97553	0.97752	0.97972	0.98192	0.98393	0.98564	0.98705	0.98815	0.98895	0.98948	0.98991	0.99000
51	0.97559	0.97534	0.97642	0.97808	0.97996	0.98195	0.98395	0.98565	0.98706	0.98816	0.98905	0.98958	0.98992	0.99000
52	0.97831	0.97784	0.97778	0.97894	0.98050	0.98227	0.98406	0.98575	0.98715	0.98825	0.98906	0.98958	0.98992	0.99000
53	0.98119	0.98051	0.98023	0.98026	0.98132	0.98278	0.98445	0.98594	0.98724	0.98834	0.98915	0.98967	0.98992	0.99000
54	0.98395	0.98316	0.98267	0.98239	0.98260	0.98357	0.98484	0.98621	0.98741	0.98842	0.98914	0.98967	0.98992	0.99000
55	0.98647	0.98567	0.98498	0.98458	0.98440	0.98453	0.98541	0.98649	0.98758	0.98850	0.98922	0.98966	0.98992	0.99000
56	0.98874	0.98777	0.98707	0.98648	0.98610	0.98593	0.98615	0.98685	0.98775	0.98857	0.98930	0.98975	0.98992	0.99000
57	0.99066	0.98953	0.98875	0.98806	0.98758	0.98721	0.98715	0.98730	0.98792	0.98864	0.98928	0.98974	0.98991	0.99000
58	0.99215	0.99096	0.99001	0.98925	0.98867	0.98821	0.98796	0.98792	0.98817	0.98871	0.98927	0.98973	0.98991	0.99000
59	0.99330	0.99206	0.99088	0.99004	0.98939	0.98893	0.98858	0.98845	0.98852	0.98879	0.98925	0.98963	0.98991	0.99000
60	0.99388	0.99277	0.99162	0.99063	0.98990	0.98936	0.98902	0.98889	0.98886	0.98895	0.98924	0.98962	0.98990	0.99000
61	0.99407	0.99309	0.99198	0.99102	0.99014	0.98962	0.98928	0.98906	0.98904	0.98913	0.98932	0.98961	0.98990	0.99000
62	0.99370	0.99313	0.99224	0.99123	0.99038	0.98978	0.98937	0.98915	0.98913	0.98922	0.98941	0.98970	0.98990	0.99000
63	0.99290	0.99272	0.99224	0.99144	0.99061	0.98995	0.98946	0.98925	0.98923	0.98931	0.98950	0.98970	0.98990	0.99000
64	0.99165	0.99205	0.99196	0.99147	0.99085	0.99021	0.98965	0.98935	0.98933	0.98933	0.98951	0.98971	0.98990	0.99000
65	0.99023	0.99102	0.99141	0.99132	0.99091	0.99038	0.98992	0.98955	0.98944	0.98943	0.98961	0.98971	0.98990	0.99000
66	0.98884	0.98991	0.99059	0.99098	0.99087	0.99054	0.99019	0.98983	0.98955	0.98953	0.98962	0.98981	0.98990	0.99000
67	0.98756	0.98872	0.98969	0.99036	0.99073	0.99061	0.99037	0.99001	0.98983	0.98964	0.98972	0.98981	0.98991	0.99000
68	0.98650	0.98764	0.98878	0.98965	0.99030	0.99057	0.99044	0.99028	0.99001	0.98983	0.98982	0.98982	0.98991	0.99000
69	0.98566	0.98677	0.98789	0.98894	0.98969	0.99025	0.99041	0.99036	0.99019	0.99001	0.98991	0.98991	0.98991	0.99000
70	0.98511	0.98619	0.98721	0.98824	0.98909	0.98983	0.99019	0.99033	0.99027	0.99010	0.99001	0.99001	0.98991	0.99000
71	0.98477	0.98574	0.98664	0.98765	0.98849	0.98932	0.98887	0.99021	0.99025	0.99018	0.99010	0.99001	0.99000	0.99000
72	0.98463	0.98541	0.98628	0.98718	0.98800	0.98882	0.98946	0.98990	0.99014	0.99017	0.99009	0.99009	0.99000	0.99000
73	0.98459	0.98527	0.98604	0.98682	0.98762	0.98834	0.98906	0.98960	0.98993	0.99007	0.99009	0.99009	0.99000	0.99000
74	0.98455	0.98523	0.98590	0.98658	0.98736	0.98806	0.98868	0.98930	0.98973	0.98996	0.99008	0.99009	0.99000	0.99000
75	0.98470	0.98528	0.98595	0.98653	0.98711	0.98780	0.98841	0.98902	0.98944	0.98976	0.98998	0.99000	0.99000	0.99000
76	0.98475	0.98542	0.98600	0.98648	0.98706	0.98764	0.98823	0.98874	0.98925	0.98966	0.98888	0.98999	0.99000	0.99000
77	0.98498	0.98556	0.98605	0.98662	0.98710	0.98759	0.98816	0.98866	0.98907	0.98948	0.98978	0.98990	0.99000	0.99000
78	0.98511	0.98578	0.98627	0.98676	0.98724	0.98762	0.98810	0.98859	0.98898	0.98938	0.98969	0.98989	0.99000	0.99000
79	0.98534	0.98591	0.98649	0.98688	0.98736	0.98775	0.98822	0.98852	0.98900	0.98939	0.98969	0.98989	0.99000	0.99000
80	0.98556	0.98613	0.98670	0.98709	0.98757	0.98796	0.98834	0.98863	0.98901	0.98930	0.98960	0.98980	0.99000	0.99000
81	0.98578	0.98634	0.98691	0.98730	0.98778	0.98807	0.98845	0.98874	0.98903	0.98931	0.98960	0.98980	0.98980	0.99000
82	0.98590	0.98655	0.98711	0.98750	0.98788	0.98827	0.98856	0.98885	0.98913	0.98942	0.98961	0.98980	0.98980	0.99000
83	0.98610	0.98666	0.98722	0.98769	0.98807	0.98846	0.98875	0.98904	0.98923	0.98952	0.98971	0.98980	0.98980	0.99000
84	0.98629	0.98685	0.98732	0.98779	0.98817	0.98855	0.98884	0.98913	0.98942	0.98962	0.98981	0.98990	0.99000	0.99000
85	0.98638	0.98695	0.98742	0.98788	0.98827	0.98865	0.98894	0.98923	0.98952	0.98971	0.98981	0.99000	0.99000	0.99000
86	0.98647	0.98704	0.98751	0.98798	0.98836	0.98874	0.98912	0.98941	0.98961	0.98981	0.99001	0.99010	0.99020	0.99010
87	0.98655	0.98712	0.98760	0.98808	0.98846	0.98883	0.98922	0.98951	0.98971	0.99000	0.99011	0.99030	0.99030	0.99030
88	0.98653	0.98711	0.98760	0.98808	0.98855	0.98893	0.98922	0.98961	0.98990	0.99010	0.99030	0.99040	0.99050	0.99040
89	0.98651	0.98710	0.98768	0.98816	0.98864	0.98903	0.98932	0.98961	0.99000	0.99020	0.99040	0.99060	0.99060	0.99060
90	0.98649	0.98708	0.98767	0.98816	0.98864	0.98913	0.98951	0.98981	0.99000	0.99030	0.99050	0.99070	0.99080	0.99080
91	0.98637	0.98697	0.98756	0.98815	0.98864	0.98913	0.98961	0.98991	0.99020	0.99040	0.99070	0.99080	0.99090	0.99090
92	0.98625	0.98695	0.98755	0.98814	0.98873	0.98923	0.98972	0.99011	0.99040	0.99060	0.99080	0.99100	0.99110	0.99110
93	0.98614	0.98684	0.98744	0.98814	0.98873	0.98923	0.98982	0.99022	0.99061	0.99081	0.99100	0.99110	0.99120	0.99120
94	0.98603	0.98664	0.98734	0.98804	0.98874	0.98933	0.98983	0.99032	0.99072	0.99110	0.99130	0.99140	0.99140	0.99140
95	0.98583	0.98653	0.98724	0.98804	0.98874	0.98934	0.98994	0.99052	0.99092	0.99131	0.99151	0.99161	0.99160	0.99150
96	0.98653	0.98723	0.98793	0.98863	0.98924	0.98993	0.99043	0.99093	0.99141	0.99171	0.99191	0.99210	0.99210	0.99190
97	0.98723	0.98783	0.98853	0.98923	0.98984	0.99043	0.99093	0.99142	0.99182	0.99211	0.99240	0.99250	0.99250	0.99240
98	0.98793	0.98853	0.98914	0.98983	0.99043	0.99094	0.99143	0.99192	0.99231	0.99261	0.99280	0.99290	0.99290	0.99280
99	0.98872	0.98923	0.98983	0.99043	0.99094	0.99153	0.99193	0.99242	0.99272	0.99301	0.99321	0.99330	0.99330	0.99320
100	0.98942	0.98992	0.99043	0.99103	0.99153	0.99203	0.99252	0.99282	0.99321	0.99341	0.99361	0.99370	0.99370	0.99360
101	0.99012	0.99053	0.99112	0.99163	0.99213	0.99253	0.99302	0.99332	0.99362	0.99391	0.99410	0.99411	0.99411	0.99410
102	0.99082	0.99122	0.99172	0.99222	0.99263	0.99312	0.99352	0.99382	0.99411	0.99431	0.99450	0.99460	0.99460	0.99450
103	0.99152	0.99192	0.99233	0.99282	0.99322	0.99362	0.99402	0.99431	0.99452	0.99480	0.99490	0.99500	0.99500	0.99490
104	0.99221	0.99262	0.99302	0.99342	0.99382	0.99412	0.99451	0.99481	0.99501	0.99521	0.99531	0.99540	0.99540	0.99530
105	0.99291	0.99322	0.99362	0.99402	0.99432	0.99472	0.99501	0.99522	0.99550	0.99561	0.99580	0.99580	0.99580	0.99580
106	0.99361	0.99392	0.99431	0.99462	0.99492	0.99522	0.99551	0.99571	0.99591	0.99610	0.99620	0.99620	0.99620	0.99620
107	0.99431	0.99461	0.99491	0.99521	0.99551	0.99572	0.99601	0.99621	0.99640	0.99650	0.99660	0.99670	0.99670	0.99660
108	0.99501	0.99531	0.99552	0.99581	0.99602	0.99631	0.99651	0.99671	0.99681	0.99691	0.99700	0.99710	0.99710	0.99700
109	0.99571	0.99591	0.99621	0.99641	0.99661	0.99681	0.99701	0.99711	0.99730	0.99740	0.99750	0.99750	0.99750	0.99750
110	0.99650	0.99661	0.99681	0.99701	0.99721	0.99731	0.99751	0.99761	0.99771	0.99780	0.99790	0.99790	0.99790	0.99790
111	0.99720	0.99731	0.99741	0.99761	0.99771	0.99790	0.99801	0.99810	0.99820	0.99830	0.99830	0.99830	0.99830	0.99830
112	0.99790	0.99800	0.99810	0.99821	0.99831	0.99841	0.99850	0.99860	0.99861	0.99870	0.99870	0.99870	0.99870	0.99870
113	0.99860	0.99861	0.99871	0.99880	0.99890	0.99891	0.99900	0.99901	0.99910	0.99910	0.99920	0.99920	0.99920	0.99920
114	0.99930	0.99930	0.99940	0.99940	0.99941	0.99950	0.99950	0.99950	0.99951	0.99960	0.99960	0.99960	0.99960	0.99960
> 114	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

MORTALITY IMPROVEMENT FACTORS
Applied to: Surviving Spouses, and Current Spouses
Gender Mix: 10% Male / 90% Female

(Age Nearest Birthday)

