DEPARTMENT OF DEFENSE
BOARD OF ACTUARIES
4800 MARK CENTER DRIVE, SUITE 03E25
ALEXANDRIA, VA 22350

August 24, 2023

MEMORANDUM FOR THE RECORD

SUBJECT: Minutes of the July 14, 2023, Meeting of the DoD Board of Actuaries

The Military Retirement Fund and Voluntary Separation Incentive Fund were discussed from 10:00 AM to 11:30 AM.

List of Attachments:

1 - Meeting agenda
2 - Complete list of attendees
3 - Meeting handouts
4 - Meeting transcript

We have reviewed and agree with the meeting minutes. Responsibility for the accuracy of each attachment resides with the organization creating it.

Marcia A. Dush
____
Marcia A. Dush, Chairperson
DoD Board of Actuaries

Inger M. Pettygrove
____
Inger M. Pettygrove
Designated Federal Officer

DEPARTMENT OF DEFENSE BOARD OF ACTUARIES MEETING MINUTES

July 14, 2023

Virtual Meeting

MILITARY RETIREMENT FUND/VOLUNTARY SEPARATION INCENTIVE FUND

HIGHLIGHTS/KEY BOARD DECISIONS

<u>Agenda Item 1:</u> September 30, 2022, Valuation of the Military Retirement Fund

- Transcript Pages 9-11: Starting population and total annualized pay for active duty, selected drilling reservists, non-selected reservists, disabled retirees, nondisabled retirees, and survivors were presented to the Board members. It was noted that 2022 figures include the Coast Guard where 2021 figures did not.

- Transcript Pages 11-13: The present value of future benefits was $2.526 trillion, the present value of future normal cost contributions was $418 billion, and the fund value was $1.279 trillion. The Unfunded Accrued Liability (UFL) was $829.3 billion.

- Transcript Pages 13-16: Total change in UFL was a loss of $173.3 billion. Total economic experience loss was $45.1 billion, and the loss due to the plan amendment for Coast Guard was $59.7 billion. The largest change due to new assumptions was a $58.8 billion loss due to the VA offset parameters.

- Transcript Pages 16-18: The Board passed a motion to amortize the Coast Guard initial unfunded liability over a period of three years.

<u>Agenda Item 2:</u> September 30, 2023, Valuation of the Military Retirement Fund, Proposed Methods and Assumptions

- Transcript Pages 18-27: Approved long-term economic assumptions for the September 1, 2023 valuation of 4.00% nominal interest rate (no change from last year), 2.75% across-the-board salary increase (no change from last year), and 2.5% inflation (no change from last year).

- Transcript Pages 27-64: Approved proposed Reserve Rates (no change to full-time NCP, decreased part-time NCP by 0.1%), Mortality Improvement Scales (decreased NCPs 0.1% full-time, 0.2% part-time), SBP Parameters (increased full-time and part-time NCPs by 0.4%), and VA offset parameters (decreased NCPs 3.3% full-time, 1.4% part-time).

- Transcript Pages 27-64: Approved FY 2025 DoD NCPs of 26.6% for full-time and 21.5% for part-time and estimated Treasury NCPs of 30.8% for full-time and 9.8% for part-time.

Agenda Item 3: September 30, 2022, VSI Fund Valuation, Proposed Methods and Assumptions

- Transcript Pages 64-73: Approved economic assumptions of 2.75% interest (0.5% increase from last year), 2.2% COLA (unchanged from last year), and 1.0% VA increase (unchanged from last year), leading to a January 1, 2025 amortization payment of $7.8 million.

Agenda Item 4: Transition to ADVANA

- Transcript Pages 73-80: Explained transition to ADVANA, a new method of accessing data, and ADVANA's advantages over the previous method.

ATTACHMENT 1

DEPARTMENT OF DEFENSE BOARD OF ACTUARIES MEETING AGENDA

Friday, July 14th, 2023
10:00 AM—1:00 PM EST
Virtual Meeting (MS Teams)

DoD365/MS Teams Link:
https://dod.teams.microsoft.us/dl/launcher/launcher.html?url=%2F_%23%2Fl%2Fmeetup-join%2F19%3Adod%3Ameeting_26bda19a8fcd4b909148777a4f0fec7c%40thread.v2%2F0%3Fcontext%3D%257b%2522Tid%2522%253a%2522102d0191-eeae-4761-b1cb-1a83e86ef445%2522%252c%2522Oid%2522%253a%2522244081cb-d4dd-4158-8c6f-2048b5cf15bb%2522%257d%26anon%3Dtrue&type=meetup-join&deeplinkId=1abae826-ab92-4560-a5b3-c9532174f55&directDl=true&msLaunch=true&enableMobilePage=true&suppressPrompt=true

Call-In (for audio only): Dial: 410-874-6749 // Conference ID: 820 191 989#

(1) Please ensure your audio is muted when not speaking or actively participating.

(2) Please identify yourself before asking a question.

MILITARY RETIREMENT FUND

1. September 30, 2022, Valuation of the Military Retirement Fund

   a. Starting Population as of September 30, 2022 (Drew May, DoD Office of the Actuary)
   b. Actuarial status information as of September 30, 2022 (Drew May)
   c. Change in unfunded liability for FY 2022 (Drew May)
   d. Amortization period for Coast Guard liability* (Drew May)
   e. October 1, 2023 Treasury amortization payment and normal cost payment* (Drew May)

2. September 30, 2023, Valuation of the Military Retirement Fund, Proposed Methods and Assumptions*

   a. Economic Assumptions – COLA, Interest Rate, and Across-the-Board Salary Increases (Phil Davis, DoD Office of the Actuary)

   b. FY 2025 Full-Time and Part-Time Normal Cost Percentages (Qian Magee, DoD Office of the Actuary)

   c. Non-Economic Assumptions
      i. Reserve Rates (Drew May)
      ii. Mortality improvement factors (Jonathan Wong, DoD Office of the Actuary)
      iii. SBP parameters (Rich Allen, DoD Office of the Actuary, and Drew May)

iv. VA Offset Parameters and Disability Rates (Jonathan Wong)

<u>VOLUNTARY SEPARATION INCENTIVE FUND</u>

3. September 30, 2022, VSI Fund Valuation, Proposed Methods and Assumptions*

   a. Introduction (Phil Davis)
   b. Interest Rate (Jonathan Wong)
   c. Valuation Update and Other Assumptions (Jonathan Wong)
   d. Unfunded Liability Amortization Payments (Jonathan Wong)

<u>TRANSITION TO ADVANA</u> (Phil Davis)

* Indicates Board approval required

ATTACHMENT 2

Department of Defense Board of Actuaries Meeting
Attendee List

Name	**Position or Office**
Marcia Dush	Chairperson
John Moore	Board Member
Mike Clark	Board Member
Pete Zouras	DoD Chief Actuary and Executive Secretary
Inger Pettygrove	OACT, DFO
Richard Allen	OACT
Qian Magee	OACT
Philip Davis	OACT
Drew May	OACT
Chelsea Chu	OACT
Jonathan Wong	OACT
Ethan Field	Guest
Austin Keib	Guest
William Moorhouse	Advisor, Legal
Tom Liuzzo	Advisor, Reserve Affairs
Peter Abraham	DMDC
David Rafferty	CBO
James Fasano	Advisor, Comptroller
Jonathan Poe	DFAS
Donald E. Sutton, III	ARNG
Alicia Litts	OUSD (C)
Richard Virgile	USCG
Edith Smith	Capitol Crusader
Paul Dotto	OPM
Susan Harvey	DFAS
Christina Horne	DFAS
Daniel Lee	OUSD (C)

Anita Chellaraj	OMB
Craig Graby	Korn Ferry Hay Group
Matthew Torres	DMDC
Horst Spiess	Army
Brittany Gladden	Army
Joseph Ortega	Army
Molly Byrnes	Army
Tracy Payne	Guest
Danilo Mendoza	USCG
Montreville Holcombe	USCG
Jeff Goldstein	OMB
Francis Nguyen	CTR
Richard Rodriguez	Army
COL Clay Pettit	Co-Chair, MRF FMC

ATTACHMENT 3

Meeting Handouts for the
Department of Defense Board of Actuaries Meeting
(Military Retirement Fund and VSI Fund)

DoD Board of Actuaries Legislative and Policy Update

Mr. Ronald Garner
Assistant Director, Military Compensation Policy
Retired and Annuitant Pay
ODASD(MPP-Compensation)
July 12, 2023

Agenda

- Blended Retirement System Implementation
  - Current Status
- Recent Legislative Changes
  - FY2023 National Defense Authorization Act
  - FY2023 Appropriations Omnibus
- Pending Legislative Changes
  - FY2024 National Defense Authorization Act

Blended Retirement System

Blended Retirement System Update

- **In Service as of June 30, 2023:**

(number in parentheses shows increase/decrease since last update (2021))

	Full-Time	Part-Time	**Total**
Opted In	204141 *(-65,237)*	124,285 *(+6,957)*	**328,426** *(-58,280)*
Auto-Enrolled	662,214 *(+198,291)*	317,133 *(+96,739)*	**979,347** *(+295,030)*
Total In-Service Participants as of June 30, 2023			**1,307,773**
Net Increase Since June 30, 2021			**+236,750**

- **Lump Sum:**
  - Discount rate for CY24 will be 6.26% (-0.06% from CY23)
  - 1 Lump Sum taker since June of 2021 (reservist)
  - LSDR formula under review in CY23 as required by law

Recent Legislation

FY 2023 National Defense Authorization Act

- **Basic Pay**
  - Pay raise was 4.6% (MRF Impact: MINIMAL)
- **Survivor Benefit Plan Open Season** (MRF Impact: MINIMAL)
  - Section 643 declared an open season enrollment and disenrollment period from 23 December 2022 to 1 January 2024.
  - Eligible members: retired members (including gray area retirees) currently enrolled can disenroll, those currently not enrolled can enroll
  - Cost to members: Prospective premiums plus a retrospective buy-in premium to account for past premiums, interest, and additional factor back to when they could have first elected to participate

FY 2023 Appropriations Omnibus

- **Secure 2.0 Act**

Pending Legislation

FY 2024 National Defense Authorization Act

- **Basic Pay**
  - Pay raise anticipated to be 5.2% (MRF Impact: MINIMAL)
- **House and Senate bills not yet released**

Military Retirement Fund
Board of Actuaries Meeting

Defense Finance and Accounting Service

Jonathan Poe / Lori Haines
Enterprise Accounting and Audit Support (EAAS)
Financial Reporting

July 12, 2023

AGENDA

- Overview
- Financial Data
- Fund Status

OVERVIEW

- Short Term Liquidity
  - ✓ Invested approximately $130.0B in October (Treas contrib $131.1B)
  - ✓ Off cycle investment of $1.0B in March
  - ✓ Inflows exceeding outflows
    - ✓ FY 2023 payments through May $43.6B
    - ✓ FY 2023 receipts through May $187.4B
    - ✓ FY 2023 overnights/cash as of May 31st $15.2B

