



VALUATION OF THE MEDICARE-ELIGIBLE RETIREE HEALTH CARE FUND

SEPTEMBER 30, 2022

**DoD Office of the Actuary
February 2024**

ACTUARIAL CERTIFICATION

This report on the valuation of the Medicare-Eligible Retiree Health Care Fund (MERHCF) as of September 30, 2022, has been prepared in accordance with all applicable Actuarial Standards of Practice. In preparing this report, we have relied upon information maintained by other Department of Defense activities. The purpose of the actuarial valuation documented in this report is to calculate actuarial liabilities and funding amounts to meet the requirements of Chapter 56, Title 10, United States Code. The use of this report for other purposes may not be appropriate.

The DoD Office of the Actuary performed the valuation using methods and assumptions approved by the Board. The annual economic assumptions include a 2.75% inflation rate, 4.50% discount rate and 4.75% ultimate medical trend rate. The actuarial methods and assumptions used in the preparation of this report are reasonable, and the valuation results are actuarially sound.

Underlying data, methods, and assumptions used to calculate actuarial liabilities and funding amounts that are not included in this report can be provided upon request. Please contact Drew May at Drew.T.May.civ@mail.mil for further information.



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INTRODUCTION

The Fiscal Year (FY) 2001 National Defense Authorization Act contained a provision for extending TRICARE coverage to Medicare-eligible members or former members of the uniformed services (and their Medicare-eligible dependents and survivors) entitled to retired or retainer pay. The Act also created a mechanism to fund benefits for these beneficiaries. Specifically, United States Code (U.S.C.), Chapter 56, Title 10 established the Department of Defense (DoD) Medicare-Eligible Retiree Health Care Fund (MERHCF or Fund), administered by the Secretary of the Treasury. The purpose of the MERHCF is to accumulate funds needed to finance liabilities associated with uniformed services retiree health care programs for Medicare-eligible beneficiaries on an actuarially sound basis. Medical benefits were provided to Medicare-eligible retirees and dependents of the uniformed services beginning October 2001, and the MERHCF was established October 2002.

A description of the medical benefits provided to Medicare-eligible retirees and their eligible dependents can be found in Appendix A.

Section 1114 of Title 10 created a Medicare-Eligible Retiree Health Care Board of Actuaries (Board). The three independent members who comprise the Board are appointed by the Secretary of Defense for a fifteen-year term. The Board is required to approve methods and assumptions used in actuarial valuations of the MERHCF, to approve the method of amortizing unfunded liabilities, to report annually to the Secretary of Defense, and to report to the President and Congress on the status of the MERHCF at least every four years¹. The DoD Office of the Actuary (OACT) provides technical and administrative support to the Board. As of the July 2023 meeting, the members were David Osterndorf (Chairperson), Stuart Alden, and Jian Yu. The DoD Chief Actuary is the Executive Secretary for the Board.

Chapter 56 of Title 10, U.S.C., also requires that an actuarial valuation be performed at least once every four years, using the aggregate entry-age normal cost funding method. Under this law, 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 assumed experience differing from actual experience. On behalf of the uniformed services, the Treasury Department also deposits funds for the annual accrued benefits based on each current year of service (normal cost), and the uniformed services reflect these normal cost contributions in their budgets.

NOTIFICATION ABOUT ROUNDING

Throughout this report (including the appendices), numbers may not appear to add due to rounding.

¹For access to the official transcripts from the July 2023 Board meeting, follow this link: <https://actuary.defense.gov/External-Links/>. The purpose of the Board meeting was to approve the September 30, 2022, valuation assumptions, the FY 2024 MERHCF per capita normal costs, and the FY 2023 unfunded liability payment.

SUMMARY OF VALUATION RESULTS

The purpose of the September 30, 2022, MERHCF valuation was to develop normal costs (NCs), unfunded accrued liabilities (UFLs), and UFL amortization payments.

The 2022 valuation used census population data as of September 30, 2022, aggregate claims data for FY 2022, and detailed claims data from fiscal years 2015 to 2022. The 2022 valuation produced UFL figures as of September 30, 2022, an UFL amortization payment for October 1, 2023, and per capita NCs for FY 2023 that are projected to FY 2025. The total October 1, 2023, Treasury payment is the sum of the October 1, 2023, UFL amortization payment and the October 1, 2023, Treasury NC payment. The October 1, 2023, NC payment is a function of FY 2024 per capita NC amounts promulgated by the Board in calendar year 2022, as well as budgeted average force strengths for FY 2024. The per capita normal costs are contributed for each eligible full-time (active duty) and part-time (reserve) participant each year. The per capita normal costs are determined by projecting a new-entrant cohort and their expected benefit payments for 100 years. Table 1 is a summary of the Fund's liabilities, Table 2 shows the October 1, 2023, Treasury payment, and Table 3 shows the FY 2025 per capita normal costs.

OACT has made certain pandemic-related adjustments to the medical trend rate assumptions used in this report, as described in Appendix D. In future Fund valuations, OACT will continue to assess the impact of the pandemic on the medical trend rate.

TABLE 1
LIABILITY SUMMARY
(\$ millions)

	<u>AL</u>	<u>Fund</u>	<u>UFL</u>
As of September 30, 2022	\$540,328	\$344,635	\$195,693

TABLE 2
TREASURY PAYMENT
(\$ millions)

<u>Payable</u>	<u>UFL Amortization</u>	<u>NC</u>	<u>Total</u>
October 1, 2023	\$9,584	\$10,837	\$20,421

TABLE 3
PER CAPITA NORMAL COSTS FOR FY 2025

<u>Payable</u>	<u>Active Duty</u>	<u>Reserve</u>
October 1, 2024	\$6,951	\$2,523

Additional tables containing further breakdowns of the AL and per capita normal costs are presented in Appendix B.

FUNDED STATUS

The Actuarial Liability (AL) is defined as the Present Value of Future Benefits (PVFB) minus the Present Value of Future Normal Costs (PVFNC). The Unfunded Liability (UFL) is the AL minus the Fund balance. The Fund balance is adjusted to be on an incurred basis. Table 4 shows the funded status as of September 30, 2022.

TABLE 4
FUNDED STATUS AS OF SEPTEMBER 30, 2022
(\$ millions)

PVFB	\$624,133
PVFNC	\$83,805
AL	\$540,328
Fund	\$344,635
UFL	\$195,693

ASSETS

The assets of 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 security that is mirrored may have been issued recently, or at any time in the past.

Under current Treasury procedures, the investment manager is permitted to redeem long-term special issue securities at any time before maturity for their fair market value, which is based on the bid price for the public issue with the same maturity date and coupon rate. However, Treasury policy encourages a buy-and-hold approach considering the needs of the Fund in determining the maturities of securities purchased.

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 MERHCF, 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 actuarial value of assets during the year, and the inflation compensation accrued from the holdings of Treasury Inflation-Protected Securities.

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 5 shows the statement of the actuarial value of assets as of September 30, 2022; Table 6 shows the statement of changes in the actuarial value of assets.