Age	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
< 21	0.98353	0.98403	0.98587	0.98898	0.99282	0.99679	0.99987	1.00138	1.00048	0.99707	0.99187	0.98539	0.97836	0.97177	0.96619	0.96369
21	0.98281	0.98357	0.98576	0.98939	0.99393	0.99850	1.00217	1.00424	1.00399	1.00132	0.99676	0.99090	0.98432	0.97797	0.97236	0.96678
22	0.98177	0.98232	0.98477	0.98885	0.99402	0.99929	1.00366	1.00631	1.00682	1.00488	1.00115	0.99593	0.98988	0.98389	0.97834	0.97447
23	0.98035	0.98057	0.98300	0.98735	0.99307	0.99916	1.00424	1.00768	1.00886	1.00776	1.00476	1.00036	0.99495	0.98923	0.98378	0.97999
24	0.97883	0.97852	0.98063	0.98506	0.99134	0.99808	1.00398	1.00813	1.01009	1.00976	1.00768	1.00402	0.99926	0.99401	0.98875	0.98506
25	0.97744	0.97628	0.97787	0.98237	0.98893	0.99624	1.00288	1.00776	1.01042	1.01095	1.00963	1.00672	1.00272	0.99795	0.99316	0.98948
26	0.97620	0.97426	0.97520	0.97939	0.98613	0.99382	1.00102	1.00654	1.00992	1.01115	1.01060	1.00855	1.00522	1.00122	0.99693	0.99343
27	0.97544	0.97258	0.97275	0.97650	0.98313	0.99110	0.99868	1.00467	1.00859	1.01052	1.01067	1.00932	1.00678	1.00356	1.00005	0.99674
28	0.97528	0.97147	0.97094	0.97404	0.98035	0.98821	0.99597	1.00223	1.00669	1.00907	1.00984	1.00911	1.00728	1.00505	1.00260	0.99993
29	0.97564	0.97115	0.96979	0.97232	0.97800	0.98555	0.99320	0.99953	1.00415	1.00697	1.00811	1.00793	1.00691	1.00558	1.00428	1.00254
30	0.97672	0.97154	0.96945	0.97129	0.97633	0.98334	0.99057	0.99668	1.00127	1.00425	1.00565	1.00602	1.00565	1.00531	1.00510	1.00437
31	0.97835	0.97259	0.97004	0.97118	0.97555	0.98182	0.98842	0.99408	0.99834	1.00118	1.00267	1.00331	1.00367	1.00415	1.00502	1.00533
32	0.98043	0.97440	0.97140	0.97202	0.97570	0.98112	0.98686	0.99177	0.99548	0.99789	0.99943	1.00025	1.00107	1.00228	1.00405	1.00521
33	0.98296	0.97677	0.97353	0.97373	0.97672	0.98134	0.98611	0.99005	0.99290	0.99476	0.99597	0.99685	0.99803	0.99969	1.00208	1.00409
34	0.98576	0.97962	0.97624	0.97621	0.97868	0.98241	0.98617	0.98903	0.99082	0.99192	0.99276	0.99350	0.99474	0.99665	0.99938	1.00183
35	0.98873	0.98276	0.97954	0.97927	0.98130	0.98431	0.98706	0.98872	0.98942	0.98965	0.98984	0.99032	0.99142	0.99338	0.99616	0.99876
36	0.99177	0.98618	0.98311	0.98280	0.98448	0.98676	0.98858	0.98922	0.98883	0.98808	0.98758	0.98760	0.98835	0.98997	0.99242	0.99516
37	0.99461	0.98957	0.98676	0.98649	0.98792	0.98964	0.99072	0.99044	0.98904	0.98739	0.98611	0.98546	0.98565	0.98673	0.98864	0.99114
38	0.99722	0.99284	0.99039	0.99016	0.99141	0.99285	0.99328	0.99226	0.99004	0.98759	0.98543	0.98400	0.98343	0.98386	0.98514	0.98700
39	0.99940	0.99570	0.99369	0.99369	0.99486	0.99601	0.99607	0.99460	0.99175	0.98849	0.98554	0.98332	0.98199	0.98157	0.98201	0.98314
40	1.00086	0.99785	0.99639	0.99670	0.99797	0.99911	0.99898	0.99716	0.99396	0.99009	0.98644	0.98335	0.98124	0.98007	0.97958	0.97994
41	1.00149	0.99936	0.99846	0.99919	1.00074	1.00197	1.00183	0.99993	0.99648	0.99218	0.98794	0.98425	0.98128	0.97936	0.97803	0.97754
42	1.00134	0.99994	0.99981	1.00096	1.00289	1.00439	1.00443	1.00262	0.99458	0.98993	0.98567	0.98222	0.97955	0.97748	0.97612
43	1.00032	0.99967	1.00022	1.00199	1.00432	1.00618	1.00658	1.00506	1.00159	0.99711	0.99233	0.98768	0.98377	0.98054	0.97791	0.97578
44	0.99867	0.99869	0.99985	1.00217	1.00508	1.00742	1.00820	1.00697	1.00350	0.99638	0.99477	0.99012	0.98583	0.98233	0.97924	0.97653
45	0.99657	0.99708	0.99877	1.00165	1.00499	1.00781	1.00908	1.00835	1.00569	1.00179	0.99726	0.99259	0.98840	0.98463	0.98127	0.97837
46	0.99420	0.99510	0.99723	1.00041	1.00410	1.00735	1.00913	1.00900	1.00696	1.00350	0.99941	0.99511	0.99102	0.98733	0.98388	0.98080
47	0.99193	0.99303	0.99522	0.99862	1.00259	1.00611	1.00834	1.00884	1.00744	1.00470	1.00125	0.99740	0.99366	0.99016	0.98679	0.98363
48	0.98987	0.99095	0.99311	0.99654	1.00053	1.00425	1.00686	1.00784	1.00719	1.00528	1.00246	0.99925	0.99596	0.99282	0.98981	0.98665
49	0.98804	0.98899	0.99100	0.99419	0.99803	1.00177	1.00469	1.00617	1.00619	1.00495	1.00296	1.00038	0.99773	0.99513	0.99267	0.98987
50	0.98663	0.98734	0.98910	0.99195	0.99553	0.99913	1.00200	1.00381	1.00441	1.00385	1.00261	1.00078	0.99886	0.99699	0.99509	0.99292
51	0.98557	0.98612	0.98754	0.98993	0.99307	0.99633	0.99914	1.00108	1.00193	1.00196	1.00141	1.00043	0.99926	0.99814	0.99706	0.99553
52	0.98488	0.98526	0.98632	0.98826	0.99094	0.99365	0.99611	0.99791	0.99898	0.99944	0.99941	0.99913	0.99874	0.99846	0.99823	0.99753
53	0.98457	0.98478	0.98557	0.98704	0.98915	0.99129	0.99329	0.99474	0.99577	0.99638	0.99679	0.99713	0.99745	0.99805	0.99866	0.99872
54	0.98446	0.98460	0.98520	0.98628	0.98771	0.98926	0.99060	0.99168	0.99238	0.99297	0.99374	0.99453	0.99557	0.99677	0.99826	0.99917
55	0.98474	0.98480	0.98520	0.98589	0.98672	0.98758	0.98833	0.98876	0.98921	0.98967	0.99043	0.99159	0.99308	0.99499	0.99708	0.99859
56	0.98524	0.98520	0.98541	0.98578	0.98611	0.98636	0.98643	0.98637	0.98628	0.98660	0.98734	0.98858	0.99042	0.99259	0.99510	0.99731
57	0.98595	0.98589	0.98580	0.98577	0.98568	0.98542	0.98489	0.98436	0.98390	0.98388	0.98448	0.98570	0.98760	0.98993	0.99268	0.99513
58	0.98686	0.98661	0.98639	0.98603	0.98553	0.98477	0.98384	0.98282	0.98208	0.98170	0.98206	0.98313	0.98490	0.98719	0.98990	0.99250
59	0.98788	0.98751	0.98708	0.98632	0.98549	0.98442	0.98309	0.98177	0.98074	0.98009	0.98008	0.98089	0.98242	0.98456	0.98705	0.98951
60	0.98902	0.98853	0.98778	0.98679	0.98566	0.98427	0.98273	0.98112	0.97980	0.97894	0.97865	0.97919	0.98036	0.98217	0.98432	0.98655
61	0.99017	0.98956	0.98868	0.98738	0.98594	0.98425	0.98250	0.98077	0.97924	0.97810	0.97761	0.97786	0.97876	0.98021	0.98192	0.98381
62	0.99125	0.99070	0.98952	0.98809	0.98642	0.98453	0.98257	0.98064	0.97890	0.97764	0.97694	0.97691	0.97752	0.97870	0.98006	0.98159
63	0.99233	0.99176	0.99055	0.98891	0.98703	0.98492	0.98275	0.98070	0.97876	0.97738	0.97649	0.97634	0.97677	0.97767	0.97876	0.97992
64	0.99332	0.99274	0.99151	0.98984	0.98784	0.98552	0.98314	0.98079	0.97882	0.97724	0.97633	0.97608	0.97632	0.97703	0.97793	0.97882
65	0.99422	0.99373	0.99249	0.99080	0.98868	0.98623	0.98364	0.98116	0.97899	0.97730	0.97637	0.97603	0.97627	0.97679	0.97759	0.97828
66	0.99503	0.99455	0.99348	0.99178	0.98954	0.98697	0.98416	0.98156	0.97927	0.97756	0.97654	0.97619	0.97633	0.97685	0.97746	0.97815
67	0.99556	0.99527	0.99430	0.99259	0.99042	0.98773	0.98488	0.98216	0.97976	0.97794	0.97691	0.97646	0.97660	0.97702	0.97763	0.97823
68	0.99609	0.99590	0.99503	0.99349	0.99122	0.98850	0.98563	0.98279	0.98036	0.97853	0.97739	0.97685	0.97698	0.97740	0.97792	0.97851
69	0.99641	0.99643	0.99566	0.99413	0.99203	0.98929	0.98639	0.98361	0.98116	0.97922	0.97798	0.97743	0.97738	0.97771	0.97832	0.97891
70	0.99664	0.99676	0.99619	0.99476	0.99274	0.99008	0.98725	0.98446	0.98189	0.97994	0.97869	0.97795	0.97788	0.97821	0.97874	0.97933
71	0.99676	0.99699	0.99653	0.99529	0.99337	0.99079	0.98804	0.98523	0.98274	0.98077	0.97941	0.97866	0.97840	0.97864	0.97917	0.97977
72	0.99687	0.99721	0.99686	0.99572	0.99390	0.99150	0.98883	0.98610	0.98360	0.98152	0.98006	0.97929	0.97903	0.97917	0.97970	0.98021
73	0.99688	0.99733	0.99708	0.99614	0.99442	0.99212	0.98954	0.98681	0.98429	0.98220	0.98072	0.97985	0.97958	0.97971	0.98024	0.98066
74	0.99698	0.99744	0.99729	0.99645	0.99484	0.99273	0.99016	0.98742	0.98499	0.98289	0.98140	0.98051	0.98014	0.98036	0.98078	0.98121
75	0.99709	0.99764	0.99750	0.99676	0.99534	0.99325	0.99069	0.98804	0.98552	0.98341	0.98190	0.98101	0.98072	0.98092	0.98134	0.98185
76	0.99729	0.99793	0.99789	0.99716	0.99575	0.99367	0.99120	0.98848	0.98595	0.98384	0.98242	0.98151	0.98121	0.98141	0.98190	0.98240
77	0.99769	0.99824	0.99828	0.99756	0.99615	0.99417	0.99163	0.98891	0.98639	0.98427	0.98276	0.98194	0.98171	0.98190	0.98248	0.98296
78	0.99810	0.99873	0.99868	0.99805	0.99665	0.99458	0.99205	0.98933	0.98673	0.98462	0.98310	0.98227	0.98204	0.98231	0.98288	0.98344
79	0.99862	0.99924	0.99928	0.99864	0.99715	0.99508	0.99246	0.98967	0.98707	0.98487	0.98345	0.98262	0.98238	0.98272	0.98328	0.98393
80	0.99916	0.99985	0.99988	0.99924	0.99774	0.99559	0.99288	0.99009	0.98741	0.98522	0.98370	0.98287	0.98263	0.98296	0.98360	0.98424
81	0.99988	1.00057	1.00059	0.99985	0.99835	0.99611	0.99340	0.99052	0.98784	0.98556	0.98405	0.98312	0.98288	0.98320	0.98392	0.98455
82	1.00054	1.00130	1.00131	1.00056	0.99906	0.99672	0.99401	0.99105	0.98828	0.98600	0.98440	0.98347	0.98313	0.98345	0.98406	0.98477
83	1.00129	1.00204	1.00204	1.00129	0.99969	0.99744	0.99464	0.99167	0.98890	0.98653	0.98484	0.98382	0.98347	0.98369	0.98421	0.98491
84	1.00196	1.00271	1.00279	1.00202	1.00042	0.99817	0.99537	0.99240	0.98954	0.98708	0.98529	0.98417	0.98372	0.98384	0.98435	0.98495
85	1.00273	1.00346	1.00354	1.00277	1.00116	0.99891	0.99611	0.99313	0.99027	0.98780	0.98592	0.98470	0.98416	0.98409	0.98449	0.98499
86	1.00332	1.00414	1.00421	1.00343	1.00192	0.99966	0.99695	0.99397	0.99111	0.98854	0.98665	0.98534	0.98460	0.98442	0.98463	0.98494
87	1.00400	1.00473	1.00479	1.00411	1.00259	1.00042	0.99771	0.99482	0.99195	0.98947	0.98739	0.98597	0.98513	0.98476	0.98477	0.98488
88	1.00460	1.00532	1.00538	1.00470	1.00327	1.00119	0.99857	0.99577	0.99290	0.99041	0.98832	0.98680	0.98576	0.98519	0.98491	0.98492
89	1.00510	1.00582	1.00597	1.00529	1.00395	1.00188	0.99944	0.99664	0.99395	0.99136	0.98926	0.98763	0.98639	0.98562	0.98514	0.98495
90	1.00560	1.00632	1.00639	1.00580	1.00456	1.00267	1.00023	0.99761	0.99491	0.99241	0.99030	0.98847	0.98712	0.98615	0.98537	0.98499
91	1.00609	1.00673	1.00680	1.00622	1.00507	1.00328	1.00103	0.99850	0.99598	0.99356	0.99134	0.98950	0.98795	0.98669	0.98570	0.98511
92	1.00650	1.00705	1.00713	1.00664	1.00551	1.00390	1.00183	0.99949	0.99696	0.99463	0.99240	0.99045	0.98879	0.98741	0.98612	0.98524
93	1.00681	1.00737	1.00746	1.00698	1.00594	1.00443	1.00255	1.00030	0.99805	0.99570	0.99355	0.99149	0.98972	0.98813	0.98664	0.98555
94	1.00711	1.00760	1.00761	1.00723	1.00629	1.00497	1.00319	1.00121	0.99895	0.99678	0.99462	0.99254	0.99065	0.98886	0.98716	0.98587
95	1.00732	1.00774	1.00776	1.00740	1.00665	1.00543	1.00383	1.00204	0.99996	0.99787	0.99569	0.99360	0.99160	0.98969	0.98787	0.98637
96	1.00701	1.00733	1.00736	1.00709	1.00626	1.00514	1.00364	1.00194	0.99996	0.99797	0.99598	0.99399	0.99209	0.99019	0.98847	0.98698
97	1.00660	1.00702	1.00705	1.00669	1.00596	1.00484	1.00344	1.00175	0.99996	0.99808	0.99618	0.99429	0.99249	0.99069	0.98907	0.98768
98	1.00619	1.00661	1.00665	1.00630	1.00566	1.00464	1.00324	1.00165	0.99996	0.99818	0.99639	0.99459	0.99289	0.99128	0.98967	0.98838
99	1.00588	1.00621	1.00624	1.00590	1.00527	1.00434	1.00305	1.00156	0.99997	0.99828	0.99659	0.99490	0.99330	0.99179	0.99028	0.98907
100	1.00547	1.00580	1.00584	1.00559	1.00497	1.00405	1.00285	1.00146	0.99997	0.99838	0.99679	0.99520	0.99370	0.99229	0.99088	0.98977
101	1.00515	1.00540	1.00544	1.00520	1.00466	1.00376	1.00265	1.00136	0.99997	0.99848	0.99699	0.99559	0.99410	0.99279	0.99148	0.99047
102	1.00475	1.00499	1.00504	1.00480	1.00427	1.00355	1.00246	1.00126	0.99997	0.99859	0.99719	0.99589	0.99459	0.99329	0.99208	0.99108
103	1.00443	1.00468	1.00464	1.00449	1.00397	1.00326	1.00226	1.00117	0.99997	0.99869	0.99740	0.99620	0.99499	0.99379	0.99269	0.99178
104	1.00402	1.00427	1.00433	1.00410	1.00367	1.00296	1.00216	1.00107	0.99998	0.99879	0.99769	0.99650	0.99540	0.99430	0.99329	0.99248
105	1.00371	1.00387	1.00392	1.00370	1.00328	1.00267	1.00196	1.00097	0.99998	0.99889	0.99779	0.99680	0.99580	0.99489	0.99389	0.99318
106	1.00330	1.00346	1.00352	1.00330	1.00298	1.00247	1.00176	1.00088	0.99998	0.99899	0.99809	0.99710	0.99620	0.99539	0.99449	0.99388
107	1.00289	1.00306	1.00312	1.00299	1.00268	1.00217	1.00157	1.00078	0.99998	0.99918	0.99829	0.99749	0.99669	0.99589	0.99509	0.99449
108	1.00258	1.00274	1.00272	1.00260	1.00229	1.00188	1.00137	1.00068	0.99999	0.99929	0.99850	0.99780	0.99709	0.99639	0.99579	0.99519
109	1.00217	1.00234	1.00232	1.00220	1.00199	1.00158	1.00118	1.00058	0.99999	0.99939	0.99870	0.99810	0.99750	0.99690	0.99630	0.99589
110	1.00185	1.00193	1.00192	1.00189	1.00169	1.00138	1.00098	1.00049	0.99999	0.99949	0.99890	0.99840	0.99790	0.99740	0.99699	0.99659
111	1.00145	1.00153	1.00152	1.00150	1.00129	1.00109	1.00078	1.00039	0.99999	0.99959	0.99910	0.99870	0.99830	0.99790	0.99759	0.99729
112	1.00113	1.00112	1.00120	1.00110	1.00099	1.00079	1.00059	1.00029	0.99999	0.99969	0.99939	0.99900	0.99870	0.99849	0.99819	0.99799
113	1.00072	1.00081	1.00080	1.00070	1.00069	1.00050	1.00039	1.00019	1.00000	0.99980	0.99960	0.99940	0.99920	0.99900	0.99880	0.99860
114	1.00041	1.00040	1.00040	1.00040	1.00030	1.00029	1.00020	1.00010	1.00000	0.99990	0.99980	0.99970	0.99960	0.99950	0.99940	0.99930
>114	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