- United States Coast Guard
  - ✓ USCG joined the MRF October 2022

- Long Term Liquidity
  - ✓ New investing for FY 2023
    - ✓ As of EOM May, $131.0B
    - ✓ Average 20-year term
  - ✓ Updated Mix Ratio and Average to maturity (60-70% TIPS, 30-40% nominal and 15 years average to maturity)
  - ✓ FY 2025-2028 projected investments of $541.6B

Summary Financial Analysis

Year Ended September 30

(In Billions)

	FY 2022	FY 2021	% Change
Service Contributions	$26.0	$25.2	3%
Unfunded Liability Contribution	114.5	98.1	17%
Concurrent Receipts Contribution	10.6	9.8	8%
Interest Income	93.1	56.9	64%
Total Revenue	$244.2	$190.0	28%
Benefit Payments	$71.5	$63.1	13%
Total Expense	$71.5	$63.1	13%

Summary Financial Analysis

Year Ended September 30

(In Billions)

Interest Income

	FY 2022	FY 2021	$Change
Interest Revenue--Par	$23.4	$21.4	$2.0
Interest Revenue--Inflation	76.0	41.0	$35.0
Interest Revenue--Discount	0.9	0.9	$0.0
Interest Revenue--Premium	-7.2	-6.4	-$0.8
	$93.1	$56.9	$36.2

Military Retirement Fund
For the Year Ending September 30, 2022

	(in millions)
Assets	
Fund Balance with Treasury	$610.5
Investments	
Overnight	$8,891.1
Long term	
Par	$936,227.3
Inflation purchased	$51,492.8
Inflation earned	$198,041.0
Premium outstanding	$92,245.0
Discount outstanding	-$14,899.6
Interest receivable	$6,375.9
Total Long Term Investments	$1,269,482.4
Total Investments	$1,278,373.5
Accounts Receivable, net	$160.1
Total Assets	$1,279,144.1
Liabilities	
Military Retirement and Other Federal Employment Benefits	
Benefits Payable to Beneficiaries	$394.2
Actuarial Liability	$2,513,153.1
Total Military and Other Federal Employment Benefits	$2,513,547.3
Other Liabilities	$2.4
Total Liabilities	$2,513,549.7
Net Position	
Cumulative Results of Operations	-$1,234,405.6
Total Liabilities and Net Position	$1,279,144.1

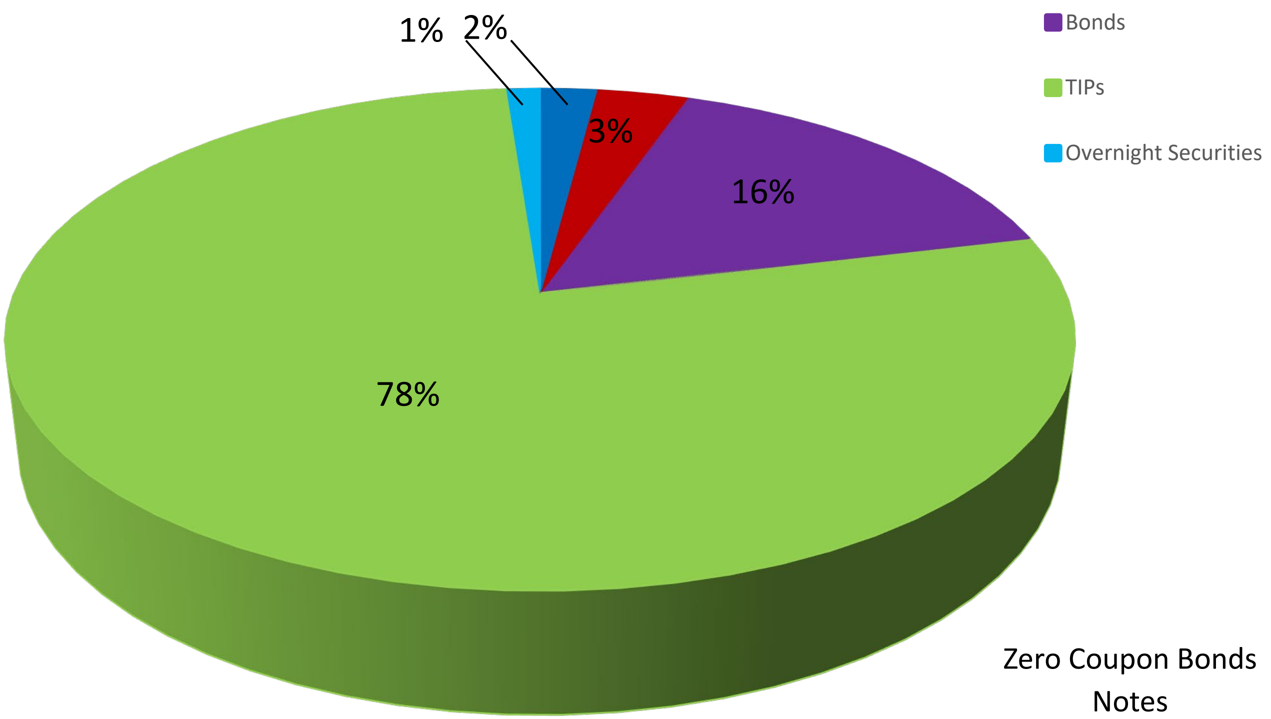
FINANCIAL DATA Updated

Effective Fund Yields

FY	Yield
2013	3.10%
2014	3.16%
2015	1.79%
2016	2.34%
2017	2.92%
2018	3.82%
2019	3.01%
2020	2.67%
2021	5.34%
2022	7.73%

FUNDS STATUS

Military Retirement Portfolio
As Of 5/31/2023



Zero Coupon Bonds	$25.7
Notes	$42.2
Bonds	$200.9
TIPs	$981.3
Overnight Securities	$15.1
Total (in Billions)	$1,265.2

FUND STATUS

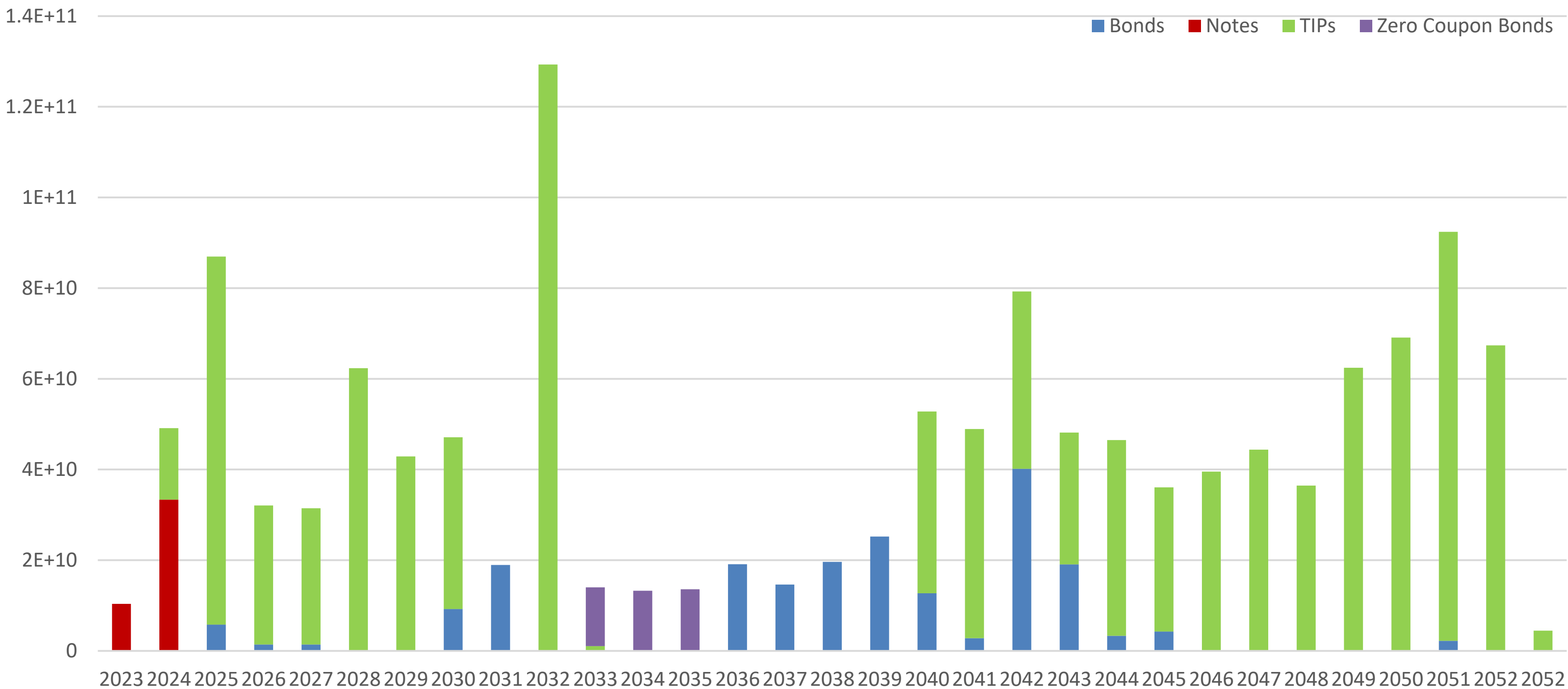
Security Description	Shares Par	Inflation Compensation	Book Value	Market Value
INTEREST ZCB 08/15/33	12,949,000,000.00	-	10,706,196,324.15	8,737,460,247.54
INTEREST ZCB 08/15/34	13,268,000,000.00	-	10,720,909,874.66	8,581,257,587.28
INTEREST ZCB 08/15/35	13,593,000,000.00	-	10,733,678,248.27	8,419,909,271.40
Zero Coupon Bond Total	**39,810,000,000.00**	**-**	**32,160,784,447.08**	**25,738,627,106.22**
MK BOND 1.875% 02/15/2051	2,233,238,900.08	-	2,019,288,124.17	1,471,844,012.58
MK BOND 2.500% 02/15/2045	4,280,660,325.79	-	4,064,184,930.64	3,321,524,871.54
MK BOND 2.750% 11/15/2042	30,591,584,611.59	-	26,461,375,703.52	25,276,296,785.33
MK BOND 3.000% 05/15/2042	6,695,039,147.53	-	6,883,297,866.78	5,791,208,862.61
MK BOND 3.125% 02/15/2042	2,864,461,876.61	-	3,026,295,378.05	2,533,258,472.13
MK BOND 3.125% 02/15/2043	3,349,775,799.13	-	3,528,214,322.85	2,937,334,653.86
MK BOND 3.125% 11/15/2041	2,818,271,057.13	-	2,959,988,066.92	2,498,573,434.09
MK BOND 3.500% 02/15/2039	6,039,034,048.35	-	6,143,449,923.03	5,833,329,451.08
MK BOND 3.625% 02/15/2044	3,321,324,845.08	-	3,780,150,509.57	3,131,386,580.50
MK BOND 3.625% 08/15/2043	15,717,372,038.31	-	15,105,765,175.35	14,862,739,933.73
MK BOND 4.250% 05/15/2039	6,479,267,826.79	-	7,486,828,634.58	6,827,528,472.48
MK BOND 4.250% 11/15/2040	5,520,767,853.28	-	6,669,498,975.57	5,781,279,086.36
MK BOND 4.375% 02/15/2038	15,221,088,782.57	-	19,254,725,932.31	16,329,374,309.55
MK BOND 4.375% 05/15/2040	4,793,071,508.45	-	5,863,633,685.83	5,104,621,156.50
MK BOND 4.375% 11/15/2039	6,831,664,626.58	-	8,026,549,390.31	7,286,397,303.29
MK BOND 4.500% 02/15/2036	19,104,981,805.28	-	24,033,043,339.82	20,860,252,008.64
MK BOND 4.500% 05/15/2038	4,396,913,844.83	-	5,190,723,176.92	4,773,399,592.79
MK BOND 4.500% 08/15/2039	5,861,210,424.29	-	7,036,416,979.01	6,355,750,053.84
MK BOND 4.625% 02/15/2040	2,399,775,551.83	-	3,042,736,624.86	2,636,003,457.71
MK BOND 4.750% 02/15/2037	9,697,894,474.30	-	11,543,368,872.89	10,840,427,667.05
MK BOND 5.000% 05/15/2037	4,912,921,714.87	-	6,062,575,407.21	5,617,618,923.35
MK BOND 5.375% 02/15/2031	18,948,966,774.83	-	24,424,988,190.82	21,062,960,880.65
MK BOND 6.000% 02/15/2026	1,400,000,000.00	-	1,498,748,388.83	1,463,875,000.00
MK BOND 6.250% 05/15/2030	9,225,255,976.51	-	11,296,674,724.80	10,634,990,405.42
MK BOND 6.625% 02/15/2027	1,400,000,000.00	-	1,555,644,763.92	1,526,437,500.00
MK BOND 6.875% 08/15/2025	3,800,000,000.00	-	4,182,326,880.84	4,001,875,000.00
MK BOND 7.625% 02/15/2025	2,000,000,000.00	-	2,156,012,968.83	2,096,875,000.00
Bond Total	**199,904,543,814.01**	**-**	**223,296,506,938.23**	**200,857,162,875.08**