TABLE 5
STATEMENT OF ACTUARIAL VALUE OF ASSETS AS OF SEPTEMBER 30, 2022
(\$ millions)

Assets at Book Value	\$345,507
Less Accounts Payable	\$215
Less IBNR	\$657
Actuarial Value of Assets	\$344,635

TABLE 6
FY 2022 STATEMENT OF CHANGES IN THE ACTUARIAL VALUE OF ASSETS
(\$ millions)

Actuarial Value of Assets, Beginning of Year	\$311,760
Contributions	
Amortization of UFL	\$7,503
Normal Cost	\$9,609
Nonrecurring, other	\$0
Investment Income	\$27,063
Total Additions	\$44,174
Less Benefit Payments	\$11,300
Actuarial Value of Assets, End of Year	\$344,635

ACTUARIAL GAINS AND LOSSES

The total gain or loss is the difference between the actual and expected unfunded liabilities. The categories of gain/loss are:

- Experience
- Assumption changes
- Plan changes

Tables 7, 8, and 9 show summary level (gain)/loss information from the September 30, 2022, valuation. A more detailed explanation is contained in Appendix B.

TABLE 7
TOTAL (GAIN)/LOSS SUMMARY
(\$ millions)

	<u>AL</u>	<u>Fund</u>	<u>UFL</u>
September 30, 2021 (actual)	\$519,190	\$311,760	\$207,430
September 30, 2022 (expected)	\$541,457	\$332,533	\$208,924
September 30, 2022 (actual)	\$540,328	\$344,635	\$195,693
(Gain)/Loss			(\$13,231)

TABLE 8
 SEPTEMBER 30, 2022 ASSET AND LIABILITY (GAIN)/LOSS SUMMARY
 (\$ millions)

	<u>Liability</u>	<u>Asset</u>	<u>Total</u>
Experience	(\$20,786)	(\$12,102)	(\$32,888)
Assumption	\$19,657		\$19,657
Plan Change	\$0		\$0
Total	(\$1,129)	(\$12,102)	(\$13,231)

(Gain)/Loss Expressed as a % of September 30, 2022 AL

	<u>Liability</u>	<u>Asset</u>	<u>Total</u>
Experience	-3.8%	-2.2%	-6.1%
Assumption	3.6%		3.6%
Plan Change	0.0%		0.0%
Total	-0.2%	-2.2%	-2.4%

TABLE 9
CHANGE IN UNFUNDED LIABILITY*
(\$ millions)

1. Actual Unfunded Accrued Liability, Sept. 30, 2022	\$195,693	36.2%
2. Expected Unfunded Accrued Liability, Sept. 30, 2022	\$208,924	38.7%
3. Total (Gain)/Loss	(\$13,231)	2.4%
a. Total experience (gain)/loss	(\$32,888)	6.1%
Census	\$1,060	0.2%
Claims	(\$21,846)	4.0%
Asset	(\$12,102)	2.2%
b. Total benefit change (gain)/loss	\$0	0.0%
c. Total assumption (gain)/loss	\$19,657	3.6%
Medical trends	\$33,126	6.1%
Admin load and Rx rebate	(\$1,098)	0.2%
Demographic	(\$12,371)	2.3%
Interest rate	\$0	0%

* Percentages shown are ratios of absolute values of each gain or loss component to the actuarial accrued liability. In this table, negative values represent actuarial gains.

PAST AND PROJECTED UNFUNDED LIABILITY PAYMENTS

The UFL is comprised of the initial UFL and the three categories of (gain)/loss. The last payment on the initial unfunded liability is expected to be made October 1, 2039, with payments increasing at the rate of 3.00%. The gain or loss amortization period is calculated as 20 years weighted by the absolute value of the new (gain)/loss and the remaining period weighted by the absolute value of the existing unamortized balance.

Historical and projected components of the UFL amortization payments and UFL balances are shown in Appendix B.

PLAN AMENDMENTS

Plan changes or amendments are amortized over 20 years. There were no new plan changes in the 2022 valuation.

VALUATION DATA AND PROCEDURE

Census Data

The valuation census data comes from files maintained at the Defense Manpower Data Center. A summary of active service member and retiree census data is provided in Appendix C.

Active service member data comes from files provided by the military personnel centers (Army, Navy, Air Force, Space Force, and Marines). The MERHCF also provides benefits for retirees of the U.S. Coast Guard, Public Health Service (PHS), and National Oceanic and Atmospheric Administration (NOAA). The total number of covered service members as of September 30, 2022, is shown in Table 10.

TABLE 10
ACTIVE SERVICE MEMBERS AS OF SEPTEMBER 30, 2022

<u>DoD</u>	
Active Duty	1,393,696
Reserve	675,807
 <u>Coast Guard</u>	
Active Duty	39,471
Reserve	6,164
 <u>PHS</u>	
Active Duty	5,814
Reserve	64
 NOAA Active Duty	 334
 <u>Total</u>	
Active Duty	1,439,315
Reserve	682,035

The population projection structure used by OACT includes four categories of personnel, representing the starting status of the population. Each of the four categories is further divided into 12 subcategories, representing projected future status, for a total of 48 categories.

The four categories (starting status) are:

- All Uniformed Services and Retirees
- DoD Retirees
- DoD Active Service Members (active duty and reserve)
- New Entrant Cohort

The 12 subcategories (future status) are:

- Retiree, Active Duty, Nondisabled, Enlisted
- Retiree, Active Duty, Nondisabled, Officer
- Retiree, Active Duty, Disabled, Enlisted
- Retiree, Active Duty, Disabled, Officer
- Retiree, Reserve, Nondisabled, Enlisted
- Retiree, Reserve, Nondisabled, Officer
- Retiree, Reserve, Disabled Enlisted
- Retiree, Reserve, Disabled Officer
- Survivor, Active Duty, Enlisted
- Survivor, Active Duty, Officer
- Survivor, Reserve, Enlisted
- Survivor, Reserve, Officer

Former spouses are allocated as survivors or dependents of retirees. A summary of retiree and survivor census is contained in Appendix C.

The starting populations are projected year by year. Each year personnel are moved from one population category to another (e.g., from active to disabled or nondisabled retiree, 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. At the end of each year, the number of people is saved, and the population is aged. After 100 years, when none of the current active or retired personnel are left in the system, the present values of the series of future benefit payments are determined, using the valuation interest rate. Because no new entrants come into the system, the projection is a “closed group” model.

Claims Data

Detailed claims data and workload files from DoD’s Medical Data Repository for FYs 2015, 2016, and 2017 were used to develop claim vectors (CVs), which were trued-up to FY 2022 completed incurred cost levels.

Claims costs are separated by whether a member is Medicare-eligible or not. OACT produces average expected family claims costs per retired sponsor and per survivor. The claims costs include benefits received from Direct Care (DC), Purchased Care (PC), and the US Family Health Plan (USFHP).