MORTALITY IMPROVEMENT FACTORS (continued)
Applied to: Surviving Spouses, and Current Spouses
Gender Mix: 10% Male / 90% Female

(Age Nearest Birthday)

Age	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	>2028
< 21	0.96201	0.96113	0.96097	0.96150	0.96254	0.96399	0.96594	0.96819	0.97055	0.97320	0.97585	0.97850	0.98105	0.98349	0.98562	0.98736	0.98878	0.98969	0.99000
21	0.96500	0.96403	0.96376	0.96410	0.96495	0.96630	0.96796	0.96993	0.97218	0.97455	0.97691	0.97937	0.98172	0.98397	0.98592	0.98755	0.98888	0.98970	0.99000
22	0.96789	0.96683	0.96646	0.96661	0.96727	0.96843	0.96989	0.97166	0.97363	0.97580	0.97797	0.98024	0.98240	0.98445	0.98621	0.98775	0.98897	0.98970	0.99000
23	0.97665	0.96944	0.96889	0.96894	0.96940	0.97037	0.97164	0.97321	0.97499	0.97696	0.97894	0.98101	0.98298	0.98484	0.98650	0.98794	0.98907	0.98979	0.99000
24	0.98171	0.97872	0.97113	0.97099	0.97135	0.97212	0.97320	0.97467	0.97626	0.97795	0.97982	0.98169	0.98347	0.98523	0.98679	0.98813	0.98907	0.98979	0.99000
25	0.98622	0.98331	0.98066	0.97285	0.97312	0.97370	0.97467	0.97586	0.97734	0.97892	0.98061	0.98229	0.98396	0.98553	0.98699	0.98823	0.98917	0.98979	0.99000
26	0.99018	0.98726	0.98477	0.98235	0.97460	0.97508	0.97587	0.97695	0.97824	0.97972	0.98130	0.98288	0.98436	0.98583	0.98718	0.98833	0.98926	0.98979	0.99000
27	0.99358	0.99074	0.98825	0.98599	0.98389	0.97628	0.97705	0.97794	0.97913	0.98051	0.98189	0.98337	0.98475	0.98612	0.98738	0.98843	0.98927	0.98979	0.99000
28	0.99722	0.99457	0.99224	0.99015	0.98822	0.98643	0.97913	0.97992	0.98091	0.98201	0.98321	0.98440	0.98560	0.98678	0.98785	0.98871	0.98936	0.98988	0.99000
29	1.00038	0.99809	0.99584	0.99384	0.99198	0.99027	0.98870	0.98188	0.98268	0.98359	0.98451	0.98552	0.98643	0.98742	0.98822	0.98899	0.98955	0.98989	0.99000
30	1.00295	1.00103	0.99896	0.99704	0.99526	0.99362	0.99204	0.99051	0.98417	0.98489	0.98571	0.98644	0.98726	0.98798	0.98859	0.98917	0.98964	0.98989	0.99000
31	1.00465	1.00328	1.00150	0.99966	0.99787	0.99623	0.99463	0.99318	0.99168	0.98599	0.98663	0.98727	0.98781	0.98844	0.98895	0.98936	0.98973	0.98989	0.99000
32	1.00547	1.00467	1.00335	1.00161	0.99982	0.99807	0.99656	0.99500	0.99358	0.99220	0.98717	0.98772	0.98827	0.98871	0.98913	0.98945	0.98973	0.98988	0.99000
33	1.00503	1.00507	1.00414	1.00269	1.00099	0.99925	0.99755	0.99608	0.99474	0.99335	0.99209	0.98789	0.98835	0.98879	0.98922	0.98953	0.98982	0.98998	0.99000
34	1.00338	1.00402	1.00377	1.00271	1.00113	0.99939	0.99769	0.99621	0.99486	0.99364	0.99246	0.99139	0.98809	0.98863	0.98905	0.98945	0.98973	0.98988	0.99000
35	1.00092	1.00225	1.00259	1.00203	1.00083	0.99930	0.99761	0.99613	0.99477	0.99354	0.99253	0.99163	0.99084	0.98836	0.98896	0.98936	0.98973	0.98989	0.99000
36	0.99764	0.99958	1.00060	1.00072	1.00010	0.99887	0.99728	0.99581	0.99446	0.99332	0.99239	0.99157	0.99087	0.99036	0.98869	0.98927	0.98964	0.98989	0.99000
37	0.99357	0.99583	0.99736	0.99816	0.99813	0.99738	0.99618	0.99481	0.99356	0.99252	0.99168	0.99104	0.99052	0.99019	0.98986	0.98908	0.98955	0.98989	0.99000
38	0.98927	0.99148	0.99351	0.99481	0.99546	0.99538	0.99467	0.99360	0.99254	0.99151	0.99077	0.99032	0.98997	0.98982	0.98968	0.98971	0.98945	0.98988	0.99000
39	0.98496	0.98710	0.98926	0.99105	0.99229	0.99289	0.99276	0.99217	0.99141	0.99057	0.98993	0.98958	0.98942	0.98937	0.98950	0.98962	0.98972	0.98979	0.99000
40	0.98103	0.98281	0.98499	0.98701	0.98883	0.99002	0.99065	0.99065	0.99027	0.98973	0.98919	0.98893	0.98887	0.98900	0.98922	0.98943	0.98972	0.98988	0.99000
41	0.97796	0.97919	0.98102	0.98324	0.98529	0.98706	0.98827	0.98893	0.98905	0.98888	0.98863	0.98848	0.98842	0.98864	0.98895	0.98934	0.98963	0.98988	0.99000
42	0.97578	0.97635	0.97781	0.97986	0.98202	0.98419	0.98599	0.98723	0.98791	0.98823	0.98826	0.98821	0.98825	0.98847	0.98878	0.98926	0.98963	0.98988	0.99000
43	0.97467	0.97458	0.97547	0.97716	0.97934	0.98162	0.98372	0.98553	0.98679	0.98758	0.98790	0.98813	0.98826	0.98848	0.98879	0.98917	0.98954	0.98988	0.99000
44	0.97482	0.97405	0.97429	0.97550	0.97741	0.97961	0.98200	0.98411	0.98576	0.98702	0.98773	0.98814	0.98837	0.98859	0.98889	0.98928	0.98964	0.98988	0.99000
45	0.97615	0.97488	0.97453	0.97517	0.97652	0.97854	0.98085	0.98316	0.98510	0.98665	0.98773	0.98843	0.98875	0.98897	0.98918	0.98938	0.98965	0.98989	0.99000
46	0.97822	0.97641	0.97555	0.97553	0.97639	0.97803	0.98007	0.98230	0.98443	0.98628	0.98755	0.98845	0.98896	0.98927	0.98938	0.98957	0.98974	0.98989	0.99000
47	0.98086	0.97869	0.97728	0.97665	0.97694	0.97792	0.97958	0.98163	0.98377	0.98571	0.98728	0.98836	0.98906	0.98946	0.98967	0.98976	0.98984	0.98998	0.99000
48	0.98380	0.98144	0.97948	0.97830	0.97798	0.97847	0.97957	0.98124	0.98319	0.98515	0.98681	0.98818	0.98907	0.98957	0.98977	0.98986	0.98993	0.98998	0.99000
49	0.98720	0.98475	0.98270	0.98113	0.98016	0.98006	0.98067	0.98186	0.98336	0.98513	0.98679	0.98817	0.98916	0.98866	0.98996	0.99005	0.99003	0.98998	0.99000
50	0.99061	0.98825	0.98611	0.98436	0.98310	0.98234	0.98235	0.98297	0.98408	0.98548	0.98688	0.98817	0.98916	0.98985	0.99015	0.99015	0.99012	0.98999	0.99000
51	0.99368	0.99168	0.98963	0.98779	0.98616	0.98511	0.98446	0.98458	0.98512	0.98604	0.98715	0.98835	0.98925	0.98994	0.99024	0.99025	0.99022	0.99008	0.99000
52	0.99631	0.99467	0.99289	0.99105	0.98933	0.98799	0.98696	0.98642	0.98646	0.98690	0.98763	0.98854	0.98935	0.98995	0.99025	0.99034	0.99022	0.99008	0.99000
53	0.99823	0.99713	0.99571	0.99395	0.99232	0.99071	0.98939	0.98847	0.98794	0.98788	0.98822	0.98885	0.98946	0.98996	0.99026	0.99035	0.99023	0.99008	0.99000
54	0.99934	0.99879	0.99781	0.99641	0.99476	0.99315	0.99164	0.99043	0.98951	0.98900	0.98893	0.98916	0.98949	0.98989	0.99018	0.99026	0.99023	0.99008	0.99000
55	0.99943	0.99963	0.99901	0.99795	0.99657	0.99503	0.99343	0.99202	0.99082	0.99000	0.99002	0.98949	0.98961	0.98982	0.99010	0.99018	0.99014	0.99008	0.99000
56	0.99875	0.99943	0.99937	0.99876	0.99763	0.99626	0.99473	0.99323	0.99192	0.99090	0.99017	0.98975	0.98965	0.98975	0.98993	0.99010	0.99015	0.99008	0.99000
57	0.99709	0.99827	0.99878	0.99864	0.99786	0.99674	0.99537	0.99395	0.99254	0.99142	0.99049	0.98995	0.98970	0.98968	0.98976	0.98992	0.99006	0.98999	0.99000
58	0.99470	0.99639	0.99740	0.99764	0.99732	0.99655	0.99544	0.99409	0.99285	0.99163	0.99069	0.99004	0.98968	0.98953	0.98959	0.98983	0.98997	0.98999	0.99000
59	0.99185	0.99388	0.99521	0.99604	0.99610	0.99570	0.99494	0.99392	0.99276	0.99171	0.99077	0.99002	0.98965	0.98948	0.98951	0.98965	0.98987	0.98999	0.99000
60	0.98884	0.99091	0.99266	0.99390	0.99446	0.99452	0.99413	0.99338	0.99247	0.99150	0.99064	0.98998	0.98961	0.98934	0.98935	0.98956	0.98978	0.98990	0.99000
61	0.98585	0.98796	0.98994	0.99141	0.99247	0.99303	0.99301	0.99262	0.99126	0.99058	0.98992	0.98954	0.98936	0.98937	0.98948	0.98969	0.98990	0.98990	0.99000
62	0.98328	0.98523	0.98715	0.98895	0.99042	0.99130	0.99177	0.99176	0.99147	0.99102	0.99042	0.98993	0.98955	0.98937	0.98938	0.98949	0.98970	0.98990	0.99000
63	0.98135	0.98294	0.98479	0.98662	0.98832	0.98970	0.99096	0.99096	0.99069	0.99035	0.98994	0.98945	0.98947	0.98939	0.98950	0.98970	0.98990	0.98990	0.99000
64	0.97987	0.98120	0.98287	0.98463	0.98645	0.98805	0.98925	0.99004	0.99043	0.99045	0.99029	0.99005	0.98975	0.98957	0.98957	0.98959	0.98979	0.98990	0.99000
65	0.97915	0.98020	0.98142	0.98300	0.98647	0.98798	0.98909	0.98973	0.99019	0.99022	0.99008	0.98995	0.98976	0.98967	0.98969	0.98979	0.98990	0.98990	0.99000
66	0.97883	0.97960	0.98063	0.98194	0.98351	0.98516	0.98679	0.98811	0.98922	0.98983	0.99006	0.99011	0.99007	0.98995	0.98977	0.98978	0.98989	0.98990	0.99000