FUND STATUS cont.

Security Description	Shares Par	Inflation Compensation	Book Value	Market Value
MK NOTE 0.125% 09/15/2023	10,387,253,376.71	-	10,270,779,537.06	10,231,444,576.06
MK NOTE 0.375% 09/15/2024	21,479,417,103.80	-	20,503,462,725.26	20,264,487,573.87
MK NOTE 2.750% 02/15/2024	11,884,976,088.44	-	12,087,672,546.91	11,673,274,951.86
Note Total	**43,751,646,568.95**	**-**	**42,861,914,809.23**	**42,169,207,101.79**
MK TIPS 0.125% 01/15/2030	32,292,714,800.06	5,587,931,369.00	39,632,106,833.92	34,459,550,311.92
MK TIPS 0.125% 02/15/2051	77,794,558,985.50	12,386,449,681.67	98,133,794,694.74	59,773,099,807.21
MK TIPS 0.125% 02/15/2052	62,154,343,965.27	5,230,909,588.12	46,351,548,177.48	44,432,151,561.76
MK TIPS 0.125% 07/15/2024	12,384,186,897.41	3,356,610,016.67	15,458,975,142.47	15,273,492,005.70
MK TIPS 0.250% 02/15/2050	58,854,771,145.64	10,234,844,702.23	78,794,925,445.12	48,103,645,034.08
MK TIPS 0.625% 02/15/2043	22,156,985,598.00	6,928,489,396.50	26,684,666,907.91	23,841,000,284.55
MK TIPS 0.750% 02/15/2042	29,278,329,999.00	9,827,271,464.16	38,464,954,306.31	33,203,099,742.32
MK TIPS 0.750% 02/15/2045	24,791,139,787.00	6,982,424,521.01	31,392,707,675.27	26,213,190,554.11
MK TIPS 0.875% 02/15/2047	35,491,724,098.11	8,882,158,872.79	43,912,558,562.10	37,163,126,988.13
MK TIPS 1.000% 02/15/2046	31,047,295,342.32	8,498,576,154.06	41,258,382,308.48	34,293,685,438.26
MK TIPS 1.000% 02/15/2048	29,787,977,975.60	6,668,932,509.18	36,148,912,917.69	31,307,371,878.80
MK TIPS 1.000% 02/15/2049	52,067,680,448.21	10,380,733,450.96	68,674,678,560.23	53,529,999,789.19
MK TIPS 1.125% 01/15/2033	1,045,800,093.45	13,794,103.23	1,021,637,087.16	1,027,475,247.60
MK TIPS 1.375% 02/15/2044	33,333,101,942.39	9,832,265,079.95	44,447,104,142.73	40,615,912,532.58
MK TIPS 1.750% 01/15/2028	7,000,000,000.00	3,084,340,000.00	10,828,188,627.75	10,093,794,068.75
MK TIPS 2.000% 01/15/2026	20,167,675,000.00	10,499,291,605.00	30,979,541,826.47	30,590,299,188.49
MK TIPS 2.125% 02/15/2040	28,691,811,638.98	11,371,712,624.99	45,988,946,771.40	43,105,848,137.77
MK TIPS 2.125% 02/15/2041	33,452,277,019.97	12,650,313,077.87	53,508,840,730.95	49,646,726,711.61
MK TIPS 2.375% 01/15/2025	50,700,000,000.00	30,476,277,000.00	82,713,730,445.54	80,846,498,374.69
MK TIPS 2.375% 01/15/2027	20,071,880,000.00	9,966,892,732.80	30,688,726,809.94	30,545,677,022.67
MK TIPS 2.500% 01/15/2029	7,000,000,000.00	2,839,900,000.00	11,033,390,003.46	10,279,620,531.25
MK TIPS 3.375% 04/15/2032	76,051,206,552.50	53,258,659,948.72	139,298,791,080.60	149,110,439,809.21
MK TIPS 3.625% 04/15/2028	28,000,000,000.00	24,247,440,000.00	54,619,683,417.59	56,835,418,325.00
MK TIPS 3.875% 04/15/2029	18,000,000,000.00	15,045,480,000.00	35,344,219,986.79	37,083,224,587.50
TIPS Total	**791,615,461,289.41**	**278,251,697,898.91**	**1,105,381,012,462.10**	**981,374,347,933.15**
ONE DAY 5.230% 06/01/2023	**15,145,866,383.24**	**-**	**15,145,866,383.24**	**15,145,866,383.24**
Total Portfolio	**1,090,227,518,055.61**	**278,251,697,898.91**	**1,418,846,085,039.88**	**1,265,285,211,399.48**

FUND STATUS

MRF Maturities
As of May 31, 2023



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
10.4	49.1	87.0	32.1	31.4	62.3	42.9	47.1	18.9	129.3	14.0	13.3	13.6	19.1	14.6	19.6	25.2	52.8	48.9	79.3	48.2	46.5	36.1	39.5	44.4	36.5	62.4	69.1	92.4	67.3

DoD Board of Actuaries Meeting Objectives

1. Review and approve the September 30, 2022, closed group valuation results and amortization schedule
    a. Population as of September 30, 2022
    b. Actuarial status information as of September 30, 2022
    c. Change in unfunded liability for FY 2022
    d. Amortization schedule for Coast Guard liability
    e. The October 1, 2023, Treasury amortization payment and normal cost payment
        - The amounts will be sent in a letter to the Secretary of Defense

2. Set the long-term economic assumptions for the September 30, 2023, valuation and FY 2025 Normal Cost Percentages (NCPs)
    a. COLA
    b. Interest Rate
    c. Salary

3. Review and approve proposed non-economic actuarial assumptions for the September 30, 2023, valuation and FY 2025 NCPs
    a. Reserve rates
    b. Mortality improvement scales
    c. SBP parameters
    d. VA offset parameters/disability rates

4. Set FY 2025 DoD NCP. The NCPs will be sent in a letter to the DoD Comptroller and Secretary of Homeland Security (Coast Guard)

5. Review and approve September 30, 2022, VSI valuation

INITIAL ACCOUNTING FIGURES AS OF SEPTEMBER 30
($ in billions)

	2022*	2021
Total Active Duty Personnel + Full-Time Reservists	1,433,234	1,425,020
Total Annualized Basic Pay	$71.98	$67.78
Non-BRS	685,998	739,965
Total Annualized Basic Pay	$44.24	$43.93
BRS	747,236	685,055
Total Annualized Basic Pay	$27.74	$23.85
Total Selected Drilling Reservists	681,979	702,629
Total Annualized Basic Pay	$8.62	$8.40
Non-BRS	385,823	434,854
Total Annualized Basic Pay	$5.98	$6.13
BRS	296,156	267,775
Total Annualized Basic Pay	$2.63	$2.27
Total Non-Selected Reservists (with 20 years)	180,712	182,944
Total Annualized Basic Pay	-N/A-	-N/A-
Total Number of Non-disabled Retirees	1,907,227	1,866,453
Total Annualized Retired Pay	$62.13	$56.92
Total Number of Disabled Retirees	136,468	130,024
Total Annualized Retired Pay	$2.23	$1.96
Total Number of Surviving Families	319,193	317,764
Total Annualized Survivor Annuities	$4.91	$4.60

* 2022 Figures include the addition of Coast Guard (~3% of active duty population and ~1% of reserves).

MILITARY RETIREMENT SYSTEM
ACTUARIAL STATUS INFORMATION

($ in billions)

	9/30/22 [1]	9/30/21	Difference	
1. Present Value of Future Benefits (PVFB)				
a. Retirees and Survivors	$1,372.1	$1,198.5	$173.6	14%
b. Reserves	$248.3	$221.9	$26.4	12%
c. Active Duty	$906.5	$795.8	$110.7	14%
TOTAL	$2,526.8	$2,216.3	$310.5	14%
2. Present Value of Future Normal Cost Contributions (PVFNC) [2]	$418.4	$364.6	$53.8	15%
3. Actuarial Accrued Liability (1 - 2)	$2,108.4	$1,851.6	$256.8	14%
4. Actuarial Value of Assets [3]	$1,279.1	$1,106.5	$172.6	16%
5. Unfunded Accrued Liability (3 - 4)	$829.3	$745.1	$84.2	11%
6. Valuation DoD Normal Cost Percentage (NCP)	FY 2023	FY 2022		
a. Full-time	30.1%	37.4%		-7.3%
b. Part-time	23.1%	24.7%		-1.6%
7. Implemented DoD Normal Cost Percentage, Applied to Basic Pay in Fiscal Year [4]	FY 2024	FY 2023		
a. Full-time	30.0%	36.9%		-6.9%
b. Part-time	23.1%	24.5%		-1.4%
8. Implemented Treasury Normal Cost Percentage, Applied to Basic Pay in Fiscal Year [5]	FY 2024	FY 2023		
a. Full-time	27.9%	16.2%		11.7%
b. Part-time	8.5%	3.8%		4.7%

[1] 9/30/22 numbers include Coast Guard.