DC workload data is for care received in Military Treatment Facilities (MTFs). The Defense Health Agency provides OACT with an annual cost-allocation analysis obtained from the MTFs’

Medical Expense and Performance Reporting System. This analysis allows OACT to convert workloads into claims costs. DC comprises a relatively small portion of total medical care received by Medicare-eligible retirees since they receive care on a space-available basis and most do not live near an MTF.

PC claims are for care obtained in the private sector.

USFHP is TRICARE's designated provider plan. The plan providers receive per capita rates and provide comprehensive patient care.

See Appendix E for more information on claims data.

Economic Assumptions

The economic assumptions include the inflation rate, medical trend rates, and the interest rate. See Appendix D for more information on economic assumptions.

Decrement Rates

See the following Appendices for more information on decrement rates and other non-economic assumptions:

- Active duty: Appendix F
- Drilling and non-drilling (with 20 good years) reservists: Appendix G
- Retiree and survivor: Appendix H

MEDICAL TREND SENSITIVITY ANALYSIS

Future medical trend rates assumed in this valuation (described in Appendix D) represent an estimate of changes in the cost, mix, and utilization of medical care over the next 100 years.

A one percentage point change in the assumed healthcare cost trend rates would have the following effects on the Actuarial Liability and per capita normal cost.

TABLE 11
MEDICAL TREND SENSITIVITY ANALYSIS

	<u>Assumed Trend</u>	<u>1% Higher Trend</u>	<u>1% Lower Trend</u>
Actuarial Liability as of 09/30/22 (\$ millions)	\$540,328	\$680,720	\$435,941
Per Capita Normal Cost for FY 2025			
Active Duty	\$6,951	\$11,145	\$4,355
Reserve	\$2,523	\$4,008	\$1,589
<u>Percentage Change in:</u>			
Actuarial Liability as of 09/30/22		26.0%	-19.3%
Per Capita Normal Cost for FY 2025			
Active Duty		60.3%	-37.4%
Reserve		58.8%	-37.0%

APPENDIX A

ELIGIBILITY AND PLAN PROVISIONS

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INTRODUCTION

The military medical care program known as TRICARE has gone through many changes over the years, and it continues to change each year according to provisions made in the annual National Defense Authorization Act, (NDAA). The 2001 NDAA created TRICARE For Life (TFL), a benefit plan for Medicare-eligible retired beneficiaries.

The information in this Appendix describes plan eligibility requirements and benefit provisions.

ELIGIBILITY REQUIREMENTS

Military retirees and their family members are eligible for TRICARE. This includes the U.S. armed services, the U.S. Coast Guard, the Public Health Service, and the National Oceanic and Atmospheric Administration. There are several different TRICARE beneficiary categories groups: nondisabled retirees from active duty and reserves, disabled retirees, surviving/former spouses, and dependents.

See the following website for details on eligibility: tricare.mil/plans/eligibility.

SUMMARY OF PLAN PROVISIONS

Medicare-eligible retired beneficiaries and survivors are enrolled in the following health plan options:

- TRICARE (if under age 65)
- US Family Health Plan (in specific U.S. locations)
- TRICARE For Life (with Medicare Parts A & B coverage)

Medicare-eligible retired beneficiaries can receive benefits under TFL if they enroll in Medicare Part B. There is no member contribution for TFL. Medicare-eligible retirees can choose to enroll in (and pay for) a US Family Health Plan (USFHP), if the plan is available in the member's location instead of TFL. The member contribution and copayments for USFHP are waived if the member pays for Medicare Part B. Medicare-eligible retired beneficiaries who are under age 65 can also elect TRICARE Prime, and the member contribution is waived if the member pays for Medicare Part B. Eligibility for USFHP when a member is eligible for Medicare due to age is restricted to a grandfathered group of beneficiaries who have been enrolled in USFHP since September 30, 2012.

TFL is a Medicare wraparound plan that also covers prescription drugs. Therefore, Medicare is the primary payer for Medicare Part A and Part B services. If a member is covered by other health insurance (other than Medicaid), that coverage pays second, and TFL pays last.

See the following website for details on plan provisions: tricare.mil/plans.

APPENDIX B

SUPPLEMENTAL VALUATION RESULTS

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SUPPLEMENTAL VALUATION RESULTS

Tables B1 through B4 provide additional breakdowns of the actuarial liability and per capita normal costs (NCs). Table B5 shows the reconciliation of the MERHCF liability gain/loss. Table B6 provides details regarding the MERHCF's asset gain/loss.

Historical and projected components of the Unfunded Liability amortization payments are shown in Table B7. Historical and projected UFL balances are shown in Table B8, and no future gains/losses are projected. “DC” refers to direct care; “PC” refers to purchased care.

TABLE B1
 SEPTEMBER 30, 2022, ACTUARIAL LIABILITY BY BENEFIT TYPE
 (\$millions)

				Proportion of Total		
	<u>DC</u>	<u>PC</u>	<u>Total</u>	<u>DC</u>	<u>PC</u>	<u>Total</u>
Inpatient	\$29,867	\$49,237	\$79,104	5.5%	9.1%	14.6%
Outpatient	\$37,060	\$184,097	\$221,158	6.9%	34.1%	40.9%
Pharmacy	\$41,696	\$180,653	\$222,349	7.7%	33.4%	41.2%
<u>USFHP</u>	<u>\$0</u>	<u>\$17,717</u>	<u>\$17,717</u>	<u>0.0%</u>	<u>3.3%</u>	<u>3.3%</u>
Total	\$108,623	\$431,705	\$540,328	20.1%	79.9%	100.0%

TABLE B2
 SEPTEMBER 30, 2022, ACTUARIAL LIABILITY
 BY SPONSOR STATUS
 (\$millions)

	Active Duty		
	<u>DC</u>	<u>PC</u>	<u>Total</u>
In-service	\$24,783	\$72,878	\$97,661
<u>Inactive</u>	<u>\$73,446</u>	<u>\$252,625</u>	<u>\$326,071</u>
Total	\$98,230	\$325,503	\$423,732
	Reserve		
	<u>DC</u>	<u>PC</u>	<u>Total</u>
In-service	\$6,226	\$57,557	\$63,783
<u>Inactive</u>	<u>\$4,167</u>	<u>\$48,645</u>	<u>\$52,812</u>
Total	\$10,393	\$106,202	\$116,595
	Total		
	<u>DC</u>	<u>PC</u>	<u>Total</u>
In-service	\$31,010	\$130,434	\$161,444
<u>Inactive</u>	<u>\$77,614</u>	<u>\$301,270</u>	<u>\$378,884</u>
Total	\$108,623	\$431,705	\$540,328

TABLE B3
FY 2025 ACTIVE DUTY PER CAPITA NORMAL COST

				Proportion of Total		
	<u>DC</u>	<u>PC</u>	<u>Total</u>	<u>DC</u>	<u>PC</u>	<u>Total</u>
Inpatient	\$443	\$581	\$1,024	6.4%	8.4%	14.7%
Outpatient	\$591	\$2,390	\$2,982	8.5%	34.4%	42.9%
Pharmacy	\$607	\$2,339	\$2,946	8.7%	33.6%	42.4%
<u>USFHP</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>0.0%</u>	<u>0.0%</u>	<u>0.0%</u>
Total	\$1,642	\$5,310	\$6,951	23.6%	76.4%	100.0%