67	0.97890	0.97948	0.98033	0.98126	0.98256	0.98404	0.98568	0.98721	0.98844	0.98937	0.98989	0.99013	0.99013	0.99007	0.98996	0.98988	0.98989	0.98999	0.99000
68	0.97909	0.97967	0.98033	0.98107	0.98209	0.98330	0.98476	0.98622	0.98765	0.98870	0.98953	0.98996	0.99012	0.99009	0.99007	0.98998	0.98998	0.98999	0.99000
69	0.97949	0.98006	0.98054	0.98119	0.98193	0.98294	0.98413	0.98541	0.98686	0.98801	0.98905	0.98969	0.99004	0.99011	0.99009	0.98999	0.98999	0.98999	0.99000
70	0.97982	0.98039	0.98095	0.98151	0.98206	0.98279	0.98371	0.98489	0.98616	0.98741	0.98847	0.98931	0.98977	0.99003	0.99010	0.99009	0.98999	0.99000	0.99000
71	0.98026	0.98083	0.98138	0.98184	0.98239	0.98293	0.98366	0.98456	0.98565	0.98681	0.98788	0.98883	0.98949	0.98985	0.99002	0.99010	0.99000	0.99000	0.99000
72	0.98071	0.98127	0.98183	0.98228	0.98282	0.98327	0.98389	0.98452	0.98542	0.98640	0.98738	0.98834	0.98910	0.98966	0.98993	0.99001	0.99000	0.99000	0.99000
73	0.98116	0.98173	0.98228	0.98273	0.98327	0.98371	0.98423	0.98476	0.98538	0.98618	0.98706	0.98794	0.98880	0.98937	0.98983	0.99001	0.99001	0.99000	0.99000
74	0.98170	0.98218	0.98274	0.98319	0.98372	0.98415	0.98467	0.98510	0.98562	0.98624	0.98694	0.98772	0.98850	0.98917	0.98964	0.98992	0.99001	0.99000	0.99000
75	0.98225	0.98273	0.98319	0.98373	0.98417	0.98470	0.98512	0.98555	0.98597	0.98639	0.98700	0.98769	0.98838	0.98896	0.98944	0.98982	0.99000	0.99000	0.99000
76	0.98280	0.98328	0.98375	0.98420	0.98464	0.98515	0.98558	0.98600	0.98642	0.98674	0.98716	0.98767	0.98826	0.98885	0.98934	0.98972	0.98991	0.99000	0.99000
77	0.98336	0.98383	0.98430	0.98466	0.98510	0.98562	0.98604	0.98645	0.98678	0.98710	0.98751	0.98784	0.98834	0.98883	0.98932	0.98962	0.98990	0.99000	0.99000
78	0.98392	0.98439	0.98485	0.98521	0.98566	0.98599	0.98643	0.98683	0.98724	0.98756	0.98778	0.98810	0.98851	0.98882	0.98922	0.98961	0.98981	0.99000	0.99000
79	0.98440	0.98486	0.98532	0.98568	0.98612	0.98646	0.98679	0.98721	0.98752	0.98784	0.98815	0.98838	0.98868	0.98900	0.98931	0.98961	0.98981	0.99000	0.99000
80	0.98488	0.98534	0.98579	0.98615	0.98650	0.98684	0.98717	0.98750	0.98781	0.98813	0.98844	0.98866	0.98887	0.98909	0.98930	0.98960	0.98980	0.99000	0.99000
81	0.98518	0.98572	0.98617	0.98653	0.98688	0.98722	0.98746	0.98779	0.98810	0.98842	0.98863	0.98885	0.98906	0.98927	0.98939	0.98960	0.98980	0.99000	0.99000
82	0.98540	0.98593	0.98647	0.98682	0.98717	0.98750	0.98775	0.98799	0.98830	0.98852	0.98883	0.98904	0.98925	0.98937	0.98958	0.98969	0.98980	0.99000	0.99000
83	0.98553	0.98606	0.98658	0.98702	0.98736	0.98770	0.98794	0.98818	0.98841	0.98863	0.98894	0.98915	0.98936	0.98947	0.98968	0.98979	0.98980	0.99000	0.99000
84	0.98556	0.98618	0.98670	0.98713	0.98747	0.98781	0.98805	0.98828	0.98851	0.98873	0.98895	0.98916	0.98937	0.98958	0.98978	0.98989	0.98990	0.99000	0.99000
85	0.98550	0.98611	0.98663	0.98715	0.98749	0.98782	0.98815	0.98838	0.98852	0.98883	0.98905	0.98926	0.98947	0.98968	0.98979	0.98989	0.99000	0.99000	0.99000
86	0.98544	0.98596	0.98657	0.98698	0.98750	0.98783	0.98815	0.98839	0.98862	0.98884	0.98906	0.98928	0.98949	0.98969	0.98989	0.99009	0.99010	0.99020	0.99010
87	0.98529	0.98579	0.98630	0.98682	0.98733	0.98775	0.98808	0.98840	0.98872	0.98894	0.98907	0.98938	0.98959	0.98979	0.99000	0.99019	0.99030	0.99030	0.99030
88	0.98513	0.98563	0.98604	0.98664	0.98715	0.98757	0.98799	0.98840	0.98872	0.98895	0.98917	0.98938	0.98969	0.98990	0.99010	0.99030	0.99040	0.99050	0.99040
89	0.98506	0.98537	0.98578	0.98637	0.98688	0.98739	0.98790	0.98832	0.98864	0.98896	0.98927	0.98948	0.98969	0.99000	0.99020	0.99040	0.99060	0.99060	0.99060
90	0.98490	0.98511	0.98551	0.98601	0.98661	0.98721	0.98772	0.98823	0.98855	0.98896	0.98937	0.98959	0.98989	0.99000	0.99030	0.99050	0.99070	0.99080	0.99080
91	0.98483	0.98493	0.98524	0.98574	0.98633	0.98693	0.98753	0.98804	0.98855	0.98896	0.98937	0.98969	0.98999	0.99020	0.99040	0.99070	0.99080	0.99090	0.99090
92	0.98485	0.98476	0.98505	0.98546	0.98605	0.98665	0.98735	0.98795	0.98846	0.98897	0.98947	0.98988	0.99019	0.99040	0.99060	0.99080	0.99110	0.99110	0.99110
93	0.98496	0.98467	0.98487	0.98527	0.98577	0.98646	0.98716	0.98776	0.98846	0.98897	0.98947	0.98998	0.99038	0.99069	0.99089	0.99100	0.99110	0.99120	0.99120
94	0.98507	0.98477	0.98478	0.98508	0.98558	0.98627	0.98706	0.98766	0.98836	0.98906	0.98957	0.99007	0.99048	0.99088	0.99110	0.99130	0.99140	0.99140	0.99140
95	0.98537	0.98487	0.98478	0.98498	0.98538	0.98607	0.98677	0.98756	0.98836	0.98906	0.98966	0.99026	0.99068	0.99108	0.99139	0.99159	0.99169	0.99160	0.99150
96	0.98608	0.98558	0.98548	0.98568	0.98618	0.98677	0.98747	0.98817	0.98887	0.98956	0.99017	0.99067	0.99117	0.99149	0.99179	0.99199	0.99210	0.99210	0.99190
97	0.98678	0.98638	0.98628	0.98648	0.98688	0.98747	0.98807	0.98877	0.98947	0.99016	0.99067	0.99117	0.99158	0.99198	0.99219	0.99240	0.99250	0.99250	0.99240
98	0.98757	0.98708	0.98699	0.98719	0.98758	0.98817	0.98877	0.98946	0.99007	0.99067	0.99126	0.99167	0.99208	0.99239	0.99269	0.99280	0.99290	0.99290	0.99280
99	0.98828	0.98788	0.98778	0.98798	0.98838	0.98888	0.98947	0.99007	0.99067	0.99126	0.99177	0.99217	0.99258	0.99288	0.99309	0.99329	0.99330	0.99330	0.99320
100	0.98898	0.98859	0.98858	0.98869	0.98908	0.98958	0.99008	0.99067	0.99127	0.99177	0.99227	0.99268	0.99298	0.99329	0.99349	0.99369	0.99370	0.99370	0.99360
101	0.98978	0.98939	0.98929	0.98948	0.98979	0.99028	0.99077	0.99128	0.99187	0.99237	0.99277	0.99318	0.99348	0.99378	0.99399	0.99410	0.99419	0.99419	0.99410
102	0.99048	0.99018	0.99009	0.99019	0.99049	0.99098	0.99138	0.99188	0.99238	0.99287	0.99328	0.99368	0.99398	0.99419	0.99439	0.99450	0.99460	0.99460	0.99450
103	0.99119	0.99089	0.99088	0.99099	0.99128	0.99168	0.99208	0.99257	0.99298	0.99338	0.99378	0.99418	0.99439	0.99468	0.99480	0.99490	0.99500	0.99500	0.99490
104	0.99198	0.99169	0.99159	0.99169	0.99199	0.99229	0.99278	0.99318	0.99358	0.99398	0.99428	0.99459	0.99489	0.99509	0.99529	0.99539	0.99540	0.99540	0.99530
105	0.99269	0.99239	0.99239	0.99249	0.99269	0.99299	0.99338	0.99378	0.99418	0.99448	0.99488	0.99509	0.99538	0.99550	0.99569	0.99580	0.99580	0.99580	0.99580
106	0.99339	0.99319	0.99310	0.99320	0.99348	0.99369	0.99408	0.99439	0.99478	0.99508	0.99538	0.99559	0.99579	0.99599	0.99610	0.99620	0.99620	0.99620	0.99620
107	0.99418	0.99390	0.99389	0.99399	0.99419	0.99439	0.99469	0.99499	0.99529	0.99559	0.99588	0.99609	0.99629	0.99640	0.99660	0.99670	0.99670	0.99660	0.99660
108	0.99489	0.99469	0.99469	0.99470	0.99489	0.99509	0.99539	0.99568	0.99589	0.99618	0.99639	0.99659	0.99679	0.99689	0.99699	0.99700	0.99710	0.99710	0.99700
109	0.99559	0.99549	0.99540	0.99549	0.99560	0.99579	0.99599	0.99629	0.99649	0.99669	0.99709	0.99709	0.99719	0.99730	0.99740	0.99750	0.99750	0.99750	0.99750
110	0.99630	0.99620	0.99619	0.99620	0.99639	0.99650	0.99669	0.99689	0.99709	0.99729	0.99739	0.99759	0.99769	0.99779	0.99780	0.99790	0.99790	0.99790	0.99790
111	0.99709	0.99699	0.99699	0.99700	0.99709	0.99720	0.99739	0.99749	0.99769	0.99779	0.99790	0.99809	0.99810	0.99820	0.99830	0.99830	0.99830	0.99830	0.99830
112	0.99780	0.99770	0.99770	0.99770	0.99780	0.99790	0.99800	0.99810	0.99829	0.99839	0.99849	0.99850	0.99860	0.99869	0.99870	0.99870	0.99870	0.99870	0.99870
113	0.99850	0.99850	0.99850	0.99850	0.99850	0.99860	0.99869	0.99879	0.99880	0.99890	0.99889	0.99900	0.99909	0.99910	0.99910	0.99920	0.99920	0.99920	0.99920
114	0.99930	0.99920	0.99920	0.99920	0.99930	0.99930	0.99930	0.99940	0.99940	0.99949	0.99950	0.99950	0.99950	0.99959	0.99960	0.99960	0.99960	0.99960	0.99960
> 114	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