[2] 9/30/22 PVFNC reflects a reduction of $960.559 million due to sequestration of the 10/1/2022 Treasury Concurrent Receipt normal cost contribution. The 9/30/21 PVFNC reflects a reduction of $956.658 million due to sequestration of the prior Treasury Concurrent Receipt normal cost contribution.

[3] The following is a reconciliation of assets during FY22 ($ in billions):

	PLUS				MINUS	
Beg. of Year	DoD Accrual	Contributions Treas. Accrual	Unfund. Liab.	Int. Income	Fund Disb.	End of Year
$1,106.5	$26.0	$10.6	$114.5	$93.1	$71.5	$1,279.1

[4] Line 7 may differ from Line 6 in the portion of military personnel assumed to be under the Final Pay, Hi-3, REDUX, and Blended Retirement System retirement benefit formulas.

[5] Line 8 refers to the increase in the normal cost due to concurrent receipt benefits, which is paid by Treasury.

NOTE: Some figures may not add precisely due to rounding.

* The data and assumptions supporting this handout are to be summarized in the DoD Office of the Actuary's September 30, 2022, Valuation of the Military Retirement System.

Long-Term Economic Assumptions

9/30/22 Val	9/30/21 Val
COLA (2.50%)	COLA (2.50%)
Salary (2.75%)	Salary (2.75%)
Interest (4.00%)	Interest (4.00%)

9/30/2022 CHANGE IN UNFUNDED LIABILITY

($ in billions)

(A Negative Change Indicates a Gain and
A Positive Change Indicates a Loss)

1. 9/30/21 Unfunded Liability	$745.1		
2. 10/01/21 Amortization Payment on Unfunded Liability	$114.5		
3. Interest Assumption	1.0400		
4. Expected Unfunded Liability on 9/30/22 (1 - 2) X 3	$655.9		
5. Actual Unfunded Liability	$829.3		
6. Total Change in Unfunded Liability (5 - 4)	**$173.3**	8.2%	
A. Total Experience (gain) loss	**$45.0**	2.1%	
1. COLA, Salary, and Interest	$45.1	2.1%	
a. Interest [1]:	-$40.0	-1.9%	--> -3.1%
b. Salary [2]:	$8.9	0.4%	
c. COLA [3]:	$76.2	3.6%	
2. Noneconomic Experience[4]:	-$0.1	0.0%	
B. 10/1/22 unpaid contribution [5]:	**$1.0**	0.0%	
C. Including Coast Guard:	**$59.7**	2.8%	
D. Total benefit change (gain) loss:	**$0.0**	0.0%	
E. Total assumption change (gain) loss	**$67.7**	3.2%	
1. Updated VA Offset Parameters	$58.8	2.8%	
2. Updated Retiree Death and Other Loss Rates	$1.4	0.1%	
3. Updated Mortality Improvement Scales	$7.5	0.4%	

(Percentages shown are ratios of values of each gain or loss component to the accrued liability; the ratio of the interest gain to the actuarial value of assets is shown as well).

[1] Valuation assumption: 4.00% investment return; FY22 dollar-weighted fund yield: 7.7%

[2] Valuation assumption: 2.75% long-term salary; 1/1/23 across-the-board pay increase: 4.6%

[3] Valuation assumption: 2.50% long-term COLA; 1/1/23 COLA: 8.7%

[4] (Gains)/losses as a percent of liability for each population are as follows:
Active (-0.1%), Reserves (-0.1%), Retiree (0.0%), Survivor (0.9%)

[5] Loss due to $960.559 million sequestration (reduction) to the 10/1/2022 Treasury Concurrent Receipt normal cost contribution.

NOTE: Some figures may not add precisely due to rounding.

* The data and assumptions supporting this handout are to be summarized in the DoD Office of the Actuary's September 30, 2022, valuation of the Military Retirement System.

TOTAL TREASURY PAYMENT

($ in billions)

	October 1, 2023	October 1, 2022
1. Amortization Payment for:		
a. Initial Unfunded Liability	$108.303	$105.404
b. Initial Unfunded Liability for Coast Guard [1]	$20.953	$0.000
c. Benefits Changes	$7.768	$7.676
d. Actuarial Assumptions	$21.608	$17.162
e. Actuarial Experience	($8.110)	($10.799)
f. Prior year unpaid contribution [2]	$0.999	$0.995
Total amortization payment	**$151.521**	**$120.438**
2. Normal Cost payment [3]	**$21.673**	**$10.612**
3. Total Treasury payment	**$173.194**	**$131.050**

[1] Amortized over 3 years, which is the same as the remaining period for 1.a. The remaining amortization period as of October 1, 2023, for 1.c through 1.e is 18.4 years.

Amortizations are scheduled to increase as a percent of the long-term salary increase assumption.

[2] Prior year unpaid contribution of $999 million is due to 8.3% sequestration of the 10/1/2022 Treasury Concurrent Receipt normal cost contribution ($999 million is equal to $960.559 million plus one year of interest at the assumed rate of 4.00%). It is treated as an actuarial experience loss, and amortized over one year.

[3] Treasury contribution to pay for Concurrent Receipt benefits. The 10/1/2022 normal cost payment of $10.612 billion is net of the $960.559 million sequestration reduction. The 10/1/2023 normal cost payment of $21.673 billion does not reflect an expected sequestration reduction.

NOTE: Some figures may not add precisely due to rounding.

* The data and assumptions supporting the October 1, 2023, payment are to be summarized in the DoD Office of the Actuary's September 30, 2022, Valuation of the Military Retirement System report. Support for the prior year's payment is summarized in the September 30, 2021, valuation report.

Economic Assumptions – At A Glance (Page 1 of 2)

Other Systems Current Economic Assumptions in Nominal and Real Terms

Economic Assumption - Nominal Terms	MRF Current 2022	OPM 2023	SSA OASDI Trustee's Report 2023			MRF Financial Statements 2022	CBO Inflation and 10 Yr Treas. Note 2023	Blue Chip Consensus Inflation and 10 Yr Treas. Note 2022
			Low Cost	Intermediate	High Cost			
Reference Date	7/29/2022	5/10/2023	3/31/2023	3/31/2023	3/31/2023	9/1/2022	2/1/2023	12/1/2022
Rate Projection Period	75-100 Yrs Forward	75-100 Yrs Forward	Inf: '26 to '97 Sal: '32 to '97 Int: '32 to '100	Inf: '26 to '97 Sal: '32 to '97 Int: '32 to '100	Inf: '26 to '97 Sal: '32 to '97 Int: '32 to '100	10 Yr Look Back	2029 to 2033	2029 to 2033
Inflation	2.50%	2.40%	3.00%	2.40%	1.80%	2.30%	2.30%	2.10%
Salary	2.75%	2.65%	4.79%	3.56%	2.35%	2.30%	---	---
Interest Rate	4.00%	4.00%	5.80%	4.70%	3.60%	2.80%	3.80%	3.70%

Notes:

(1) **MRF securities are purchased at market, but valued at book.** TIPS are valued at experienced inflation rates to date.

(2) "Salary" refers to Across-The-Board Pay Increase for MRF and OPM, but Total Wage Increase for SSA.
Total Wage Increase for SSA = productivity growth + hours growth + earnings growth + CPI adjusted for substitution

(3) Inflation assumptions for MRF, OPM, and SSA are CPI-W, all other are CPI-U (including Blue Chip).

(4) Above reference dates refer to when the projection and underlying assumptions were adopted.

(5) 'MRF Financial Statements' refers to economic assumptions prescribed by Statement of Federal Financial Accounting Standards (SFFAS) No. 33.

(6) SSA Note that a higher price inflation rate results in faster earnings and revenue growth immediately, while the resulting added growth in benefit levels occurs with a delay, causing an overall improvement in the actuarial balance. Similarly, a lower price inflation rate causes an overall decline in the actuarial balance.

Economic Assumptions – At A Glance (Page 2 of 2)

Economic Assumption - Real Terms	MRF Current 2022	OPM 2023	SSA OASDI Trustee's Report 2023		
			Low Cost	Intermediate	High Cost
Reference Date	**7/29/2022**	**5/10/2023**	**3/31/2023**	**3/31/2023**	**3/31/2023**
Rate Projection Period	**75-100 Yrs Forward**	**75-100 Yrs Forward**	**Inf: '26 to '97 Sal: '32 to '97 Int: '32 to '100**	**Inf: '26 to '97 Sal: '32 to '97 Int: '32 to '100**	**Inf: '26 to '97 Sal: '32 to '97 Int: '32 to '100**
Salary (Real)	0.25%	0.25%	1.79%	1.16%	0.55%
Interest Rate (Real)	1.50%	1.60%	2.80%	2.30%	1.80%

MRF Financial Statements 2022	CBO Inflation and 10 Yr Treas. Note 2023	Blue Chip Consensus Inflation and 10 Yr Treas. Note 2022
9/1/2022	**2/1/2023**	**12/1/2022**
10 Yr Look Back	**10 Yrs Forward**	**10 Yrs Forward**
0.00%	---	---
0.50%	1.50%	1.60%

Blue Chip L-T Index	Year				
	Dec 2022	**Jun 2022**	**Dec 2021**	**Jun 2021**	**Dec 2020**
Projection Period	**10 Yrs**	**10 Yrs**	**10 Yrs**	**10 Yrs**	**10 Yrs**
CPI	**2.10%**	**2.30%**	**2.20%**	**2.20%**	**2.20%**
30 Year Treasury	**4.00%**	**3.90%**	**3.80%**	**3.90%**	**3.60%**
Real Return	1.90%	1.60%	1.60%	1.70%	1.40%

Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2024 through 2028 and averages for the five-year periods 2024-2028 and 2029-2033. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year					Five-Year Averages	
		2024	2025	2026	2027	2028	2024-2028	2029-2033
1. Federal Funds Rate	**CONSENSUS**	**3.7**	**2.9**	**2.8**	**2.8**	**2.7**	**3.0**	**2.8**
	Top 10 Average	4.5	3.7	3.6	3.5	3.4	3.7	3.4
	Bottom 10 Average	2.7	2.2	2.2	2.2	2.2	2.3	2.3
2. Prime Rate	**CONSENSUS**	**6.8**	**6.1**	**5.9**	**5.9**	**5.9**	**6.1**	**5.9**
	Top 10 Average	7.6	6.8	6.7	6.6	6.5	6.8	6.5
	Bottom 10 Average	5.9	5.3	5.3	5.3	5.3	5.4	5.3
3. SOFR	**CONSENSUS**	**3.7**	**2.9**	**2.8**	**2.8**	**2.7**	**3.0**	**2.8**
	Top 10 Average	4.4	3.6	3.4	3.3	3.2	3.6	3.3
	Bottom 10 Average	3.0	2.3	2.2	2.2	2.2	2.4	2.2
4. Commercial Paper, 1-Mo	**CONSENSUS**	**3.7**	**3.1**	**3.0**	**2.9**	**2.9**	**3.1**	**2.9**
	Top 10 Average	4.4	3.6	3.5	3.4	3.3	3.6	3.3
	Bottom 10 Average	3.2	2.6	2.5	2.4	2.4	2.6	2.5
5. Treasury Bill Yield, 3-Mo	**CONSENSUS**	**3.7**	**3.0**	**2.9**	**2.8**	**2.8**	**3.0**	**2.8**
	Top 10 Average	4.4	3.7	3.6	3.5	3.4	3.7	3.4
	Bottom 10 Average	2.9	2.2	2.3	2.2	2.2	2.4	2.3
6. Treasury Bill Yield, 6-Mo	**CONSENSUS**	**3.7**	**3.0**	**3.0**	**3.0**	**2.9**	**3.1**	**3.0**
	Top 10 Average	4.4	3.7	3.7	3.6	3.5	3.8	3.5
	Bottom 10 Average	3.1	2.4	2.4	2.4	2.4	2.5	2.4
7. Treasury Bill Yield, 1-Yr	**CONSENSUS**	**3.8**	**3.1**	**3.1**	**3.1**	**3.0**	**3.2**	**3.1**
	Top 10 Average	4.4	3.8	3.7	3.6	3.5	3.8	3.6
	Bottom 10 Average	3.1	2.5	2.5	2.5	2.5	2.6	2.6
8. Treasury Note Yield, 2-Yr	**CONSENSUS**	**3.6**	**3.2**	**3.2**	**3.1**	**3.1**	**3.2**	**3.1**
	Top 10 Average	4.4	3.9	3.8	3.8	3.7	3.9	3.8
	Bottom 10 Average	2.7	2.5	2.6	2.6	2.6	2.6	2.6
9. Treasury Note Yield, 5-Yr	**CONSENSUS**	**3.6**	**3.3**	**3.4**	**3.4**	**3.3**	**3.4**	**3.4**
	Top 10 Average	4.4	4.0	4.0	4.0	3.9	4.1	3.9
	Bottom 10 Average	2.9	2.7	2.7	2.8	2.8	2.8	2.9
10. Treasury Note Yield, 10-Yr	**CONSENSUS**	**3.7**	**3.5**	**3.6**	**3.6**	**3.6**	**3.6**	**3.7**
	Top 10 Average	4.4	4.2	4.4	4.4	4.3	4.3	4.3
	Bottom 10 Average	3.0	2.9	2.8	2.9	3.0	2.9	3.0
11. Treasury Bond Yield, 30-Yr	**CONSENSUS**	**4.0**	**3.9**	**3.9**	**4.0**	**3.9**	**3.9**	**4.0**
	Top 10 Average	4.6	4.5	4.7	4.6	4.6	4.6	4.7
	Bottom 10 Average	3.4	3.3	3.3	3.3	3.3	3.3	3.3
12. Corporate Aaa Bond Yield	**CONSENSUS**	**5.1**	**4.9**	**5.0**	**5.0**	**5.0**	**5.0**	**5.1**
	Top 10 Average	5.7	5.5	5.6	5.6	5.6	5.6	5.7
	Bottom 10 Average	4.6	4.4	4.4	4.4	4.5	4.4	4.5
13. Corporate Baa Bond Yield	**CONSENSUS**	**6.2**	**5.9**	**5.9**	**6.0**	**5.9**	**6.0**	**6.0**
	Top 10 Average	6.6	6.4	6.5	6.5	6.5	6.5	6.6
	Bottom 10 Average	5.7	5.3	5.3	5.4	5.4	5.4	5.5
14. State & Local Bonds Yield	**CONSENSUS**	**4.4**	**4.2**	**4.3**	**4.3**	**4.3**	**4.3**	**4.4**
	Top 10 Average	4.8	4.7	4.8	4.7	4.7	4.7	4.8
	Bottom 10 Average	3.9	3.7	3.8	3.9	3.9	3.9	3.9
15. Home Mortgage Rate	**CONSENSUS**	**5.9**	**5.5**	**5.5**	**5.5**	**5.5**	**5.6**	**5.5**
	Top 10 Average	6.6	6.2	6.2	6.2	6.2	6.3	6.2
	Bottom 10 Average	5.3	4.8	4.8	4.8	4.8	4.9	4.9
A. Fed's AFE Nominal $ Index	**CONSENSUS**	**117.6**	**116.0**	**114.5**	**113.5**	**112.2**	**114.8**	**110.7**
	Top 10 Average	120.7	119.3	118.5	118.0	117.9	118.9	116.7
	Bottom 10 Average	115.1	112.9	110.7	109.2	107.2	111.0	105.4
		Year-Over-Year, % Change					Five-Year Averages	
		2024	2025	2026	2027	2028	2024-2028	2029-2033
B. Real GDP	**CONSENSUS**	**1.4**	**2.2**	**2.1**	**2.0**	**2.0**	**1.9**	**1.9**
	Top 10 Average	2.2	2.6	2.6	2.4	2.4	2.5	2.3
	Bottom 10 Average	0.5	1.8	1.7	1.7	1.7	1.5	1.6
C. GDP Chained Price Index	**CONSENSUS**	**2.3**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**
	Top 10 Average	2.7	2.4	2.3	2.3	2.3	2.4	2.2
	Bottom 10 Average	2.0	1.9	1.9	1.9	1.9	1.9	1.9
D. Consumer Price Index	**CONSENSUS**	**2.4**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.1**
	Top 10 Average	2.8	2.5	2.4	2.3	2.3	2.5	2.3
	Bottom 10 Average	2.0	2.0	2.0	2.0	2.0	2.0	2.0
E. PCE Price Index	**CONSENSUS**	**2.3**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**
	Top 10 Average	2.6	2.4	2.4	2.3	2.2	2.4	2.2
	Bottom 10 Average	1.9	1.9	1.9	1.9	2.0	1.9	1.9

MRF Fund Yield Projection
BASED ON 2023 SOCIAL SECURITY (SSA) - INTERMEDIATE ASSUMPTIONS

FY	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
2023	4.00%	-0.67%	3.33%	3.50%	3.50%
2024	2.53%	0.84%	3.37%	3.50%	3.50%
2025	2.40%	0.99%	3.39%	3.55%	3.60%
2026	2.40%	1.01%	3.41%	3.60%	3.70%
2027	2.40%	1.06%	3.46%	3.69%	3.90%
2028	2.40%	1.11%	3.51%	3.80%	4.20%
2029	2.40%	1.20%	3.60%	3.93%	4.40%
2030	2.40%	1.32%	3.72%	4.04%	4.60%
2031	2.40%	1.42%	3.82%	4.14%	4.60%
2032	2.40%	1.48%	3.88%	4.22%	4.70%
2033	2.40%	1.54%	3.94%	4.29%	4.70%
2034	2.40%	1.59%	3.99%	4.34%	4.70%
2035	2.40%	1.63%	4.03%	4.38%	4.70%
2036	2.40%	1.68%	4.08%	4.42%	4.70%
2037	2.40%	1.72%	4.12%	4.45%	4.70%
2038	2.40%	1.77%	4.17%	4.47%	4.70%
2039	2.40%	1.80%	4.20%	4.49%	4.70%
2040	2.40%	1.85%	4.25%	4.51%	4.70%
2041	2.40%	1.89%	4.29%	4.53%	4.70%
2042	2.40%	1.93%	4.33%	4.54%	4.70%
2043	2.40%	1.95%	4.35%	4.55%	4.70%
2044	2.40%	1.98%	4.38%	4.57%	4.70%
2045	2.40%	2.01%	4.41%	4.58%	4.70%
2046	2.40%	2.03%	4.43%	4.58%	4.70%
2047	2.40%	2.06%	4.46%	4.59%	4.70%
2048	2.40%	2.08%	4.48%	4.60%	4.70%
2049	2.40%	2.11%	4.51%	4.61%	4.70%
2050	2.40%	2.16%	4.56%	4.61%	4.70%
2051	2.40%	2.22%	4.62%	4.62%	4.70%
2052	2.40%	2.22%	4.62%	4.62%	4.70%
2053	2.40%	2.23%	4.63%	4.63%	4.70%
2054	2.40%	2.23%	4.63%	4.63%	4.70%
2055	2.40%	2.24%	4.64%	4.64%	4.70%
2056	2.40%	2.24%	4.64%	4.64%	4.70%
2057	2.40%	2.24%	4.64%	4.64%	4.70%
2058	2.40%	2.24%	4.64%	4.64%	4.70%
2059	2.40%	2.25%	4.65%	4.65%	4.70%
2060	2.40%	2.25%	4.65%	4.65%	4.70%
2061	2.40%	2.25%	4.65%	4.65%	4.70%
2062	2.40%	2.25%	4.65%	4.65%	4.70%
2063	2.40%	2.26%	4.66%	4.66%	4.70%
2064	2.40%	2.26%	4.66%	4.66%	4.70%
2065	2.40%	2.26%	4.66%	4.66%	4.70%
2066+	2.40%	2.26%	4.66%	4.66%	4.70%

	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
10 Yr Avg	2.57%	0.98%	3.55%	3.80%	4.07%
20 Yr Avg	2.49%	1.36%	3.84%	4.12%	4.38%
30 Yr Avg	2.46%	1.60%	4.06%	4.28%	4.49%
50 Yr Avg	2.43%	1.86%	4.29%	4.43%	4.57%
75 Yr Avg	2.42%	1.99%	4.42%	4.50%	4.62%
10 Yr Fund Wgt Avg	2.54%	1.03%	3.57%	3.83%	4.12%
20 Yr Fund Wgt Avg	2.46%	1.45%	3.91%	4.19%	4.46%
30 Yr Fund Wgt Avg	2.43%	1.74%	4.17%	4.37%	4.57%
50 Yr Fund Wgt Avg	2.41%	2.07%	4.49%	4.56%	4.65%
75 Yr Fund Wgt Avg	2.40%	2.21%	4.61%	4.63%	4.69%
Ultimate	2.40%	2.26%	4.66%	4.66%	4.70%

BoA Assumptions		
2.50%	1.50%	4.00%

Liab Mod Dur	NC FT BRS Mod Dur	NC PT BRS Mod Dur
23	30	40

NC FT Delta*** If Infl -0.25%	NC PT Delta*** If Infl -0.25%
+0.1%	+0.1%

MRF Fund Yield Notes

* Real = Nominal Fund Yield - Inflation. For inflation, fund yield, and new investment return calculations, the "X Yr Avg" calculation is geometric and the "X Yr Fund Wgt Avg" is weighted by expected fund size during FY.

** Assumes an amount equal to 5% of expected annual benefit payments is invested in overnights and new bond purchases are invested in 27-yr bonds. ASSUMES OVERNIGHT RETURNS SAME AS LONG BONDS (new bond purchases are invested in 27-yr bonds with yields equal to SSA's new-purchase yield assumptions from the 2023 Trustees Report). The long-term expected 27-yr bond rate assumes 4.70%.