					Proportion of Total			
	<u>Non-disabled Retiree</u>	<u>Disabled Retiree</u>	<u>Survivor</u>	<u>Total</u>	<u>Non-disabled Retiree</u>	<u>Disabled Retiree</u>	<u>Survivor</u>	<u>Total</u>
Total	\$4,173	\$1,465	\$1,313	\$6,951	60.0%	21.1%	18.9%	100.0%

TABLE B4
FY 2025 RESERVE PER CAPITA NORMAL COST

				Proportion of Total		
	<u>DC</u>	<u>PC</u>	<u>Total</u>	<u>DC</u>	<u>PC</u>	<u>Total</u>
Inpatient	\$61	\$232	\$293	2.4%	9.2%	11.6%
Outpatient	\$82	\$999	\$1,081	3.3%	39.6%	42.9%
Pharmacy	\$135	\$1,014	\$1,149	5.3%	40.2%	45.5%
<u>USFHP</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>0.0%</u>	<u>0.0%</u>	<u>0.0%</u>
Total	\$278	\$2,245	\$2,523	11.0%	89.0%	100.0%

					Proportion of Total			
	<u>Non-disabled Retiree</u>	<u>Disabled Retiree</u>	<u>Survivor</u>	<u>Total</u>	<u>Non-disabled Retiree</u>	<u>Disabled Retiree</u>	<u>Survivor</u>	<u>Total</u>
Total	\$1,694	\$360	\$469	\$2,523	67.1%	14.3%	18.6%	100.0%

TABLE B5
SEPTEMBER 30, 2022, LIABILITY (GAIN)/LOSS RECONCILIATION

Step	Actuarial Liability			Fiscal Year	Normal Cost				Actuarial Liability (Gain)/Loss (\$millions)	(Gain)/Loss Category
	As of 09/30	Amount (\$millions)	% Change From Prior Step		Active Duty	% Change From Prior Step	Reserve	% Change From Prior Step		
	2021	\$519,190		2024	\$6,405		\$2,553			
0	2022	\$541,457	4.29%	2025	\$6,709	4.75%	\$2,674	4.74%		Expected
1	2022	\$542,517	0.20%	2025	\$6,689	-0.30%	\$2,674	0.01%	\$1,060	Experience
2	2022	\$542,506	0.00%	2025	\$6,689	0.00%	\$2,674	0.00%	(\$10)	Assumption
3	2022	\$542,953	0.08%	2025	\$6,727	0.57%	\$2,678	0.13%	\$446	Assumption
4	2022	\$544,955	0.37%	2025	\$6,757	0.44%	\$2,688	0.40%	\$2,002	Assumption
5	2022	\$536,797	-1.50%	2025	\$6,651	-1.56%	\$2,650	-1.44%	(\$8,158)	Assumption
6	2022	\$529,932	-1.28%	2025	\$6,619	-0.48%	\$2,438	-7.98%	(\$6,865)	Assumption
7	2022	\$530,145	0.04%	2025	\$6,772	2.30%	\$2,458	0.83%	\$213	Assumption
8	2022	\$508,300	-4.12%	2025	\$6,491	-4.15%	\$2,371	-3.57%	(\$21,846)	Experience
9	2022	\$507,201	-0.22%	2025	\$6,477	-0.22%	\$2,365	-0.24%	(\$1,098)	Assumption
10	2022	\$540,328	6.53%	2025	\$6,951	7.33%	\$2,523	6.70%	\$33,126	Assumption

A description of the steps shown in Table B5 follows.

0. Expected results on September 30, 2022, based on a roll forward of September 30, 2021, valuation results.
1. Update census (as of September 30, 2022).
2. Update Former Spouse Allocation Rates.
3. Update Spouse(s) per Sponsor Rates.
4. Add one more year of Mortality Improvement (MI). Mortality rates are improved to the valuation date.
5. Update Mortality Improvement Rates.
6. Update Reserve Rates.
7. Update Disability Retirement to reflect PACT Act¹.
8. Claims True-up.
9. Update Admin Loads.
10. Update Select Period Medical Trend Rates.

¹ The Honoring our Promise to Address Comprehensive Toxics Act (PACT) of 2022 increases healthcare benefits for veterans exposed to toxic substances during military service. Active duty and reserve duty disability retirement rates were increased to reflect the expected changes. The effect of the PACT Act will be monitored in future valuations.

TABLE B6
 SEPTEMBER 30, 2022, ASSET (GAIN)/LOSS
 (\$millions)

	<u>(Gain)/Loss</u>	<u>% of Fund</u>
1. Incurred Benefit Payments vs. Expected	(\$94)	-0.03%
2. Implemented Per Capita NCs vs. Expected	\$640	0.19%
3. Force Strengths vs. Expected	(\$133)	-0.04%
4. Unexpected, Nonrecurring Deposit	\$0	0.00%
5. Yield vs. Expected	<u>(\$12,515)</u>	<u>-3.63%</u>
6. Total	(\$12,102)	-3.51%

Percentages shown are ratios of absolute values of each gain or loss component to the actuarial value of the MERHCF.

TABLE B7
PAST AND PROJECTED UNFUNDED LIABILITY PAYMENTS
ON OCTOBER 1
(\$millions)