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APPENDIX K

25 YEAR PROJECTIONS

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PROJECTION NOTES

The following are relevant notes to the projections depicted in this appendix:

- Refer to the "NOTE REGARDING OPEN GROUP PROJECTIONS" in the Table 8 Footnotes for important caveats related to this appendix.

- Columns in this appendix may not add due to rounding.

- In some cases the number of personnel may show zero with the corresponding pay showing a non-zero value. This is a result of rounding the display to the nearest person.

- Future mortality improvement is assumed throughout this appendix (with the exception of temporary disabled retirees).

- Although Combat Related Special Compensation (CRSC) is not technically considered retired pay, it is paid from the MRF; hence these projections include CRSC.

- The FY 2011 National Defense Authorization Act (P.L. 111-383) required "amounts of retired pay and retainer pay due a retired member of the uniformed services shall be paid on the first day of each month beginning after the month in which the right to such pay accrues." This means that when the first day of the month falls on a non-business day (weekend/holiday), the pay must be paid the preceding business day. This legislation did not apply to survivor annuitant pay and CRSC. This results in retirees receiving 13 payments in some fiscal years and 11 payments in others, with 12 payments occurring in a typical fiscal year. Annual fiscal year amounts shown in this appendix assume 12 monthly payments each year.

- The following economic assumptions are applied to the projection of basic pay and retired outlays. This table is partially replicated from the Table 8 footnotes in the main text:

ANNUAL ECONOMIC ASSUMPTIONS USED IN PROJECTIONS OF
BASIC PAY AND RETIRED OUTLAYS

Fiscal Year	Full COLA	Basic Pay
2018	2.0%	2.4%
2019	2.8	2.6
2020	2.2	2.1
2021	2.2	2.1
2022	2.3	2.1
2023	2.3	2.1
2024	2.3	2.1
2025	2.3	2.1
2026	2.3	2.1
2027	2.75	2.1
2028+	2.75	3.25

ACTIVE DUTY PERSONNEL AND PAY BY FISCAL YEAR

(Dollar Amounts in Thousands)

Fiscal Year	People at Year End (September 30th)			Dollars During Fiscal Year		
	Officers	Enlisted	Total	Officers	Enlisted	Total
2017	245,671	1,123,643	1,369,314			
2018	245,329	1,134,428	1,379,757	$19,177,492	$39,146,032	$58,323,524
2019	247,872	1,160,392	1,408,264	$19,957,975	$41,228,779	$61,186,754
2020	249,578	1,171,986	1,421,564	$19,868,814	$41,416,365	$61,285,179
2021	250,781	1,180,164	1,430,945	$20,323,009	$42,552,142	$62,875,151
2022	252,028	1,183,044	1,435,072	$20,799,191	$43,619,234	$64,418,425
2023	252,916	1,183,775	1,436,691	$21,279,599	$44,585,825	$65,865,424
2024	252,916	1,183,775	1,436,691	$21,739,096	$45,498,038	$67,237,134
2025	252,916	1,183,775	1,436,691	$22,186,054	$46,428,346	$68,614,400
2026	252,916	1,183,775	1,436,691	$22,643,947	$47,395,815	$70,039,762
2027	252,916	1,183,775	1,436,691	$23,104,833	$48,378,452	$71,483,285
2028	252,916	1,183,775	1,436,691	$23,840,558	$49,959,775	$73,800,333
2029	252,916	1,183,775	1,436,691	$24,609,250	$51,610,291	$76,219,540
2030	252,916	1,183,775	1,436,691	$25,407,813	$53,315,865	$78,723,678
2031	252,916	1,183,775	1,436,691	$26,232,755	$55,070,894	$81,303,649
2032	252,916	1,183,775	1,436,691	$27,090,253	$56,870,941	$83,961,194
2033	252,916	1,183,775	1,436,691	$27,980,301	$58,659,721	$86,640,021
2034	252,916	1,183,775	1,436,691	$28,914,852	$60,487,064	$89,401,916
2035	252,916	1,183,775	1,436,691	$29,903,688	$62,448,333	$92,352,021
2036	252,916	1,183,775	1,436,691	$30,939,728	$64,518,606	$95,458,334
2037	252,916	1,183,775	1,436,691	$32,010,140	$66,660,193	$98,670,333
2038	252,916	1,183,775	1,436,691	$33,099,780	$68,851,395	$101,951,175
2039	252,916	1,183,775	1,436,691	$34,194,216	$71,075,072	$105,269,288
2040	252,916	1,183,775	1,436,691	$35,300,039	$73,340,640	$108,640,679
2041	252,916	1,183,775	1,436,691	$36,444,587	$75,694,694	$112,139,281
2042	252,916	1,183,775	1,436,691	$37,631,027	$78,128,289	$115,759,316

DoD Office of the Actuary

NONRETIRED RESERVISTS PERSONNEL AND PAY BY FISCAL YEAR

(Dollar Amounts in Thousands)

Fiscal Year	People at Year End (September 30th)			Dollars During Fiscal Year		
	Officers	Enlisted	Total	Officers	Enlisted	Total
2017	113,737	618,413	732,150			
2018	115,731	621,543	737,274	$2,267,875	$5,147,966	$7,415,841
2019	118,952	615,686	734,638	$2,969,803	$6,600,637	$9,570,440
2020	119,830	615,020	734,850	$2,641,176	$5,726,172	$8,367,348
2021	119,603	616,675	736,278	$2,739,584	$5,862,155	$8,601,740
2022	119,616	616,942	736,558	$2,836,039	$5,997,318	$8,833,357
2023	119,649	617,295	736,944	$2,931,414	$6,128,291	$9,059,706
2024	119,649	617,295	736,944	$3,022,005	$6,257,665	$9,279,669
2025	119,649	617,295	736,944	$3,113,088	$6,385,570	$9,498,658
2026	119,649	617,295	736,944	$3,211,475	$6,525,406	$9,736,881
2027	119,649	617,295	736,944	$3,311,415	$6,670,716	$9,982,131
2028	119,649	617,295	736,944	$3,450,991	$6,896,173	$10,347,164
2029	119,649	617,295	736,944	$3,593,305	$7,130,935	$10,724,240
2030	119,649	617,295	736,944	$3,737,290	$7,373,712	$11,111,001
2031	119,649	617,295	736,944	$3,883,743	$7,624,226	$11,507,968
2032	119,649	617,295	736,944	$4,031,875	$7,882,889	$11,914,764
2033	119,649	617,295	736,944	$4,177,647	$8,145,565	$12,323,213
2034	119,649	617,295	736,944	$4,322,237	$8,412,068	$12,734,305
2035	119,649	617,295	736,944	$4,472,680	$8,690,681	$13,163,362
2036	119,649	617,295	736,944	$4,625,625	$8,976,005	$13,601,630
2037	119,649	617,295	736,944	$4,781,560	$9,268,524	$14,050,084
2038	119,649	617,295	736,944	$4,940,717	$9,570,331	$14,511,049
2039	119,649	617,295	736,944	$5,104,155	$9,882,624	$14,986,779
2040	119,649	617,295	736,944	$5,267,937	$10,204,849	$15,472,786
2041	119,649	617,295	736,944	$5,433,028	$10,537,336	$15,970,364
2042	119,649	617,295	736,944	$5,601,819	$10,879,952	$16,481,772

TOTAL NUMBER OF RETIREES ON SEPTEMBER 30 OF EACH FISCAL YEAR

Fiscal Year	Nondisabled (non-CSB/Redux)			Nondisabled (CSB/Redux)			Disabled			Grand Total
	Officers	Enlisted	Total	Officers	Enlisted	Total	Officers	Enlisted	Total	
2017	518,129	1,290,426	1,808,555	3,817	65,979	69,796	19,691	98,971	118,662	1,997,013
2018	520,502	1,289,582	1,810,084	4,278	71,816	76,094	20,052	102,898	122,949	2,009,128
2019	521,952	1,288,116	1,810,068	4,694	77,055	81,749	20,257	105,766	126,023	2,017,840
2020	523,377	1,287,423	1,810,799	5,050	81,576	86,626	20,353	107,546	127,899	2,025,324
2021	524,878	1,287,980	1,812,857	5,362	85,367	90,729	20,353	107,994	128,347	2,031,933
2022	526,480	1,289,255	1,815,735	5,655	88,637	94,292	20,372	108,437	128,809	2,038,836
2023	528,284	1,291,011	1,819,295	5,902	91,341	97,242	20,408	108,850	129,257	2,045,795
2024	535,367	1,307,825	1,843,192	6,085	92,879	98,965	20,456	109,242	129,699	2,071,856
2025	536,440	1,307,516	1,843,956	6,225	93,834	100,060	20,512	109,608	130,120	2,074,135
2026	537,022	1,306,567	1,843,588	6,334	94,398	100,732	20,573	109,960	130,533	2,074,853
2027	537,290	1,304,765	1,842,055	6,416	94,665	101,081	20,638	110,300	130,938	2,074,074
2028	536,833	1,301,233	1,838,066	6,478	94,683	101,161	20,704	110,619	131,324	2,070,551
2029	535,948	1,296,747	1,832,695	6,522	94,528	101,050	20,773	110,918	131,691	2,065,436
2030	534,632	1,291,923	1,826,554	6,547	94,193	100,741	20,843	111,207	132,051	2,059,345
2031	532,504	1,285,000	1,817,503	6,559	93,725	100,284	20,915	111,491	132,406	2,050,193
2032	529,980	1,277,793	1,807,773	6,559	93,141	99,700	20,987	111,782	132,769	2,040,242
2033	530,648	1,278,707	1,809,355	6,547	92,450	98,998	21,060	112,104	133,164	2,041,517
2034	527,669	1,270,898	1,798,566	6,524	91,630	98,154	21,134	112,423	133,556	2,030,277
2035	524,532	1,261,939	1,786,471	6,494	90,722	97,216	21,208	112,725	133,933	2,017,620
2036	521,501	1,252,946	1,774,447	6,458	89,732	96,190	21,284	113,015	134,298	2,004,935
2037	518,497	1,244,037	1,762,534	6,418	88,657	95,075	21,361	113,296	134,657	1,992,266
2038	516,010	1,236,100	1,752,110	6,371	87,497	93,868	21,439	113,579	135,018	1,980,996
2039	514,137	1,229,716	1,743,854	6,318	86,250	92,568	21,519	113,873	135,392	1,971,813
2040	512,480	1,223,657	1,736,137	6,259	84,913	91,172	21,600	114,167	135,767	1,963,077
2041	510,821	1,217,728	1,728,549	6,194	83,485	89,680	21,680	114,458	136,138	1,954,366
2042	509,087	1,211,687	1,720,773	6,123	81,963	88,086	21,758	114,748	136,506	1,945,365

*This projection includes retired from active and reserve duty.
  Non-CSB/Redux figures include both active and reserve duty retirees, while CSB/Redux figures include only active duty retirees.
**The number of retirees projected only considers those receiving non-zero retired pay from the Military Retirement Fund.
***The number of disabled retirees includes excess disability retirees, which are assumed to wind down over the next 3 years, to account for
  the difference between what the disablity rates produce and elevated future expected experience. E.g., there were 3,689 added
  to disabled retirees in FY 2018.