***There is a +0.1 percent change to both the FY 2024 DoD Full-time (FT) and Part-time (PT) NCP, if the long-term interest rate, across-the-board salary, and COLA assumptions are each lowered by 25 basis points. For reference purposes, the current interest/salary/COLA assumptions are 4.00%/2.75%/2.50%.

--- Long term fund yield converges to 4.66%
--- Short Term Strategy: Mix of overnights and bills.
--- Portfolio Allocation: 75-90% in TIPS and 10-25% in conventional notes and bonds (except, for example, high premiums, TIPS not offered, expected decreases in future inflation, etc.)
--- Investment Policy: The Fund is required to be invested in market based Treasury special issues, and the interest assumption reflects this constraint. Current strategy includes investing the funds to coincide with the cash flow of the fund (to pay benefits and expenses when due) and holding securities to maturity, unless a cash flow requirement to pay benefits occurs. Many considerations are taken into account when making the investment decisions, including balancing various risks, targeting a maturity of future investments of AT MINIMUM 15 years, and current and projected economic conditions.

MRF Fund Yield Projection
BASED ON <u>BLUE CHIP</u> ASSUMPTIONS

FY	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
2023	3.21%	0.41%	3.62%	4.08%	4.08%
2024	2.70%	-0.01%	2.69%	4.02%	3.93%
2025	2.30%	1.25%	3.55%	3.95%	3.88%
2026	2.20%	1.38%	3.58%	3.93%	3.88%
2027	2.20%	1.38%	3.58%	3.93%	3.95%
2028	2.20%	1.39%	3.59%	3.93%	3.90%
2029	2.15%	1.45%	3.60%	3.93%	3.95%
2030	2.10%	1.56%	3.66%	3.94%	3.98%
2031	2.10%	1.59%	3.69%	3.95%	3.98%
2032	2.10%	1.58%	3.68%	3.95%	3.98%
2033	2.10%	1.59%	3.69%	3.95%	3.98%
2034	2.10%	1.60%	3.70%	3.96%	3.98%
2035	2.10%	1.61%	3.71%	3.96%	3.98%
2036	2.10%	1.63%	3.73%	3.96%	3.98%
2037	2.10%	1.65%	3.75%	3.96%	3.98%
2038	2.10%	1.67%	3.77%	3.96%	3.98%
2039	2.10%	1.68%	3.78%	3.97%	3.98%
2040	2.10%	1.70%	3.80%	3.97%	3.98%
2041	2.10%	1.71%	3.81%	3.97%	3.98%
2042	2.10%	1.73%	3.83%	3.97%	3.98%
2043	2.10%	1.74%	3.84%	3.97%	3.98%
2044	2.10%	1.75%	3.85%	3.97%	3.98%
2045	2.10%	1.76%	3.86%	3.97%	3.98%
2046	2.10%	1.77%	3.87%	3.97%	3.98%
2047	2.10%	1.78%	3.88%	3.97%	3.98%
2048	2.10%	1.78%	3.88%	3.97%	3.98%
2049	2.10%	1.80%	3.90%	3.97%	3.98%
2050	2.10%	1.83%	3.93%	3.97%	3.98%
2051	2.10%	1.87%	3.97%	3.97%	3.98%
2052	2.10%	1.87%	3.97%	3.97%	3.98%
2053	2.10%	1.87%	3.97%	3.97%	3.98%
2054	2.10%	1.87%	3.97%	3.97%	3.98%
2055	2.10%	1.87%	3.97%	3.97%	3.98%
2056	2.10%	1.87%	3.97%	3.97%	3.98%
2057	2.10%	1.87%	3.97%	3.97%	3.98%
2058	2.10%	1.87%	3.97%	3.97%	3.98%
2059	2.10%	1.87%	3.97%	3.97%	3.98%
2060	2.10%	1.87%	3.97%	3.97%	3.98%
2061	2.10%	1.87%	3.97%	3.97%	3.98%
2062	2.10%	1.87%	3.97%	3.97%	3.98%
2063	2.10%	1.88%	3.98%	3.98%	3.98%
2064	2.10%	1.88%	3.98%	3.98%	3.98%
2065	2.10%	1.88%	3.98%	3.98%	3.98%
2066+	2.10%	1.88%	3.98%	3.98%	3.98%

	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
10 Yr Avg	2.33%	1.20%	3.52%	3.96%	3.95%
20 Yr Avg	2.21%	1.43%	3.64%	3.96%	3.96%
30 Yr Avg	2.18%	1.55%	3.73%	3.96%	3.97%
50 Yr Avg	2.15%	1.68%	3.83%	3.97%	3.97%
75 Yr Avg	2.13%	1.75%	3.88%	3.97%	3.97%
10 Yr Fund Wgt Avg	2.29%	1.25%	3.54%	3.96%	3.95%
20 Yr Fund Wgt Avg	2.18%	1.49%	3.67%	3.96%	3.97%
30 Yr Fund Wgt Avg	2.15%	1.62%	3.77%	3.97%	3.97%
50 Yr Fund Wgt Avg	2.12%	1.78%	3.90%	3.97%	3.97%
75 Yr Fund Wgt Avg	2.11%	1.84%	3.95%	3.97%	3.98%
Ultimate	2.10%	1.88%	3.98%	3.98%	3.98%

BoA Assumptions		
2.50%	1.50%	4.00%

Liab Mod Dur	NC FT BRS Mod Dur	NC PT BRS Mod Dur	NC FT Delta*** If Infl -0.25%	NC PT Delta*** If Infl -0.25%
23	30	40	+0.1%	+0.1%

<u>MRF Fund Yield Notes</u>

* Real = Nominal Fund Yield - Inflation. For inflation, fund yield, and new investment return calculations, the "X Yr Avg" calculation is geometric and the "X Yr Fund Wgt Avg" is weighted by expected fund size during FY.

** Assumes an amount equal to 5% of expected annual benefit payments is invested in overnights and new bond purchases are invested in 27-yr bonds. The long-term expected 27-yr bond rate assumes 3.98%.

***There is a +0.1 percent change to both the FY 2024 DoD Full-time (FT) and Part-time (PT) NCP, if the long-term interest rate, across-the-board salary, and COLA assumptions are each lowered by 25 basis points. For reference purposes, the current interest/salary/COLA assumptions are 4.00%/2.75%/2.50%.

--- Long term fund yield converges to 3.98%

--- Short Term Strategy: Mix of overnights and bills.

--- Portfolio Allocation: 75-90% in TIPS and 10-25% in conventional notes and bonds (except, for example, high premiums, TIPS not offered, expected decreases in future inflation, etc.)

--- Investment Policy: The Fund is required to be invested in market based Treasury special issues, and the interest assumption reflects this constraint. Current strategy includes investing the funds to coincide with the cash flow of the fund (to pay benefits and expenses when due) and holding securities to maturity, unless a cash flow requirement to pay benefits occurs. Many considerations are taken into account when making the investment decisions, including balancing various risks, targeting a maturity of future investments of AT MINIMUM 15 years, and current and projected economic conditions.

PROPOSED NON-ECONOMIC ASSUMPTION CHANGES FOR 9/30/2023 MRF VALUATION AND FY 2025 MRF NORMAL COST PERCENTAGES (NCPs)

FY 2025 NCP SUMMARY

Below is a summary of the proposed changes and their impact on the FY 2025 full- and part-time NCPs.

	DoD		Total	
	Full-time	Part-time	Full-Time	Part-time
FY 2024 Budgeted DoD NCPs (Prior assumptions)	30.0%	23.1%	57.9%	31.6%
FY 2025 DoD NCPs from 9/30/2022 Valuation (Prior assumptions)	29.6%	22.8%	57.4%	31.3%
FY 2025 DoD NCPs from 9/30/2023 Valuation (Prior assumptions) *	29.6%	22.8%	57.5%	31.3%
i. Proposed Reserve Rates	0.0%	-0.1%	-0.1%	-0.3%
ii. Proposed Mortality Improvement Scales	-0.1%	-0.2%	-0.4%	-0.3%
iii. Proposed SBP Parameters	0.4%	0.4%	0.2%	0.5%
iv. Proposed VA Offset Parameters	-3.3%	-1.4%	0.2%	0.1%
FY 2025 DoD NCP from 9/30/2023 Valuation**	**26.6%**	**21.5%**	**57.4%**	**31.3%**

* Impact of additional year of mortality improvement (advancing the valuation year from 2022 to 2023).

** The total NCP (DoD + Treasury) for FY 2025 based on the above proposed changes is 57.4% for full-time and 31.3% for part-time. Therefore, the estimated FY 2025 Treasury NCP is 30.8% for full-time and 9.8% for part-time. See Attachment 1 for Treasury NCPs.

PROPOSED RESERVE RATES

SUMMARY IMPACT: These proposals result in no change (to the 3rd decimal place) in the FY 2025 full-time DoD NCP, a 0.1% decrease in the part-time NCP, and a decrease in the 9/30/2022 accrued liability of $17.8 billion (or 0.8%).

<u>PROPOSAL</u>: We propose the following updates to reserve retirement rates and blow-up factors and elimination of the reserve career points adjustment factors.

1) Selected reserve and grey area reserve retirement rates and blow-up factors

The proposed rates decrease the FY 2025 full-time DoD NCP by 0.2%, decrease the part-time NCP by 2.2%, and decrease the 9/30/2022 accrued liability by $25.8 billion (or 1.2%).

- The proposed reserve retirement rates and grey area blow-up factors are based on the same experience period (FYs 2017-2019), but include Coast Guard data (minimal impact).
- The proposed reserve retirement rates improve the actuarial valuation model's short-term projection of reserve retirees when compared to actual for the past several years. Using current rates, the model projected 33% more reserve retirees compared to actual for FY 2022 (26,000 projected vs. 19,500 actual). We propose removing ad hoc increases applied to the current reserve retirement rates below age 60 to account for pre-age 60 retirements per NDAA 2008 (minimal impact). We also propose changing reserve retirement rates applied at the "edges" of age and years of service, e.g., age 63 and over, and 41 or more years of service. We currently assume 100% retirement when a retiree reaches an edge, and the proposal is to apply actual rates of retirement instead (except for age 59 which we will continue to use 100% rate) (moderate impact). These changes lower the projection of FY 2022 reserve retirees to 21,000.

2) Eliminate Reserve Career Points Adjustment factors

Eliminating these factors increases the FY 2025 full-time DoD NCPs by 0.2%, increases the part-time NCP by 2.1%, and increases the 9/30/2022 accrued liability by $8.0 billion (or 0.4%).

- Career Points Adjustment factors model demographic changes on the progression of average career points throughout the projection (moderate impact). The factors are calculated as the ratio of average career points for continuing reservists to average career points for reservists on the file at the beginning of the year, and have been applied to the beginning of year average career points.

<u>RATIONALE:</u> To improve the projection of reserve retirements, simplify the reserve model, and to incorporate Coast Guard experience, and to better align reserve retirements at the edges of age and years of service with actual data and reflect Board reserve advisors' view that applying actual rates of retirement (instead of 100%) is more reasonable. Attachment 2 provides a comparison of the current and proposed rates.