Calendar Year	Original UFL Pmt	Assumption Changes	Benefit Changes	Actuarial Experience	Total UFL Pmt
2002 (prelim.)	\$14,369	\$0	\$0	\$0	\$14,369
2002 (final)	\$14,369	\$0	\$0	\$0	\$14,369
2003	\$16,260	\$0	\$0	\$0	\$16,260
2004	\$16,082	(\$1,014)	\$0	\$653	\$15,721
2005	\$16,686	(\$973)	\$0	\$899	\$16,612
2006	\$17,311	(\$1,968)	\$0	\$265	\$15,608
2007	\$17,164	(\$3,256)	\$0	(\$978)	\$12,930
2008	\$17,016	(\$4,239)	\$0	(\$2,117)	\$10,660
2009	\$17,654	(\$5,031)	\$0	(\$2,617)	\$10,006
2010	\$18,316	(\$6,303)	\$0	(\$2,228)	\$9,785
2011	\$19,003	(\$9,254)	(\$478)	(\$2,555)	\$6,716
2012	\$21,603	(\$10,919)	(\$1,543)	(\$2,999)	\$6,142
2013	\$23,214	(\$12,229)	(\$3,209)	(\$3,526)	\$4,250
2014	\$24,027	(\$13,113)	(\$3,321)	(\$3,588)	\$4,005
2015	\$24,827	(\$13,625)	(\$3,789)	(\$4,089)	\$3,324
2016	\$25,633	(\$13,420)	(\$4,094)	(\$2,449)	\$5,670
2017	\$31,404	(\$16,666)	(\$5,026)	(\$3,145)	\$6,567
2018	\$32,424	(\$17,219)	(\$6,102)	(\$3,383)	\$5,720
2019	\$32,665	(\$16,175)	(\$6,148)	(\$3,705)	\$6,637
2020	\$33,658	(\$16,413)	(\$6,331)	(\$3,931)	\$6,983
2021	\$33,887	(\$14,911)	(\$6,371)	(\$5,102)	\$7,503
2022	\$34,904	(\$12,336)	(\$6,448)	(\$6,139)	\$9,981
2023	\$35,951	(\$10,998)	(\$6,553)	(\$8,816)	\$9,584
2024	\$37,030	(\$11,328)	(\$6,750)	(\$9,081)	\$9,871
2025	\$38,141	(\$11,667)	(\$6,953)	(\$9,353)	\$10,168
2026	\$39,285	(\$12,017)	(\$7,161)	(\$9,634)	\$10,473
2027	\$40,463	(\$12,378)	(\$7,376)	(\$9,923)	\$10,786
2028	\$41,677	(\$12,749)	(\$7,597)	(\$10,221)	\$11,110
2029	\$42,928	(\$13,132)	(\$7,825)	(\$10,527)	\$11,444
2030	\$44,215	(\$13,526)	(\$8,060)	(\$10,843)	\$11,786
2031	\$45,542	(\$13,932)	(\$8,302)	(\$11,168)	\$12,140
2032	\$46,908	(\$14,349)	(\$8,551)	(\$11,503)	\$12,505
2033	\$48,315	(\$14,780)	(\$8,807)	(\$11,849)	\$12,879
2034	\$49,765	(\$15,223)	(\$9,071)	(\$12,204)	\$13,267
2035	\$51,258	(\$15,680)	(\$9,343)	(\$12,570)	\$13,665
2036	\$52,795	(\$16,151)	(\$9,624)	(\$12,947)	\$14,073
2037	\$54,379	(\$11,670)	(\$6,954)	(\$9,355)	\$26,400
2038	\$56,011	\$0	\$0	\$0	\$56,011
2039	\$57,691	\$0	\$0	\$0	\$57,691
2040	\$0	\$0	\$0	\$0	\$0

TABLE B8
 PAST AND PROJECTED UNFUNDED LIABILITY BALANCES ON SEPTEMBER 30
 (BEFORE PAYMENT)
 (\$millions)

Calendar Year	Original UFL	Assumption Changes	Benefit Changes	Actuarial Experience	Total UFL
2002 (prelim.)	\$405,553	\$0	\$0	\$0	\$405,553
2002 (final)	\$442,054	\$0	\$0	\$0	\$442,054
2003	\$454,416	(\$20,704)	\$0	\$13,339	\$447,050
2004	\$465,540	(\$20,454)	\$0	\$18,703	\$463,789
2005	\$477,550	(\$40,252)	\$0	\$6,187	\$443,485
2006	\$489,668	(\$68,708)	\$0	(\$20,195)	\$400,765
2007	\$500,698	(\$91,839)	\$0	(\$46,424)	\$362,435
2008	\$511,337	(\$107,567)	\$0	(\$57,265)	\$346,505
2009	\$522,745	(\$133,109)	\$0	(\$48,757)	\$340,879
2010	\$534,133	(\$195,223)	(\$10,411)	(\$54,141)	\$274,358
2011	\$545,477	(\$228,850)	(\$33,859)	(\$62,584)	\$220,184
2012	\$556,746	(\$244,824)	(\$68,265)	(\$70,540)	\$173,116
2013	\$565,914	(\$257,241)	(\$70,559)	(\$70,419)	\$167,695
2014	\$573,905	(\$260,797)	(\$78,848)	(\$79,136)	\$155,125
2015	\$580,121	(\$251,805)	(\$83,580)	(\$50,289)	\$194,448
2016	\$585,836	(\$278,969)	(\$84,179)	(\$52,563)	\$170,124
2017	\$589,613	(\$280,132)	(\$98,394)	(\$54,901)	\$156,186
2018	\$587,515	(\$259,685)	(\$98,270)	(\$58,916)	\$170,644
2019	\$582,846	(\$251,127)	(\$96,777)	(\$59,986)	\$174,956
2020	\$576,314	(\$223,781)	(\$94,934)	(\$74,882)	\$182,718
2021	\$567,076	(\$179,861)	(\$92,590)	(\$87,195)	\$207,430
2022	\$557,182	(\$152,716)	(\$90,098)	(\$118,675)	\$195,693
2023	\$545,781	(\$146,697)	(\$87,415)	(\$117,600)	\$194,069
2024	\$532,772	(\$141,805)	(\$84,501)	(\$113,679)	\$192,787
2025	\$518,051	(\$136,349)	(\$81,249)	(\$109,305)	\$191,147
2026	\$501,506	(\$130,293)	(\$77,640)	(\$104,450)	\$189,123
2027	\$483,020	(\$123,598)	(\$73,650)	(\$99,083)	\$186,689
2028	\$462,473	(\$116,225)	(\$69,257)	(\$93,172)	\$183,819
2029	\$439,731	(\$108,132)	(\$64,434)	(\$86,684)	\$180,481
2030	\$414,659	(\$99,275)	(\$59,157)	(\$79,584)	\$176,644
2031	\$387,114	(\$89,608)	(\$53,396)	(\$71,834)	\$172,276
2032	\$356,943	(\$79,081)	(\$47,123)	(\$63,396)	\$167,342
2033	\$323,987	(\$67,645)	(\$40,308)	(\$54,229)	\$161,805
2034	\$288,077	(\$55,244)	(\$32,918)	(\$44,287)	\$155,628
2035	\$249,036	(\$41,822)	(\$24,921)	(\$33,526)	\$148,767
2036	\$206,678	(\$27,319)	(\$16,279)	(\$21,899)	\$141,182
2037	\$160,808	(\$11,670)	(\$6,954)	(\$9,355)	\$132,828
2038	\$111,218	\$0	\$0	\$0	\$111,218
2039	\$57,691	\$0	\$0	\$0	\$57,691
2040	\$0	\$0	\$0	\$0	\$0

APPENDIX C

VALUATION POPULATION DATA

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VALUATION POPULATION DATA

The population data used in the MERHCF valuation includes military personnel, retirees, and their dependents. The tables below provide summary data for active duty and reserve military personnel, and military retirees, dependents, and surviving spouses.

All Uniformed Military Personnel

Table C1 includes summary data of Active Duty, Selected Reserve, and non-Selected Reserve military personnel for DoD, Coast Guard, PHS, and NOAA. Dependents (spouses, children, and survivors) are not included in this table. The MERHCF valuation includes assumptions about dependents and projects costs for dependents based on an analysis of retiree dependents and survivor data. Full-time support Reserves are included in the Active Duty counts. Non-Selected Reserves only include those who have qualified for retired pay, stopped drilling, and have not yet reached age 60.