DoD Office of the Actuary

TOTAL ANNUAL RETIRED PAY FOR EACH FISCAL YEAR

(Dollar Amounts in Thousands)

Fiscal Year	Nondisabled (non-CSB/Redux)			Nondisabled (CSB/Redux)			Disabled			Grand Total
	Officers	Enlisted	Total	Officers	Enlisted	Total	Officers	Enlisted	Total	
2018	$23,363,825	$28,223,354	$51,587,178	$161,936	$1,469,068	$1,631,004	$575,058	$1,143,029	$1,718,087	$54,936,269
2019	$24,160,870	$28,940,787	$53,101,657	$190,578	$1,655,930	$1,846,509	$586,573	$1,210,736	$1,797,309	$56,745,475
2020	$24,882,924	$29,613,508	$54,496,432	$217,150	$1,826,164	$2,043,314	$595,317	$1,255,455	$1,850,771	$58,390,518
2021	$25,583,732	$30,284,772	$55,868,504	$241,337	$1,977,195	$2,218,532	$602,281	$1,279,201	$1,881,482	$59,968,517
2022	$26,321,067	$31,022,298	$57,343,364	$265,145	$2,117,539	$2,382,684	$610,411	$1,301,450	$1,911,861	$61,637,909
2023	$27,083,086	$31,812,563	$58,895,648	$288,281	$2,248,573	$2,536,854	$619,643	$1,324,338	$1,943,981	$63,376,484
2024	$27,954,689	$32,771,015	$60,725,704	$309,206	$2,362,692	$2,671,898	$629,887	$1,347,726	$1,977,613	$65,375,215
2025	$28,820,621	$33,724,236	$62,544,857	$328,225	$2,459,630	$2,787,856	$640,886	$1,371,616	$2,012,502	$67,345,214
2026	$29,605,994	$34,591,855	$64,197,849	$345,829	$2,548,139	$2,893,968	$652,546	$1,395,873	$2,048,419	$69,140,235
2027	$30,480,917	$35,577,825	$66,058,743	$364,125	$2,640,586	$3,004,711	$666,981	$1,424,844	$2,091,825	$71,155,278
2028	$31,375,306	$36,651,737	$68,027,042	$383,271	$2,734,333	$3,117,604	$682,798	$1,455,398	$2,138,196	$73,282,842
2029	$32,251,609	$37,693,234	$69,944,843	$403,008	$2,832,595	$3,235,603	$699,353	$1,486,623	$2,185,976	$75,366,422
2030	$33,119,469	$38,768,792	$71,888,261	$423,388	$2,944,865	$3,368,253	$716,904	$1,519,308	$2,236,212	$77,492,726
2031	$33,973,305	$39,802,980	$73,776,286	$445,381	$3,082,024	$3,527,405	$735,604	$1,553,884	$2,289,487	$79,593,178
2032	$34,816,802	$40,836,224	$75,653,026	$468,838	$3,239,453	$3,708,291	$755,346	$1,590,581	$2,345,927	$81,707,244
2033	$35,733,095	$41,972,990	$77,706,085	$490,507	$3,394,146	$3,884,653	$776,286	$1,629,856	$2,406,142	$83,996,880
2034	$36,638,187	$42,968,514	$79,606,701	$509,745	$3,531,490	$4,041,235	$798,275	$1,671,170	$2,469,444	$86,117,380
2035	$37,472,409	$43,885,129	$81,357,537	$526,194	$3,653,751	$4,179,945	$821,360	$1,713,487	$2,534,847	$88,072,329
2036	$38,313,211	$44,804,979	$83,118,190	$541,156	$3,764,281	$4,305,437	$845,545	$1,756,524	$2,602,069	$90,025,696
2037	$39,166,518	$45,780,618	$84,947,136	$554,598	$3,864,871	$4,419,469	$870,899	$1,800,597	$2,671,496	$92,038,100
2038	$40,039,808	$46,774,163	$86,813,970	$567,097	$3,954,170	$4,521,267	$897,475	$1,846,133	$2,743,608	$94,078,845
2039	$40,952,505	$47,832,792	$88,785,297	$578,417	$4,034,485	$4,612,901	$925,277	$1,893,605	$2,818,882	$96,217,080
2040	$41,891,328	$48,842,367	$90,733,696	$588,675	$4,107,399	$4,696,073	$954,365	$1,942,961	$2,897,326	$98,327,095
2041	$42,848,343	$49,880,115	$92,728,459	$598,086	$4,173,366	$4,771,452	$984,754	$1,993,766	$2,978,521	$100,478,432
2042	$43,819,199	$50,922,537	$94,741,737	$606,713	$4,232,097	$4,838,810	$1,016,290	$2,045,967	$3,062,256	$102,642,803

*This projection includes retired from active and reserve duty.
 Non-CSB/Redux figures include both active and reserve duty retirees, while CSB/Redux figures include only active duty retirees.
**The disabled retiree outlays includes amounts for excess disability retirees, which are assumed to wind down over the next 3 years, to account
 for the difference between what the disablity rates produce and elevated future expected experience. E.g., there were $51.7 million
 added to disabled retiree outlays in FY 2018.

RETIREE GAIN STATEMENT

Fiscal Year	Gains During the Fiscal Year						Average Starting Net Retired Pay Before CPI Increase					
	Nondisabled (non-CSB/Redux)		Nondisabled (CSB/Redux)		Disabled		Nondisabled (non-CSB/Redux)		Nondisabled (CSB/Redux)		Disabled	
	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted
2018	15,522	31,940	464	5,953	744	7,215	$49,302	$20,463	$58,287	$28,634	$69,229	$30,466
2019	14,667	31,912	421	5,374	737	7,212	$48,915	$21,441	$60,161	$29,512	$71,484	$31,876
2020	14,730	33,249	362	4,676	735	7,266	$49,620	$22,057	$62,884	$30,047	$74,109	$33,366
2021	14,917	35,036	318	3,971	734	7,333	$50,310	$22,660	$64,828	$30,556	$76,827	$34,935
2022	15,146	36,263	301	3,476	735	7,389	$50,818	$23,331	$68,018	$31,584	$79,681	$36,568
2023	15,492	37,221	255	2,941	736	7,415	$51,208	$24,195	$71,622	$32,959	$82,812	$38,290
2024	20,937	52,767	194	1,809	738	7,439	$46,987	$22,434	$77,883	$38,646	$86,301	$40,124
2025	15,099	36,094	152	1,263	736	7,445	$53,554	$25,903	$83,043	$43,295	$90,052	$42,004
2026	14,785	35,833	122	914	735	7,457	$54,256	$26,610	$87,552	$47,732	$94,191	$43,879
2027	14,655	35,336	97	664	734	7,468	$54,878	$27,073	$92,021	$51,925	$98,667	$45,804
2028	14,117	33,935	79	465	733	7,466	$55,737	$27,334	$97,594	$56,948	$103,423	$47,876
2029	13,874	33,281	62	348	733	7,462	$56,571	$27,499	$102,827	$61,213	$108,667	$50,108
2030	13,621	33,219	47	227	733	7,462	$57,897	$27,524	$109,854	$67,405	$114,460	$52,601
2031	12,978	31,369	36	157	732	7,463	$60,139	$28,040	$117,400	$72,600	$120,475	$55,198
2032	12,736	31,306	26	109	731	7,476	$61,789	$28,331	$123,909	$77,374	$126,542	$57,734
2033	16,070	39,637	17	73	732	7,512	$58,293	$26,939	$133,350	$81,276	$132,870	$60,219
2034	12,541	31,098	9	17	731	7,515	$64,092	$29,320	$147,957	$89,941	$139,501	$62,651
2035	12,479	30,090	5	7	731	7,506	$65,346	$29,936	$159,205	$97,664	$146,093	$64,880
2036	12,654	30,167	4	4	731	7,499	$66,111	$30,435	$171,043	$103,466	$152,848	$67,091
2037	12,723	30,329	3	2	731	7,489	$66,995	$30,956	$180,904	$109,101	$159,762	$69,374
2038	13,252	31,344	1	1	730	7,485	$67,550	$31,127	$188,184	$113,868	$166,858	$71,709
2039	13,848	32,903	0	0	731	7,494	$68,591	$31,669	$0	$0	$174,446	$74,323
2040	14,018	33,194	0	0	731	7,493	$70,192	$32,255	$0	$0	$182,556	$77,047
2041	13,942	33,249	0	0	729	7,490	$72,070	$33,052	$0	$0	$190,872	$80,005
2042	13,769	33,015	0	0	727	7,490	$74,407	$34,064	$0	$0	$199,077	$83,494

*This projection includes retired from active and reserve duty.

Non-CSB/Redux figures include both new active and reserve duty retirements, while CSB/Redux figures include only new active duty retirements.

**Gains during the year include those people who die before year end. All figures are after total and partial VA offsets.

***The dramatic retiree gain increases in FY 2024 and FY 2033 are a result of the modeling due to section 647 of the 2008 NDAA. Please refer to Appendix F and Appendix H for more information.

****Excess disability retirees used to account for anticipated experience over the next 3 years are not included in this display.

TOTAL NUMBER OF SURVIVORS ON SEPTEMBER 30 OF EACH FISCAL YEAR

Fiscal Year	SBP Non-CSB/Redux	SBP CSB/Redux	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total
2017	216,994	142	89,197	59	13,458	5,256	325,106
2018	219,351	176	91,600	51	13,546	4,764	329,488
2019	221,294	217	93,944	45	13,602	4,288	333,391
2020	222,886	267	96,329	40	13,612	3,840	336,973
2021	224,138	327	98,782	35	13,571	3,422	340,274
2022	225,068	399	101,317	30	13,441	3,034	343,289
2023	225,694	484	103,927	26	13,230	2,678	346,039
2024	226,051	584	106,679	23	12,979	2,354	348,670
2025	226,162	700	109,455	20	12,664	2,061	351,061
2026	226,045	836	112,279	17	12,227	1,798	353,202
2027	225,721	992	115,127	15	11,685	1,564	355,103
2028	225,223	1,171	117,980	12	11,210	1,357	356,954
2029	224,573	1,374	120,822	11	10,775	1,176	358,731
2030	223,800	1,604	123,625	9	10,323	1,018	360,379
2031	222,939	1,861	126,359	7	9,897	882	361,947
2032	222,022	2,148	128,993	6	9,557	766	363,491
2033	221,074	2,464	131,539	5	9,302	666	365,051
2034	220,125	2,812	133,917	4	9,111	582	366,552
2035	219,201	3,192	136,125	3	8,976	512	368,010
2036	218,319	3,605	138,137	3	8,860	453	369,377
2037	217,499	4,050	139,930	2	8,788	404	370,674
2038	216,748	4,529	141,485	2	8,743	363	371,870
2039	216,070	5,041	142,784	1	8,703	329	372,928
2040	215,462	5,586	143,816	1	8,666	301	373,832
2041	214,919	6,163	144,571	1	8,632	277	374,563
2042	214,430	6,771	145,047	1	8,596	257	375,102

*This projection includes survivors of members who retired from active and reserve duty.

Non-CSB/Redux figures include both survivors of active and reserve duty retirees, while CSB/Redux figures include only survivors of active duty retirees.

**The number of survivors projected only considers those receiving non-zero pay from the Military Retirement Fund.

***RCSBP survivors include all survivors of reservists, not just those electing pre-age 60 coverage.

****The Special Survivor Indemnity Allowance counts are included with the other survivor categories.

*****Survivors of excess disability retirees used to account for anticipated experience over the next 3 years are not included in this display.