<u>PROPOSED MORTALITY IMPROVEMENT SCALES</u>

<u>SUMMARY IMPACT:</u> This proposal results in a 0.1% decrease to the FY 2025 full-time DoD NCP, a 0.2% decrease to the part-time DoD NCP, and a decrease in the accrued liability of $35.5 billion (or 1.7%).

<u>PROPOSAL</u>: We propose the following changes to the military mortality improvement (Mil MI) projection scales: (a) incorporate 2021 data with 0% weight and 2022 data with 25% weight; (b) use military retiree long-term rates of mortality improvement for survivors; and (c) eliminate COVID loads.

The current Mil MI factors in our valuation are based on FY00-20 military data and use modified methods underlying the SOA's MP-2021 model, with loads due to COVID in FYs 2021-2023. The proposed Mil MI projection scales are used to improve death rates for MRF retirees, survivors, and spouses of retirees.

RATIONALE: Updating the Mil MI factors each year helps to keep us aware of emerging trends and techniques in mortality projection. The current Mil MI factors do not include FY21 data due to 16% excess deaths, and include COVID loads in FYs 2021-2023, reverting back to pre- COVID levels thereafter. Excess deaths for military retirees in FY22 were 10%. In addition to lingering effects from COVID, experts suggest that excess deaths for non-COVID reasons (for example, deaths of despair and continued reduction in healthcare capacity) may also continue for many years after 2022. Thus, we are proposing giving a weight of 0% to FY 2021, and a weight of 25% to FY 2022. To avoid potential edge effects of the model, we are continuing to step back 3 years so that 2019 is the starting point of the projection.

We also propose using military retiree long-term rates of mortality improvement for survivors (the current survivor long-term rates are based on those published by the SOA). To obtain the long-term rates for survivors we used a 50% weighting of officer and enlisted long-term rates.

Attachment 3 provides a comparison of the current and proposed methods. Attachment 4 provides the heat maps for the Mil MI factors. Attachment 5 provides illustrations of the comparison between the proposed and current long-term rate of mortality improvement for survivors.

PROPOSED SBP PARAMETERS

SUMMARY IMPACT: This proposal results in a 0.4% increase to the FY 2025 full-time DoD NCP, a 0.4% increase in the part-time NCP, and a decrease in the 9/30/2022 accrued liability of $1.5 billion (or 0.1%).

PROPOSAL: We propose an update to SBP parameters[1] from the experience periods listed below to FY 2021 for the following:

- SBP new retiree election rate, FYs 2007-2009
- SBP new retiree premium reduction factors, FYs 2007-2009
- SBP continuing retiree parameters modeling survivor benefits, FY 2008

RATIONALE: The purpose of the update is to reflect changes in SBP experience over time, such as potential effects of sunsetting CSB/Redux on December 31, 2017, and repeal of the DIC offset in NDAA FY 2020. The proposed parameters also incorporate Coast Guard experience. See Attachments 6 and 7 for a description of the rates development.

[1] Descriptions of SBP parameters can be found in Appendix F of the 9/30/2021 MRF Valuation Report.

PROPOSED VA OFFSET PARAMETERS/DISABILITY RATES

SUMMARY IMPACT: This proposal results in a 3.3% decrease to the FY 2025 full-time DoD NCP, a 1.4% decrease in the part-time NCP, and less than 0.01% change in the 9/30/2022 accrued liability.

PROPOSAL: We propose adjustments to VA Offset parameters and disability rates used in the valuation to reflect future expectations due to the Promise to Address Comprehensive Toxics (PACT) Act.

- Adjust VA Offset parameters for new non-disabled retirees such that the annual increase in concurrent receipt outlays in an open group run is 10% in 30-40 years.
- Ad hoc increases to the permanent and temporary disability retirement rates for both actives and reserves of 10% while decreasing loss incidence by the same number to reflect the anticipated increase in disability retirees due to the PACT Act.

RATIONALE: The PACT Act was passed in August 2022. The number of new veterans receiving VA disability compensation in 2031 is projected to be 20% higher as a result of this legislation. However, the resulting increase in concurrent receipt outlays is not expected to be as great. We propose using a 10% increase in outlays until more data is available. It should be noted that there is a potential for significant increases in concurrent receipt outlays in the future. The Board's letter to the Secretary of Defense regarding concurrent receipt is at Attachment 8.

Attachment 1: Proposed changes and their impact on FY2025 Full- and Part-time NCPs:

DoD NCP

	Full-time	Part-time
FY 2024 Budgeted DoD NCPs (Prior assumptions)	30.0%	23.1%
FY 2025 DoD NCPs from 9/30/2022 Valuation (Prior assumptions)	29.6%	22.8%
FY 2025 DoD NCPs from 9/30/2023 Valuation (Prior assumptions) *	29.6%	22.8%
i. Proposed Reserve Rates	0.0%	-0.1%
ii. Proposed Mortality Improvement Scales	-0.1%	-0.2%
iii. Proposed SBP Parameters	0.4%	0.4%
iv. Proposed VA Offset Parameters/Disability Rates	-3.3%	-1.4%
FY 2025 DoD NCP from 9/30/2023 Valuation	**26.6%**	**21.5%**

Total NCP

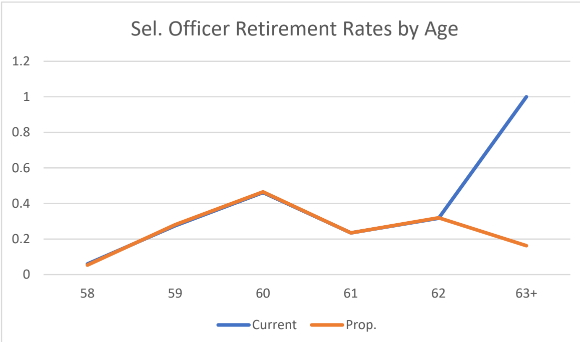
	Full-time	Part-time
FY 2024 Budgeted Total NCPs (Prior assumptions)	57.9%	31.6%
FY 2025 Total NCPs from 9/30/2022 Valuation (Prior assumptions)	57.4%	31.3%
FY 2025 Total NCPs from 9/30/2023 Valuation (Prior assumptions) *	57.5%	31.3%
i. Proposed Reserve Rates	-0.1%	-0.3%
ii. Proposed Mortality Improvement Scales	-0.4%	-0.3%
iii. Proposed SBP Parameters	0.2%	0.5%
iv. Proposed VA Offset Parameters/Disability Rates	0.2%	0.1%
FY 2025 Total NCP from 9/30/2023 Valuation	**57.4%**	**31.3%**

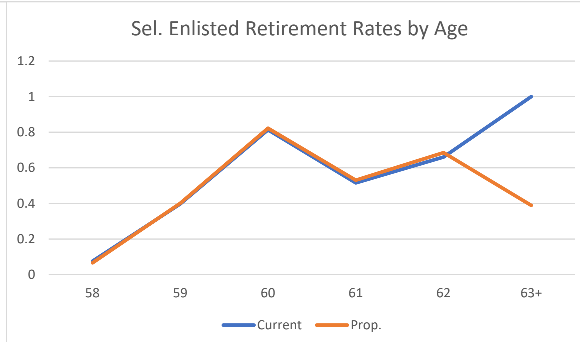
Treasury NCP

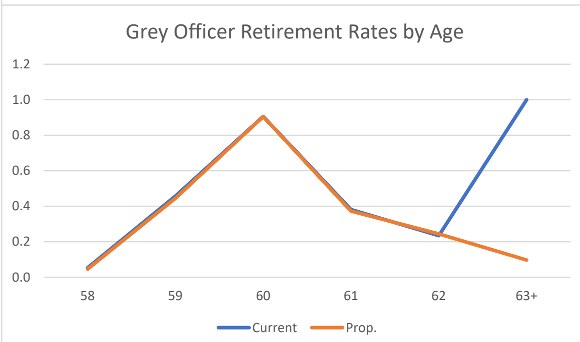
	Full-time	Part-time
FY 2024 Budgeted Treasury NCPs (Prior assumptions)	27.9%	8.5%
FY 2025 Treasury NCPs from 9/30/2022 Valuation (Prior assumptions)	27.8%	8.5%
FY 2025 Treasury NCPs from 9/30/2023 Valuation (Prior assumptions) *	27.9%	8.5%
i. Proposed Reserve Rates	-0.1%	-0.2%
ii. Proposed Mortality Improvement Scales	-0.3%	-0.1%
iii. Proposed SBP Parameters	-0.2%	0.1%
iv. Proposed VA Offset Parameters/Disability Rates	3.5%	1.5%
FY 2025 Treasury NCP from 9/30/2023 Valuation	**30.8%**	**9.8%**

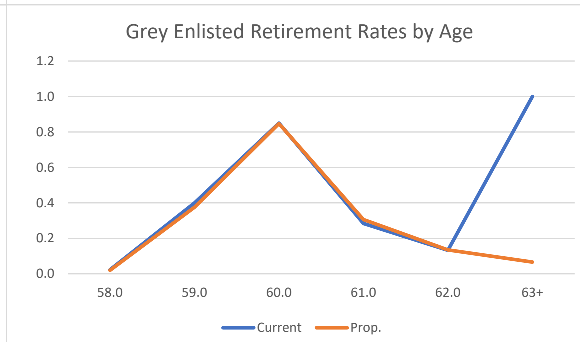
* Reflects an additional year of mortality improvement in the NCPs (advancing the valuation year from 2022 to 2023).