All Uniformed Retirees and Surviving Spouses

Table C2 includes summary data of military retirees, dependents (spouses, children, and other), and surviving spouses for DoD, Coast Guard, PHS, and NOAA.

TABLE C1
ACTIVE DUTY AND RESERVE AS OF 09/30

	<u>2021</u>	<u>2022</u>	<u>% Change</u>
DoD			
Active Duty	1,425,014	1,393,696	-2.2%
Selected Reserve	702,629	675,807	-3.8%
Non-Selected Reserve	199,584	198,587	-0.5%
Coast Guard			
Active Duty	40,449	39,471	-2.4%
Selected Reserve	5,882	6,164	4.8%
Non-Selected Reserve	2,262	2,304	1.9%
PHS Active Duty	6,013	5,814	-3.3%
PHS Reserve		64	
NOAA Active Duty	329	334	1.6%
TOTAL			
Active Duty	1,471,805	1,439,315	-2.2%
Selected Reserve	708,511	681,971	-3.7%
Non-Selected Reserve	201,846	200,891	-0.5%

TABLE C2
ELIGIBLE RETIRED BENEFICIARIES AS OF 09/30

	<u>2021</u>	<u>2022</u>	<u>% Change</u>
Retired Sponsors			
Non-Medicare-eligible	1,026,216	1,031,402	0.5%
Medicare-eligible	<u>1,204,853</u>	<u>1,211,196</u>	0.5%
Total	2,231,069	2,242,598	0.5%
Spouses of Retirees			
Non-Medicare-eligible	909,647	909,228	0.0%
Medicare-eligible	<u>736,374</u>	<u>735,249</u>	-0.2%
Total	1,646,021	1,644,477	-0.1%
Children of Retirees			
Non-Medicare-eligible	858,833	876,042	2.0%
Medicare-eligible	<u>8,780</u>	<u>8,760</u>	-0.2%
Total	867,613	884,802	2.0%
Other Dependents of Retirees			
Non-Medicare-eligible	2,334	2,317	-0.7%
Medicare-eligible	<u>4,702</u>	<u>4,579</u>	-2.6%
Total	7,036	6,896	-2.0%
Survivors			
Non-Medicare-eligible Spouse	76,713	76,235	-0.6%
Non-Medicare-eligible Children	30,775	30,943	0.5%
Non-Medicare-eligible Other	134	150	11.9%
Medicare-eligible Spouses	522,312	522,773	0.1%
Medicare-eligible Children	7,961	8,055	1.2%
Medicare-eligible Other	361	351	-2.8%
Total Spouses	599,025	599,008	0.0%
Total Children	38,736	38,998	0.7%
Total Other	495	501	1.2%
Retirees, Dependents, Survivors			
Non-Medicare-eligible	2,904,652	2,926,317	0.7%
Medicare-eligible	<u>2,485,343</u>	<u>2,490,963</u>	<u>0.2%</u>
Total	5,389,995	5,417,280	0.5%

APPENDIX D

ECONOMIC ASSUMPTIONS

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ECONOMIC ASSUMPTIONS

In July 2023, the MERHC Board of Actuaries (Board) adopted the following economic assumptions for use in the valuation as of September 30, 2022:

- General inflation rate = 2.75%
- Valuation discount rate = 4.50%
- Ultimate medical trend rate = 4.75%

To view the select medical trend rate assumptions, and associated economic assumption rationale, see the Board meeting minutes found in this link: actuary.defense.gov/external-links

Inflation

The CPI is used as an inflation assumption, a component of nominal interest and long term-medical trend.

The CPI assumption chosen in 2023 by the Board is 2.75%, unchanged from the prior year. This assumption is reasonably consistent with the 2.50% CPI assumption selected in 2023 by the DoD Board of Actuaries for the Military Retirement Fund, and the 2.40% intermediate CPI assumption selected by both the Trustees of the Center for Medicare and Medicaid Services and the Trustees of the Social Security Administration in their 2023 Trustees' Reports.

Interest Rate

The real interest rate is defined as the difference between the nominal interest rate and the CPI.

The rate of real interest chosen in 2023 by the Board is 1.75%, unchanged from last year. Since 2.75% had been adopted as the inflation rate, the nominal rate of interest is 4.50%. This rate reflects the expected long-term rate of return on the MERHCF's assets. This rate is reasonably consistent with the 1.50% real interest rate assumed by the DoD Board of Actuaries in the valuation of the Military Retirement Fund. The Trustees of the Center for Medicare and Medicaid Services and the Trustees of the Social Security Administration both used an intermediate ultimate real interest rate assumption of 2.30% in their 2023 Trustees' reports.

Medical Trend Rates

Medical trend rates are used in the actuarial valuation to project the starting average plan costs to each future year's cost level. During a 25-year select period, there are separate trend rate assumptions for Inpatient costs (IP), Outpatient costs (OP), pharmacy costs (Rx), and USFHP costs. In addition, these trend rates are determined separately for Purchased Care (PC) and Direct Care (DC) costs. All costs grow at the same ultimate trend rate, since over the long term, all plan costs are assumed to experience the same growth in prices and utilization of services.

At its 2023 meeting, the Board approved the use of the medical trend rates for the MERHCF actuarial valuation as of September 30, 2022. The rates were adjusted for COVID-19 to reflect an expected higher-than-normal growth in prices and utilization due to a rebound in delayed medical procedures. The ultimate medical trend rate remains 4.75%.

Inpatient Medical Trend

OACT used the Medicare Part A deductible and copayment trends in the development of IP trend rates. CMS provided the following tables from its 2023 Medicare Trustees Report:

- Table V.E1 – HI Cost Sharing and Premium Amounts
- Projected Medicare Part A utilization and enrollment

OACT developed inpatient medical trend rates on a fiscal year basis through 2032. For the remainder of the 25-year select period, the inpatient trend rates grade linearly to the ultimate assumption of 4.75%. The following adjustments were made to obtain the final IP trend rates:

- The first four years IP trend rates were adjusted to account for the rebound in delayed services due to COVID-19.
- The IP trends for years five through ten were increased 0.25% to reflect higher growth in the military utilization component of trend relative to Medicare Part A utilization.

Outpatient Medical Trend

OACT used CMS Medicare Part B out-of-pocket costs to develop preliminary OP medical trends. CMS provided the following tables from its 2023 Medicare Trustees Report:

- Table IV.B1 – Components of Increases in Total Allowed Charges per Fee-for-Service Enrollee for Practitioner Services
- Table IV.B2 – Incurred Reimbursement Amounts per Fee-for-Service Enrollee for Practitioner Services
- Table IV.B4 – Incurred Reimbursement Amounts per Fee-for-Service Enrollee for Institutional Services
- Projected per capita Medicare Part B deductible and coinsurance payments for fee-for-service enrollees

OACT developed outpatient medical trend rates on a fiscal year basis through 2032. For the remainder of the 25-year select period, the outpatient trend rates grade linearly to the ultimate assumption of 4.75%. The following adjustments were made to obtain the final OP trend rates:

- The first four years of OP trend rates were adjusted to account for the rebound in delayed services due to COVID-19
- The OP trends for years five through ten were increased 0.25% to reflect higher growth in the military utilization component of trend relative to Medicare Part B utilization.