TOTAL ANNUAL SURVIVOR BENEFITS FOR EACH FISCAL YEAR

(Dollar Amounts in Thousands)

Fiscal Year	SBP Non-CSB/Redux	SBP CSB/Redux	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total
2018	$3,109,845	$1,386	$749,677	$450	$129,475	$15,305	$4,006,139
2019	$3,221,723	$1,919	$793,062	$405	$134,902	$13,986	$4,165,998
2020	$3,323,708	$2,611	$836,261	$367	$139,670	$12,701	$4,315,318
2021	$3,419,229	$3,473	$880,691	$331	$143,681	$11,475	$4,458,881
2022	$3,515,662	$4,528	$928,550	$299	$147,131	$10,326	$4,606,496
2023	$3,611,667	$5,828	$979,742	$269	$149,663	$9,258	$4,756,427
2024	$3,706,567	$7,412	$1,034,493	$241	$151,462	$8,275	$4,908,450
2025	$3,800,533	$9,331	$1,093,053	$215	$152,875	$7,376	$5,063,383
2026	$3,893,655	$11,662	$1,154,815	$191	$153,544	$6,560	$5,220,427
2027	$3,999,259	$14,495	$1,224,083	$169	$153,614	$5,830	$5,397,450
2028	$4,109,414	$17,926	$1,298,576	$149	$153,635	$5,181	$5,584,883
2029	$4,220,026	$22,063	$1,377,033	$131	$154,179	$4,606	$5,778,039
2030	$4,331,260	$27,009	$1,459,378	$115	$154,608	$4,098	$5,976,469
2031	$4,443,422	$32,768	$1,545,410	$100	$154,885	$3,654	$6,180,240
2032	$4,556,960	$39,375	$1,634,881	$87	$155,719	$3,270	$6,390,292
2033	$4,672,372	$46,904	$1,727,743	$74	$157,312	$2,940	$6,607,346
2034	$4,790,116	$55,476	$1,823,725	$64	$159,390	$2,659	$6,831,429
2035	$4,910,902	$65,154	$1,922,075	$54	$161,958	$2,421	$7,062,565
2036	$5,035,242	$76,006	$2,022,570	$46	$164,884	$2,223	$7,300,971
2037	$5,163,950	$88,132	$2,124,704	$38	$168,285	$2,059	$7,547,168
2038	$5,297,613	$101,636	$2,227,956	$32	$172,129	$1,923	$7,801,290
2039	$5,436,580	$116,641	$2,331,803	$26	$176,194	$1,812	$8,063,056
2040	$5,581,297	$133,250	$2,435,757	$22	$180,404	$1,720	$8,332,449
2041	$5,732,005	$151,577	$2,539,274	$18	$184,758	$1,645	$8,609,276
2042	$5,888,920	$171,743	$2,641,853	$15	$189,223	$1,582	$8,893,335

*This projection includes survivors of members who retired from active and reserve duty.

 Non-CSB/Redux figures include both survivors of active and reserve duty retirees, while CSB/Redux figures include only survivors of active duty retirees.

 **RCSBP survivors include all survivors of reservists, not just those electing pre-age 60 coverage.

 ****The Special Survivor Indemnity Allowance counts are included with the other survivor categories.

 *****Survivors of excess disability retirees used to account for anticipated experience over the next 3 years are not included in this display.

TOTAL PROJECTED BASIC PAY AND RETIRED OUTLAYS

(Dollar Amounts in Thousands)

Fiscal Year	Total Projected Basic Pay	Total Projected Outlays	Retired Outlays Over Basic Pay
2018	$65,739,365	$58,942,408	89.7%
2019	$70,757,194	$60,911,472	86.1%
2020	$69,652,527	$62,705,836	90.0%
2021	$71,476,891	$64,427,399	90.1%
2022	$73,251,782	$66,244,405	90.4%
2023	$74,925,130	$68,132,910	90.9%
2024	$76,516,804	$70,283,665	91.9%
2025	$78,113,058	$72,408,597	92.7%
2026	$79,776,643	$74,360,662	93.2%
2027	$81,465,416	$76,552,728	94.0%
2028	$84,147,497	$78,867,726	93.7%
2029	$86,943,780	$81,144,461	93.3%
2030	$89,834,679	$83,469,195	92.9%
2031	$92,811,618	$85,773,418	92.4%
2032	$95,875,959	$88,097,536	91.9%
2033	$98,963,234	$90,604,226	91.6%
2034	$102,136,220	$92,948,809	91.0%
2035	$105,515,382	$95,134,894	90.2%
2036	$109,059,964	$97,326,667	89.2%
2037	$112,720,417	$99,585,269	88.3%
2038	$116,462,224	$101,880,135	87.5%
2039	$120,256,066	$104,280,137	86.7%
2040	$124,113,466	$106,659,544	85.9%
2041	$128,109,645	$109,087,708	85.2%
2042	$132,241,088	$111,536,137	84.3%

*Basic pay includes reserve and active duty basic pay; outlays include retired pay and survivor benefits.
**This projection includes retired from active and reserve duty.
***This projection includes pay for those retirees eligible for Concurrent Receipt.
****This projection is adjusted for the increase in survivor benefits due to P.L. 115-91.
*****Excess disability retirees used to account for anticipated experience over the next 3 years are included in outlays. However, the outlays of their survivors are not included.

APPENDIX L

FINANCIAL STATEMENT DISCLOSURES

DoD Office of the Actuary

STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS

Federal trust funds like the Military Retirement Fund are not subject to the same pension regulations as private sector and state/local governmental plans. Under the applicable financial reporting standards, both private sector and state/local pension plans have been required to include a table showing the "Statement of Net Assets Available for Benefits" and a "Statement of Changes in Net Assets Available for Benefits," where assets are valued at fair market value in their accounting statements. For the Military Retirement Fund, fair market value is based on the bid prices of public issue securities with the same maturity dates and coupon rates as the special issue securities held by the Fund. These statements are included in Tables L-1 and L-2, respectively.

The market values shown in this appendix can be found in the *Fiscal Year 2017 Military Retirement Fund Audited Financial Statements*. The financial statements are available through the website of the Office of the Under Secretary of Defense (Comptroller) at: http://comptroller.defense.gov/odcfo/cfs2017.aspx.

TABLE L-1

DEPARTMENT OF DEFENSE
MILITARY RETIREMENT FUND
STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS
($ in millions)

	For the Plan Year Ended September 30:	
	2017	2016
Assets		
1) Investments, at fair market value, in U.S. Government securities:[1]	$784,242	$758,461
2) Accounts receivable:		
a) Accrued interest[2]	$5,141	$5,143
b) Due from military retirees or their survivors	$133	$129
c) Intragovernmental	$0	$0
3) Cash:	$329	$368
Total Assets (1 + 2 + 3):	$789,845	$764,101
Accounts payable:	$(254)	$(293)
Total Assets Available for Benefits	$789,591	$763,808

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[1]   Fair market value of securities has been measured by quoted prices (bid price) in the active U.S. Government securities market. Bid price used represents the over-the-counter quotations as of 4 p.m. eastern time as reported by the U.S. Department of Treasury – Bureau of Public Debt on September 30, 2017, and September 30, 2016, respectively. Additional adjustment made as a result of FY 2011 National Defense Authorization Act (P.L. 111-383) regarding retired pay date as follows:

	2017	2016
Investments, at fair market value (actual)	$779,882	$754,114
October Expenditures paid in September	$4,360	$4,347
Investments, at fair market value (adjusted)	$784,242	$758,461

[2]   Includes accrued interest receivable and interest purchased.

TABLE L-2

DEPARTMENT OF DEFENSE
MILITARY RETIREMENT FUND
STATEMENT OF CHANGES IN NET ASSETS
AVAILABLE FOR BENEFITS
($ in millions)

| | For the Plan Year Ended September 30: | |
	2017	2016
Net assets available for benefits at beginning of plan year:	$763,808	$641,112
1) Investment/Inflation income (coupons received)	$26,335	$20,802
2) Net appreciation (depreciation) in fair market value of investments	$(49,067)	$53,716
3) Contributions from services	$18,300	$19,260
4) Appropriation to amortize the initial unfunded liability	$81,192	$79,289
5) Appropriation for Treasury Normal Cost Contribution	$6,822	$6,870
Total additions (1 + 2 + 3 + 4 + 5)	$83,582	$179,937
Less: Benefits paid to participants[1]	$57,799	$57,241
Net assets available for benefits at end of plan year	$789,591	$763,808

[1] The statement has been revised to show benefits paid to participants on an accrual basis:

	2017	2016
Benefits paid on cash basis	$57,799	$57,242
Change in liability for benefits due at end of year	$0	$0
Benefits paid on accrual basis	$57,799	$57,242

DoD Office of the Actuary

COMPARISON OF DOD BOARD AND SFFAS 33 ACTUARIAL LIABILITIES

The DoD Office of the Actuary (OACT) performs two annual valuations of the Military Retirement Fund liabilities. The primary one is for funding purposes—this valuation is governed by Chapter 74 of Title 10 U.S.C. and must use methods and assumptions approved by the DoD Board of Actuaries (Board). The other is for financial statement purposes and is governed by Federal Accounting Standards Advisory Board (FASAB) standards.

Historically, OACT has used Board valuation methods and assumptions to calculate liabilities for financial statement purposes. However, even using the same assumptions, liabilities from the Board valuation differ from financial statement numbers because of financial statement deadlines. For example, the September 30, 2017, actuarial liability for the financial statements (which was due in early October 2017) was projected based on the September 30, 2016, Board valuation. The September 30, 2017, Board valuation (documented in this report) was performed at a later time, based on actual September 30, 2017 data, and therefore resulted in a different September 30, 2017 actuarial liability. A comparison of these respective actuarial liabilities is shown in Table L-3. Note that the *Actuarial Certification* (page 2) only applies to Board valuation results for purposes of meeting the requirements of Chapter 74, Title 10, United States Code.

Currently, a separate financial statement valuation (i.e., with different assumptions) is necessary to satisfy a financial statement regulation called the Statement of Federal Financial Accounting Standards 33 (SFFAS 33). A separate financial statement valuation is needed because SFFAS 33 requires the use of a yield curve to discount cash flows, whereas the Board valuation uses an interest rate assumption based on methodologies described in Appendix D.

SFFAS 33 requires the use of a yield curve based on marketable U.S. Treasury securities, with a minimum of five years of historical rates for the yield curve input and consistency in the number of historical rates used from period to period. OACT used the U.S. Department of the Treasury-Office of Economic Policy's 10-year Average Yield Curve for Treasury Nominal Coupon Issues ('TNC yield curve' – Source: https://www.treasury.gov/resource-center/economic-policy/corp-bond-yield/Pages/TNC-YC.aspx) representing average rates from April 1, 2007, through March 31, 2017, resulting in a single-equivalent interest rate of 3.7%. This is comparable to the Board valuation interest rate of 5%.

SFFAS 33 also directs the interest rate, underlying inflation rates, and other economic assumptions to be consistent with one another. A change in the interest rate may cause other assumptions to change as well. For the September 30, 2017, financial statement valuation, SFFAS 33 required the long-term inflation and salary increase assumptions to be consistent with the underlying TNC yield curve used in the valuation. The September 30, 2017, SFFAS 33 economic assumptions are shown in the concluding note of Table L-3.

SFFAS 33 permits the use of a single average interest rate if the resulting present value is not materially different from what would be obtained using the yield curve. Table L-3 compares the SFFAS 33 liability to the corresponding Board liability. Measuring the Fund's actuarial

liability using SFFAS 33 long-term economic assumptions (as compared to Board assumptions) results in a liability that is higher by approximately 4% [1].

[1]   Note that this amount, which is the difference between the two actuarial liabilities shown in Table L-3, also includes the impact of the different populations on which the two liabilities are based as well as other information reflected in the DoD Board valuation but not known at the time of the SFFAS 33 valuation - in this case the enactment of the permanent SSIA benefit.

TABLE L-3

MILITARY RETIREMENT SYSTEM
COMPARISON OF DOD BOARD AND SFFAS 33 ACTUARIAL LIABILITIES
($ in billions)

Valuation For the Plan Year Ended September 30, 2017:

		DoD Board[1]	SFFAS 33[2]
1.	Present value of future benefits	$1,748.1	$1,814.7
2.	Present value of future normal cost contributions	$246.1	$247.0
3.	Actuarial accrued liability (1. – 2.)	$1,502.0	$1,567.7

[1]   Reproduced from Table 6A in main text.

[2]   Reproduced from the '*Fiscal Year 2017 Military Retirement Fund Audited Financial Statements*.'
The financial statements are available through the website of the Office of the Under Secretary of
Defense(Comptroller) at: http://comptroller.defense.gov/financialmanagement/reports/cfs2017.aspx.
The '*Actuarial Certification*' (page 2) does not apply to these figures.

NOTE: The following long-term economic assumptions are used in computing the
respective actuarial liabilities:

	DoD Board	SFFAS 33
Full COLA:	2.75%	1.7%
Basic Pay:	3.25%	2.1%
Interest:	5 %	3.7%

APPENDIX M

TREASURY PAYMENTS

METHOD OF AMORTIZING CHANGES IN THE UNFUNDED LIABILITY
OF THE MILITARY RETIREMENT SYSTEM

Introduction

Section 1465 of Title 10 states that the Secretary of Defense shall determine amortization methods and schedules for the annual amortization of changes in the unfunded liability (UFL) of the Military Retirement System. The section also states that these methods and assumptions must be approved by the DoD Board of Actuaries. The resulting payments are made by the Department of the Treasury to the Military Retirement Fund and do not affect the DoD budget.