Prescription Drug Trend

OACT used FY 2017 to FY 2022 prescription drug data to develop per capita cost and utilization trend rates. The trend rates incorporate assumed inflation in drug prices, changes in utilization, the introduction of new brand drugs, and the expiration of patent protections.

The Board approved short term Rx trend rates in the select period. For the remainder of the 25-year select period, the Rx trend rates grade linearly to the ultimate assumption of 4.75%.

USFHP Trend

OACT received USFHP capitation rates by age, gender, and designated provider plan and location for the contract periods from October 2015 to September 2023. The Board agreed that the initial trend rate should be a weighted average of PC and DC trend rates. The weighting was used during each of the 25 years in the select period. The USFHP trend rates grade linearly to the ultimate assumption of 4.75%.

Table D1

MERHCF MEDICAL TREND RATES
FOR THE SEPTEMBER 30, 2022, VALUATION

<u>From</u> <u>FY:</u>	<u>To FY:</u>	<u>DC</u>			<u>PC</u>			
		<u>IP</u>	<u>OP</u>	<u>Rx</u>	<u>IP</u>	<u>OP</u>	<u>Rx</u>	<u>USFHP</u>
2022	2023	6.08%	5.05%	9.42%	9.44%	8.32%	9.01%	8.84%
2023	2024	4.52%	4.02%	8.75%	8.41%	7.96%	8.51%	8.20%
2024	2025	5.29%	4.52%	4.84%	5.57%	7.06%	4.42%	6.19%
2025	2026	5.55%	4.52%	4.83%	5.05%	6.26%	4.43%	5.60%
2026	2027	4.33%	5.89%	4.83%	4.33%	5.90%	4.45%	5.15%
2027	2028	4.50%	5.11%	4.83%	4.50%	5.12%	4.46%	4.82%
2028	2029	4.79%	5.44%	4.82%	4.79%	5.44%	4.47%	5.10%
2029	2030	4.46%	5.15%	4.82%	4.46%	5.16%	4.49%	4.83%
2030	2031	4.73%	5.18%	4.81%	4.73%	5.18%	4.50%	4.94%
2031	2032	4.72%	5.33%	4.81%	4.72%	5.33%	4.52%	5.02%
2032	2033	4.72%	5.29%	4.81%	4.72%	5.29%	4.53%	5.00%
2033	2034	4.72%	5.26%	4.80%	4.72%	5.26%	4.55%	4.99%
2034	2035	4.72%	5.22%	4.80%	4.72%	5.22%	4.56%	4.97%
2035	2036	4.73%	5.18%	4.79%	4.73%	5.19%	4.58%	4.95%
2036	2037	4.73%	5.15%	4.79%	4.73%	5.15%	4.59%	4.94%
2037	2038	4.73%	5.11%	4.79%	4.73%	5.11%	4.60%	4.92%
2038	2039	4.73%	5.08%	4.78%	4.73%	5.08%	4.62%	4.90%
2039	2040	4.73%	5.04%	4.78%	4.73%	5.04%	4.63%	4.89%
2040	2041	4.74%	5.00%	4.78%	4.74%	5.00%	4.65%	4.87%
2041	2042	4.74%	4.97%	4.77%	4.74%	4.97%	4.66%	4.85%
2042	2043	4.74%	4.93%	4.77%	4.74%	4.93%	4.68%	4.84%
2043	2044	4.74%	4.89%	4.77%	4.74%	4.90%	4.69%	4.82%
2044	2045	4.74%	4.86%	4.76%	4.74%	4.86%	4.71%	4.80%
2045	2046	4.75%	4.82%	4.76%	4.75%	4.82%	4.72%	4.78%
2046	2047	4.75%	4.79%	4.75%	4.75%	4.79%	4.74%	4.77%
Ultimate		4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%

APPENDIX E

AVERAGE BENEFIT COSTS

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DEVELOPMENT OF EXPECTED AVERAGE BENEFIT COSTS

The expected average claim costs are calculated as the ratio of total family claims to the total number of retired sponsors or survivors. These costs are stored in claim vectors (CVs) and input to the valuation model. The CVs are arrayed by sponsor or survivor age and only include costs while beneficiaries are eligible for Medicare. The CVs are available upon request.

The MERHCF valuation includes 84 CVs, derived from seven benefit categories and 12 population subcategories. The seven benefit categories are:

- Direct Care inpatient (DC IP)
- Direct Care outpatient (DC OP)
- Direct Care prescription drugs (DC Rx)
- Purchased Care inpatient (PC IP)
- Purchased Care outpatient (PC OP)
- Purchased Care prescription drugs (PC Rx)
- Purchased Care US Family Health Plans (USFHP)

DC refers to care obtained at a military treatment facility (MTF) and PC refers to care obtained in the private sector. USFHP is a managed care program; the USFHP CVs are based on global rates. The 12 population subcategories are defined in the “Valuation Data and Procedure” section of this report.

Direct Care Claim Costs

DC CVs are calculated using workload units calibrated to aggregate incurred DC claims levels (with no reimbursement from Medicare). No additional loads are applied for administrative costs. For the September 30, 2022, valuation, DC CVs were developed and smoothed using data from FYs 2015 to 2017.

Estimates of 2022 incurred DC claims were provided by DHA. The DC costs are shown in Table E1.

TABLE E1
 FY 2022 MERHCF DIRECT CARE COSTS
 (\$millions)

Inpatient Hospital	\$599
Outpatient	\$785
<u>Pharmacy</u>	<u>\$850</u>
Total	\$2,234

Purchased Care Claim Costs

PC CVs are calculated on an incurred claims basis with administrative loads added. For the September 30, 2022, valuation, PC CVs were developed and smoothed using data from fiscal years 2015 to 2017.

For the September 30, 2022, valuation, the Board approved administrative loads of 1.50% (IP and OP) and 1.70% (Rx). The pharmacy claims were also adjusted by approximately 14% to reflect rebates.

Estimates of 2022 incurred PC claims were calibrated to aggregate claims paid through March 2023. Table E2 shows the FY 2022 incurred PC claims. Incurred pharmacy claims in Table E2 have not been adjusted to reflect rebates.

TABLE E2
 FY 2022 MERHCF PURCHASED CARE INCURRED CLAIMS
 (\$ millions)

Inpatient Hospital	\$818
Outpatient	\$3,210
<u>Pharmacy</u>	<u>\$4,306</u>
Total	\$8,334

U.S. Family Health Plan (USFHP) Claim Costs

USFHP is a managed care plan offered in several US hospitals funded on a fully capitated basis (with no reimbursement from Medicare). The USFHP CVs are adjusted to calibrate the initial MERHCF valuation year’s cash flow to the aggregate incurred global rate payments. Only 2% of the Medicare-eligible military retired population is enrolled in a USFHP plan. The population is projected to decrease due to grandfathering of the Medicare-eligible USFHP members (i.e., no future entrants). Since the USFHP rates cover all benefits, there are only 12 CVs—one for each population subcategory.

For the September 30, 2022, valuation, the total payments were \$833 million and the administrative load was 0.40% for the USFHP CVs.

APPENDIX F

ACTIVE DUTY RATES

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ACTIVE DUTY RATES

The active duty rates are used to project members leaving for the following reasons: death, temporary and permanent disability retirement, nondisability retirement, and net withdrawal. There is also a new entrant distribution and rates of transfer from enlisted to officer.

Death rates are arrayed by age nearest birthday for officer and enlisted. They are updated each year to reflect mortality improvement from the midpoint of the experience period to the valuation date. Improvement uses a version of the Society of Actuaries' MP-2021 mortality projection scales assuming an 80%/20% male/female mix. The remaining rates are arrayed by completed years of service for officer and enlisted.

The rates are based on the Active Duty Personnel data files. Table F1 presents the fiscal years on which the rates are based.

The active duty rates are available upon request.

TABLE F1
SUMMARY OF FISCAL YEARS ON WHICH ACTIVE DUTY RATES ARE BASED

<u>RATE</u>	<u>2015-2019</u>
Death	X
Nondisability Retirement	X
Temporary Disability Retirement	X
Permanent Disability Retirement	X
Withdrawal (other losses)	X
Reentrant Ratios	X
New Entrant Distribution	X
Paygrade Transfer	X

APPENDIX G

RESERVE RATES

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Reserve Rates	G-2
Table G1: Summary of Fiscal Years on which Reserve Rates are Based	G-3

RESERVE RATES

Selected reserve and grey area retiree populations are modeled separately. The selected reserves include only part-time members for whom normal costs are paid. Grey area retirees are reservists who have qualified for retirement at age 60 and are no longer drilling.

The rates are used to project members leaving for various reasons. The model includes a new entrant distribution; a set of reentrant ratios; rates of transfer to 20-year non-Selected Reserve status; and blow-up factors. Blow-up factors are used to account for reservists showing up on the end-of-year retired pay file who were not on the reserve file at the beginning of the year. The rates are arrayed by age nearest birthday at entry and completed years of service for officers and enlistees.

The rates are based on the Reserve Component Common Personnel Data System files. Table G1 presents the fiscal years on which the rates are based.

Death rates are based on FY 2015 to FY 2019 data. They are arrayed by age nearest birthday for officer and enlisted and improved from the midpoint of the experience period to the valuation date. Improvement is based on the Society of Actuaries' MP-2021 assuming an 80%/20% male/female mix.

The reserve rates are available upon request.

TABLE G1
SUMMARY OF FISCAL YEARS ON WHICH RESERVE RATES ARE BASED

<u>RATE</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Death (Selected and Non-Selected)	X	X	X	X	X
Separation (Selected)			X	X	X
Separation (Non-Selected)			X	X	X
Transfer (Selected-to-Non-Selected)			X	X	X
Retirement (Selected and Non-Selected)			X	X	X
New Entrant Distribution (Selected)			X	X	X
Reentrant (Selected)			X	X	X
Paygrade Transfer (Selected)			X	X	X
Disability Retirement (Selected)			X	X	X
Retirement Ratios (Non-Selected)				X	X
Transfer Ratios (Selected-to-Non-Selected)			X	X	X

APPENDIX H

RETIREE AND SURVIVOR RATES

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Table H1: Summary of Fiscal Years on which Retiree and Survivor Rates are Based	H-3

RETIREE AND SURVIVOR RATES

Retiree and survivor rates were developed using age nearest birthday for officer and enlisted and by nondisability, temporary disability, and permanent disability.

The data for the rates came from DEERS Point-In-Time-Extract files. Table H1 presents the fiscal years on which the rates are based.

The retiree and survivor rates are available upon request.

TABLE H1
SUMMARY OF FISCAL YEARS
ON WHICH RETIREE AND SURVIVOR RATES ARE BASED

	<u>2007</u>	<u>2014</u>	<u>2017</u>	
	-	-	-	
	<u>2010</u>	<u>2016</u>	<u>2020</u>	<u>2022</u>
<u>DEATH RATES</u>				
ND Officer			X	
ND Enlistee			X	
PD Officer			X	
PD Enlistee			X	
TD Officer	X			
TD Enlistee	X			
 <u>OTHER LOSS RATES</u>				
TD Officer	X			
TD Enlistee	X			
 <u>TRANSFER RATES FROM TD TO PD</u>				
Officer	X			
Enlistee	X			
 <u>SURVIVOR RATES</u>				
Remarriage		X		
Survivor Death		X		
 <u>SPOUSES GENERATED PER SPONSOR</u>				
Officer				X
Enlistee				X

ND = Nondisabled
PD = Permanently Disabled
TD = Temporarily Disabled

APPENDIX I

GLOSSARY

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TERM / ACRONYM	DEFINITION
AL	Actuarial Accrued Liability
All Uniformed Services	Refers to the population containing DoD, Coast Guard, Public Health Service, and National Oceanic and Atmospheric Administration.
CMS	Center for Medicare and Medicaid Services
CPI	Consumer Price Index
CV	Claim Vectors, an array of average claims costs by age.
DC	Direct Care, care received at a Military Treatment Facility.
DEERS	Defense Enrollment Eligibility Reporting System
DHA	Defense Health Agency
FY	Fiscal Year
Global rate	The single rate that covers the full cost of care provided under USFHP.
IBNR	Claims incurred but not reported
Interest rate	The single rate that is used to discount all projected benefit payments back to the actuarial valuation date.
MERHCF	Medicare-Eligible Retiree Health Care Fund, or Fund
MRF	Military Retirement Fund
MTF	Military Treatment Facility
NC	Normal Cost, determined on a per capita basis, multiplied by endstrength to determine annual contribution to the Fund.
NDAA	National Defense Authorization Act
Nominal interest rate	Real interest rate adjusted for inflation
Non-Selected Reserves with 20 good years	Reservists who are not in the Selected Reserve and who have completed 20 "good" years toward retirement, but who have not yet reached retirement age. Also known as "grey area" retirees.
OACT	DoD Office of the Actuary
PACT	Honoring our Promise to Address Comprehensive Toxics Act of 2022
PC	Purchased Care, care received in the private sector.
PVFB	Present Value of Future Benefits, also called PVB.

TERM / ACRONYM	DEFINITION
PVFNC	Present Value of Future Normal Costs
Real interest rate	The difference between the nominal interest rate and CPI, real rate of growth.
Selected Reserves	Reservists actively drilling who must complete 48 drills plus two weeks of annual training each year.
Strength	Military service member head counts (or count of sponsors)
TFL	TRICARE For Life, the medical plan offered to retired members and their eligible spouses, dependents and survivors who are eligible for Medicare.
U.S.C.	United States Code
UFL	Unfunded Liability
USFHP	US Family Health Plan, a TRICARE medical plan with a managed care design.