There are three causes of change in the Military Retirement System's unfunded liability: (1) changes in benefits, (2) annual experience gains or losses resulting from actual experience deviating from expected experience, and (3) changes in actuarial assumptions used in the projected liability calculations. When a change in the unfunded liability does not fit perfectly into one of the three categories, OACT and the Board of Actuaries will determine the most appropriate one. The following describes the technical procedure of amortizing these types of changes, as approved by the Board.

Amortization Procedure

All three types of changes in the UFL are amortized by means of payment schedules so that: (1) the annual amortization payments increase each year by the long-term basic pay scale assumption; (2) the payment stream completely liquidates the additional liability, with a new overall weighted period determined using (i) 30 years weighted by the absolute value of the new liability, and (ii) the remaining period on the unamortized balance prior to the new liability weighted by the absolute value of that balance; and (3) the payments are expressed to the nearest million dollars. The amortization payments increase at the same rate as the increase in the total basic payroll for a particular year—an outcome that is consistent with the way the normal cost payments and payments to amortize the system's initial UFL are determined. This method is no longer common for many private sector pension plans and has given way to an amortization schedule with level payments in order to cover interest costs. It is also often required for these pension plans to amortize changes in unfunded liabilities over shorter than a 30-year schedule. However, the methods applied to the Military Retirement Fund are similar to those that are or have been used by other federal and public sector pension plans. Additionally, the Board has annual discussions regarding the appropriateness of the amortization procedure.

Annual payments on the initial UFL are also calculated to increase each year by the long-term basic pay scale assumption, and as stated earlier in this report, the initial UFL is currently scheduled to be liquidated with the October 1, 2025 payment.

Experience gains and losses, which create changes in the UFL, occur every year. The payment streams to amortize these changes are combined. This produces one single payment stream for the category of experience gains and losses and eliminates the tedious tracking of up

to 30 different small amortization schedules. The DoD Office of the Actuary can identify the separate segments if the need arises.

A similar method of combining amortization schedules is used for changes in the UFL caused by changes in actuarial assumptions. Beginning with the September 30, 1995, valuation, changes to the UFL due to all benefit changes are being combined and amortized in a single stream of payments.

Actuarial gains and losses are changes in the UFL that result from actual experience in a pension plan deviating from what was expected, benefit changes, or assumption changes. An actuarial gain is a *decrease* in the UFL and is usually expressed as a negative number. Conversely, a loss represents an *increase* in the UFL and is usually expressed as a positive number. The amortization payment for a negative change (gain) is also expressed as a negative number. These negative amortization payments reduce any positive amortization payments otherwise payable, including the (positive) payments amortizing the system's initial UFL.

Amortization payments for changes in the UFL are structured to increase each year with the basic pay scale increase assumption. When the payments are negative, their absolute values are made to increase. Although this means that the payments are actually decreasing mathematically, for simplicity of expression both positive and negative amortization payments are said to "increase" by the basic pay scale increase assumption.

CALCULATION OF THE OCTOBER 1, 2018,
TREASURY PAYMENT

The following pages (Tables M-1 through M-5) display the calculation of the October 1, 2017, Treasury payment based on the September 30, 2017, valuation results and on amortization methods and assumptions approved by the DoD Board of Actuaries. In order to avoid a projected shortfall in the Military Retirement Fund, the Board determined that, beginning with the FY 1998 payment, the total amortization period of the initial unfunded liability would be decreased from 60 to 50 years. The Board again shortened the initial unfunded liability amortization period in 2007 to 42 years in order for the payments to cover interest on the unfunded liability each year.

Public Law (P.L.) 108-136 required the Department of Treasury to pay for the increase in the normal cost due to Concurrent Receipt. Beginning with FY 2005, Treasury includes the annual normal cost payment due to Concurrent Receipt along with the unfunded liability payment in the October 1st contribution. For the October 1, 2018, Treasury payment, the actuarially determined amount due to Concurrent Receipt totals $8.663 billion. This is computed using the full- and part-time normal cost percentages (NCPs) in Table 6A of the main text (item 8). The NCPs are multiplied by the DoD Comptroller-budgeted FY 2019 full- and part-time basic pay, $61.2 billion and $9.6 billion, respectively, i.e., $8.663 billion equates to the sum of $61.2 billion x 13.6% and $9.6 billion x 3.6%.

Treasury concurrent receipt normal costs displayed on the next page reflect actuarially calculated amounts. However, due to the Budget Control Act of 2011, in both FY 2018 and 2019 actual Treasury contributions for these amounts were reduced (or sequestered); the reductions were 8.9% (or $0.668 billion) in FY 2018 and 8.7% (or $0.754 billion) in FY 2019. Consistent with past practice, at their July 2018 meeting the Board decided to treat the FY 2018 sequestered amount of $0.668 billion as an experience loss in the FY 2017 valuation, and amortized it (brought forward with one year's assumed interest) over one year. It is included in the FY 2019 payment on the next page. (See "Unpaid contribution" of $0.701 billion = $0.668 billion x 1.05.) The Board will likely treat the FY 2019 sequestered amount in the same manner (i.e., as a loss in the 2018 valuation and added, with interest, to the FY 2020 Treasury payment).

TABLE M-1

TOTAL TREASURY PAYMENT
OCTOBER 1, 2018 AND OCTOBER 1, 2017

($ in billions)

		October 1, 2018	October 1, 2017
Amortization payment for:			
1.	Initial unfunded liability	$94.971	$92.950
2.	Changes in benefits	$8.214	$7.904
3.	Gains and Losses Amortization		
	a. Changes in actuarial assumptions	$6.383	$3.736
	b. Actuarial experience	$(22.273)	$(22.426)
	c. Unpaid contribution	$0.701	$0.713
	Total amortization payment	$87.996	$82.877
Normal cost payment*		$8.663	$7.505
	Total Treasury payment	$96.659	$90.382

* Reflects actuarially calculated amounts. Actual contributions were reduced (sequestered). The 10/1/17 Treasury normal cost payment was reduced by $0.668 billion (8.9%); this reduction was treated as an actuarial loss in the FY17 valuation and amortized over one year as Treasury's $0.701B "unpaid contribution" payment on 10/1/18. The 10/1/18 Treasury normal cost payment was reduced by $0.754B (8.7%); this reduction will likely be treated in the same manner, i.e., as an actuarial loss in the FY18 valuation and amortized over one year as part of Treasury's 10/1/19 payment.

TABLE M-2

CALCULATION OF OCTOBER 1, 2018,
PAYMENT ON INITIAL UNFUNDED LIABILITY (UFL)

($ in billions)

1.	Unamortized balance of initial UFL (10/1/16 balance × 1.0525)	9/30/17	$ 775.707
2.	Payment on UFL	10/1/17	$ 92.950
3.	Unamortized balance of initial UFL (1. - 2.)	10/1/17	$ 682.757
4.	Balance on 9/30/18 (3. × 1.05)	9/30/18	$ 716.895
5.	Number of Annual Payments Remaining	9/30/18	8
6.	Value of an annuity due for remaining amortization period at interest rate equal to $(1.05 \div 1.0325) - 1$		7.5486
7.	Payment on initial UFL due 10/1/18 (4. ÷ 6.)		$ 94.971

TABLE M-3

CALCULATION OF OCTOBER 1, 2018,
PAYMENT ON UNFUNDED LIABILITY (UFL)
RESULTING FROM BENEFIT CHANGES

($ in billions)

1.	Unamortized UFL balance due to benefit changes (10/1/16 balance x 1.0525)	9/30/17	$ 122.973
2.	Payment on UFL	10/1/17	$ 7.904
3.	Unamortized UFL balance after payment (1. - 2.)	10/1/17	$ 115.069
4.	Additional (new) UFL due to benefit changes	9/30/17	$ 8.099
5.	Unamortized UFL balance due to benefit changes (3. + 4.)	10/1/17	$ 123.168
6.	Balance on 9/30/18 (5. × 1.05)	9/30/18	$ 129.327
7.	Total number of years of prior amortization schedule		18.27
8.	Remaining number of years of prior amortization schedule (7. - 1)		17.27
9.	Total number of years of new amortization schedule (absolute values used for all numbers) [(3. × 8.) + (4. × 30)] ÷ (3. + 4.)		18.11
10.	Value of an annuity due for remaining amortization period at interest rate equal to (1.05 ÷ 1.0325) - 1		15.7442
11.	Payment on UFL due to benefit changes (6. ÷ 10.)	10/1/18	$ 8.214

TABLE M-4

CALCULATION OF OCTOBER 1, 2018,
PAYMENT ON UNFUNDED LIABILITY (UFL)
RESULTING FROM ASSUMPTION CHANGES

($ in billions)

1.	Unamortized balance of UFL due to assumption changes (10/1/16 balance × 1.0525)	9/30/17	$ 80.216
2.	Payment on UFL	10/1/17	$ 3.736
3.	Unamortized UFL balance after payment (1. - 2.)	10/1/17	$ 76.480
4.	Additional (new) UFL	9/30/17	$ 60.225
5.	Unamortized UFL balance due to assumption changes (3. + 4.)	10/1/17	$ 136.705
6.	Balance on 9/30/18 (5. × 1.05)	9/30/18	$143.540
7.	Number of years in prior amortization schedule		27.33
8.	Remaining number of years in prior amortization schedule (7. - 1)		26.33
9.	Number of years in new amortization schedule (absolute values used for all numbers) [(3. × 8.) + (4. × 30)] ÷ (3. + 4.)		27.95
10.	Value of an annuity due for remaining amortization period at interest rate equal to (1.05 ÷ 1.0325) - 1		22.4892
11.	Payment on UFL due to assumption changes (6. ÷ 10.)	10/1/18	$ 6.383

TABLE M-5

CALCULATION OF OCTOBER 1, 2018,
PAYMENT ON UNFUNDED LIABILITY (UFL)
RESULTING FROM EXPERIENCE GAINS AND LOSSES

($ in billions)

1.	Unamortized UFL balance due to experience gains and losses (10/1/16 balance × 1.0525)	9/30/17	$ (282.802)
2.	Payment on UFL	10/1/17	$ (21.713)
3.	Unamortized UFL balance after payment (1. - 2.)	10/1/17	$ (261.089)
4.	Additional (new) UFL	9/30/17	$ 2.785
5.	Unamortized UFL balance due to experience gains and losses (3. + 4.)	10/1/17	$ (258.304)
6.	Balance on 9/30/18 (5. × 1.05)	9/30/18	$ (271.219)
7.	Number of years in prior amortization schedule		14.32
8.	Remaining number of years in prior amortization schedule (7. - 1)		13.32
9.	Number of years in new amortization schedule (absolute values used for all numbers) [(3. × 8.) + (4. × 30)] ÷ (3. + 4.)		13.50
10.	Value of an annuity due for remaining amortization period at interest rate equal to (1.05 ÷ 1.0325) - 1		11.5972
11.	Payment* on UFL due to experience gains and losses (6. ÷ 10.)	10/1/18	$ (22.273)

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* Excludes payment on loss due to 10/1/17 unpaid (sequestered) contribution.

OACT ENDNOTES

VISION STATEMENT
DoD OFFICE OF THE ACTUARY

To be leaders in the evaluation of future contingent events and risk related to the financial aspects of military benefits and to provide high-quality actuarial support to key stakeholders.

MISSION STATEMENT
DoD OFFICE OF THE ACTUARY

The Office of the Actuary (OACT) performs actuarial valuations and provides actuarial support and expertise for the following major benefit programs and funds: the Military Retirement System/Military Retirement Fund; Military Health System, including the portion funded through the Medicare-Eligible Retiree Health Care Fund; education benefits funded through the Education Benefits Fund; and separation benefits funded through the Voluntary Separation Incentive Fund. We fulfill the Secretary of Defense's statutory requirements for actuarial funding determinations for these programs, and we provide requisite actuarial support to the independent Boards of Actuaries that oversee the determinations. OACT is responsible for: providing actuarial liabilities and associated input for the Department's and government-wide financial statements; providing quarterly Incurred-But-Not-Reported reserve estimates for DoD health care programs; informing policy analysis of military benefit provisions and proposals by providing actuarial and cost analysis; providing actuarial support and products for the execution of benefit programs including the Survivor Benefit Plan; providing actuarial support and expertise on matters related to investing the assets of funds that finance military benefit programs; and providing actuarial and statistical information about the Military Retirement System for key stakeholders.

CONTACT INFORMATION
DoD OFFICE OF THE ACTUARY

Located in the *Actuarial Certification* section of this report (page 2).

VALUATION OF THE MILITARY RETIREMENT SYSTEM
SEPTEMBER 30, 2018

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