Attachment 2: Reserve Retirement Update









Footnotes:

1. Additional changes to the proposed rates are including CG experience for both select and grey and using YOS <41 for the shown ages for grey retirements. A factor (not shown here) is applied to the grey retirement rate at 41 YOS. This adds a dimension to the retirement rates to account for the difference between 41 YOS retirements and the average of YOS <41 used elsewhere. At age 59 and 41 YOS, a retirement rate of 100% is used.
2. Both the actual retirements and the proposed rates do not include grey area retirees who appear on the end of year file as retired while not being on the beginning of year file. These retirees are modeled with the grey area blow up factor applied to the shown rates.
3. The proposed changes have the following impact on the probability of a reserve new entrant making retirement:

Officer: 61% to 58% Enlisted: 16% to 15% All: 18% to 16%

Attachment 3: MI METHODS/ASSUMPTIONS COMPARISON:

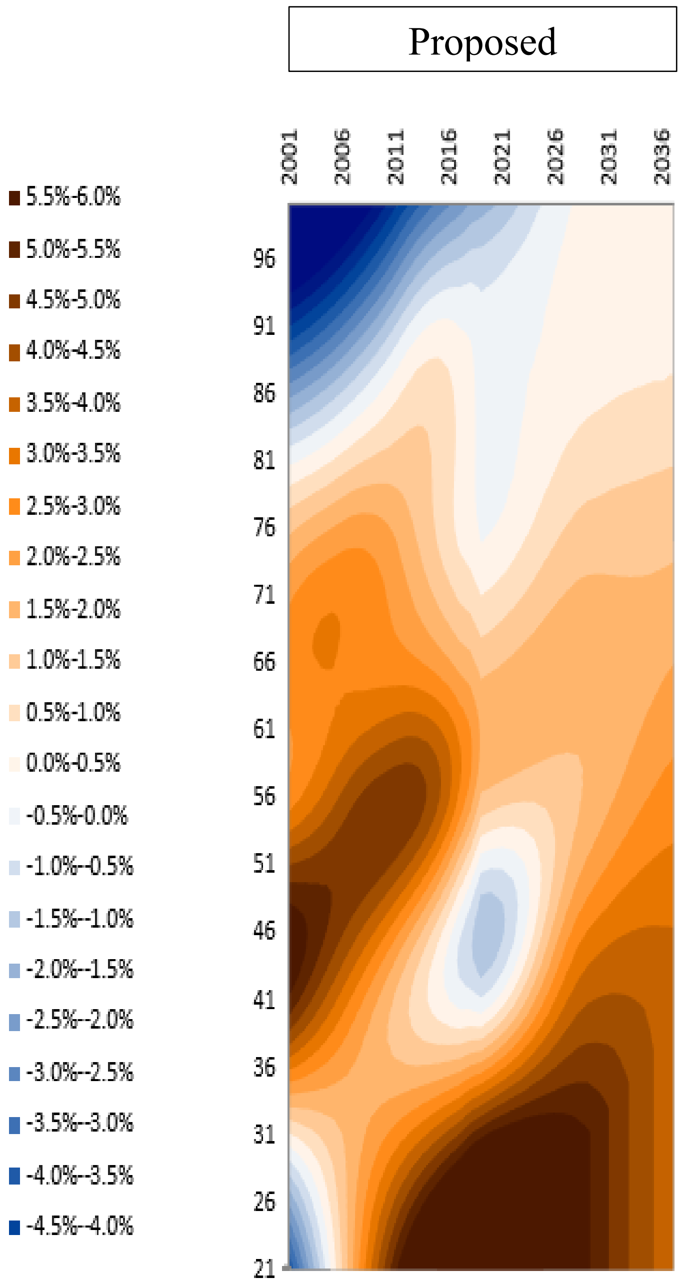
Model Component	SOA MP 2021[1]	DoD Current	DoD Proposed
Underlying Mortality Data	SSA-published through 2019	DoD data 2000 through 2020	DoD data 2000 through 2022, with weights of 0% and 25% applied to 2021 and 2022 data
Graduation Technique	2D Whittaker Henderson; Order 3	2D P-spline model; deaths assumed to be Poisson distributed.	
Smoothing Parameters	100 in the calendar year direction; 400 in the age direction		
Edge Effect Step-back	2 years	3 years	
Interpolating from current MI to Ult MI	Cubic Polynomials: @ beginning - match value and slope (constrained to initial slope constraint immediately below), @ end – match ultimate MI and slope 0. [2]		
Initial Slope Constraint	0		
Long Term MI	Flat 1.35% rate to age 62, decreasing linearly to 1.10% at age 80, further decreasing linearly to 0.40% at age 95, and then decreasing linearly to 0.00% at age 115.	Enlisted: 3.5% before age 45, linear decrease to 0.25% to age 90, then linear decrease to 0 at age 115. Officer: 4% before age 50, linear decrease to 3.5% at age 60, then decrease to 0.25% at age 95, then decrease to 0% at age 115. Survivor: same as SOA long term rate of improvement.	No change to Enlisted and Officer. Survivor: A 50% and 50% blend of the DoD retiree officer and enlisted long-term rates of improvement.
Convergence Period – Horizontal (Age)	10 Years		
Convergence Period – Diagonal (Cohort)	20 Years[3]		
Additional COVID adjustment	None	Load the mortality by 15% for FY 2021, 4% for FY 2022, and 1% for FY 2023	None

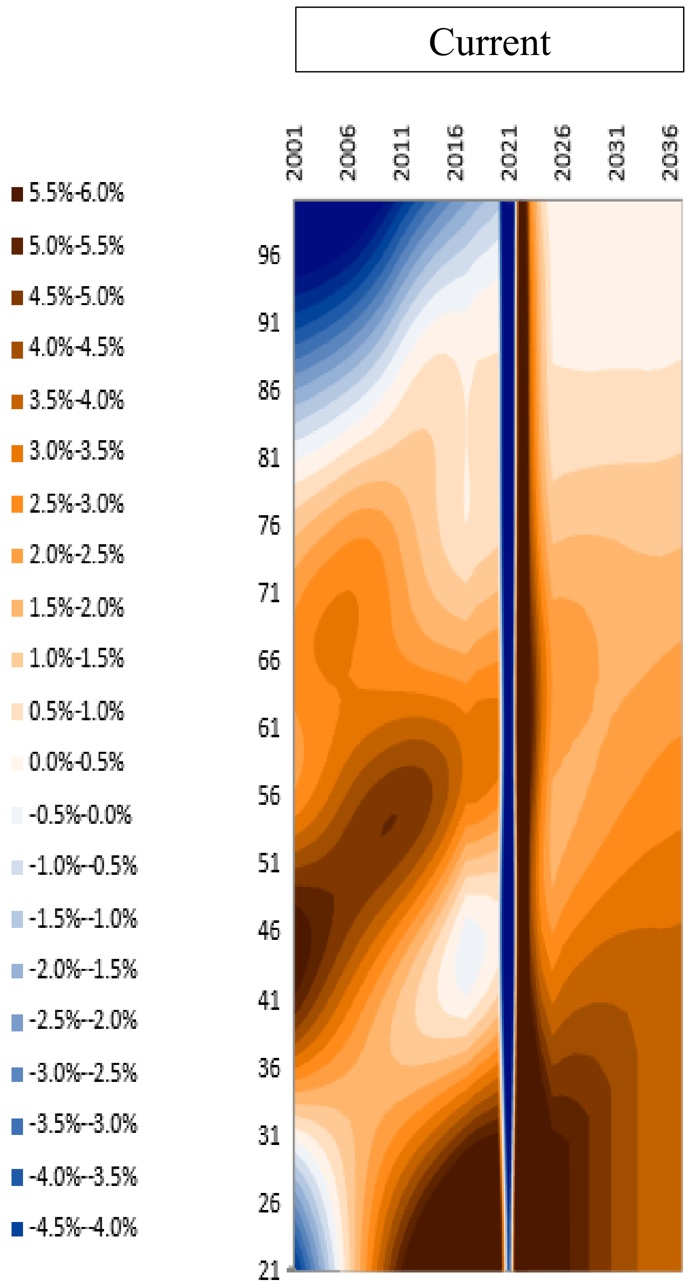
[1] SOA did not produce a new projection scale in 2022 as the COVID impacted data was uncertain to be predictive of future mortality

[2] Starting MI values for young ages without credible data are set equal to the MI for the youngest credible age. Starting MI values for old ages without credible data grade to 0 at age 115, analogous to the assumed long-term MI.

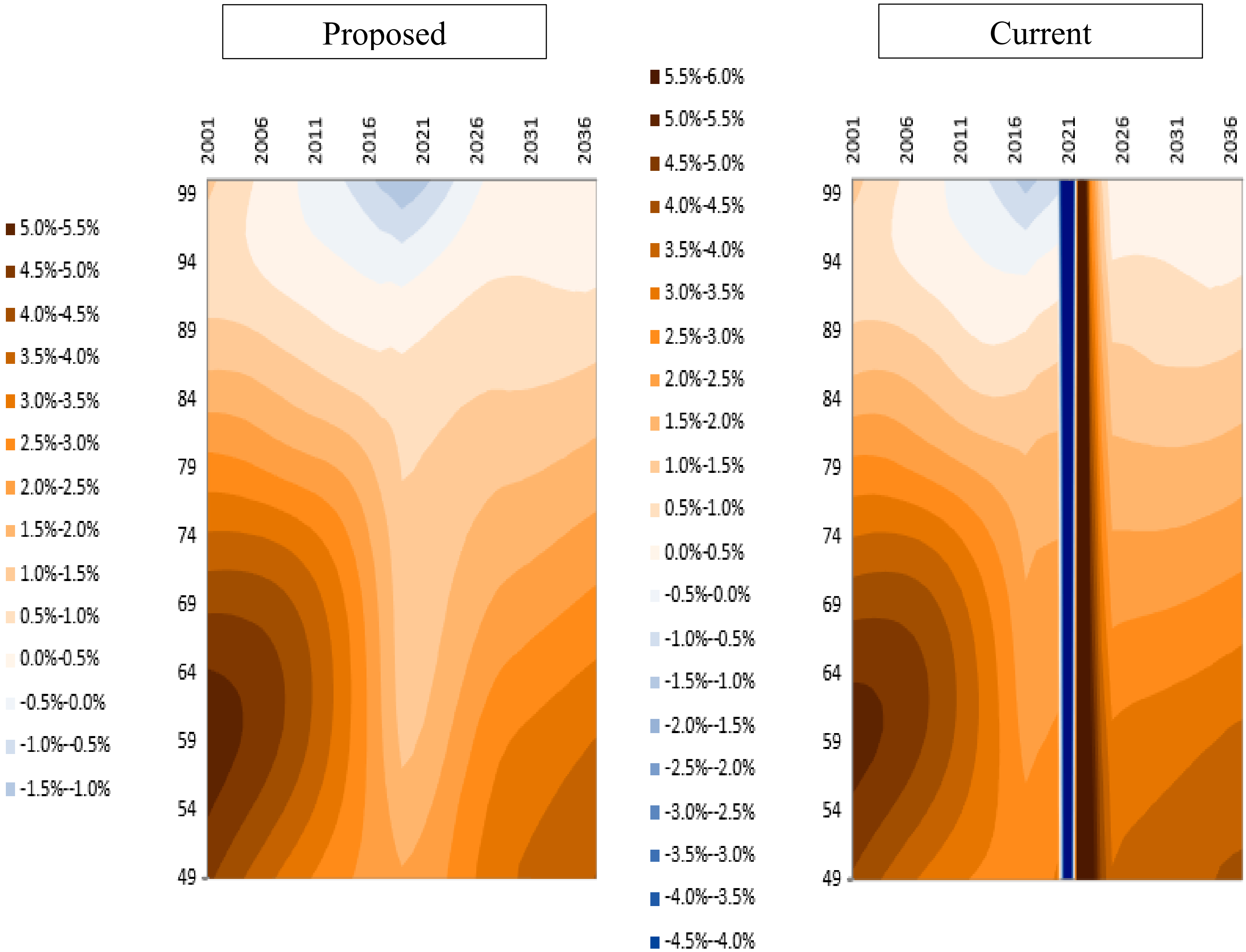
[3] DoD proposed improvement scales converge to an ultimate level in 2039 (first projection year is 2019).

Attachment 4: DoD Mortality Improvement Heat Map – Retired Enlisted

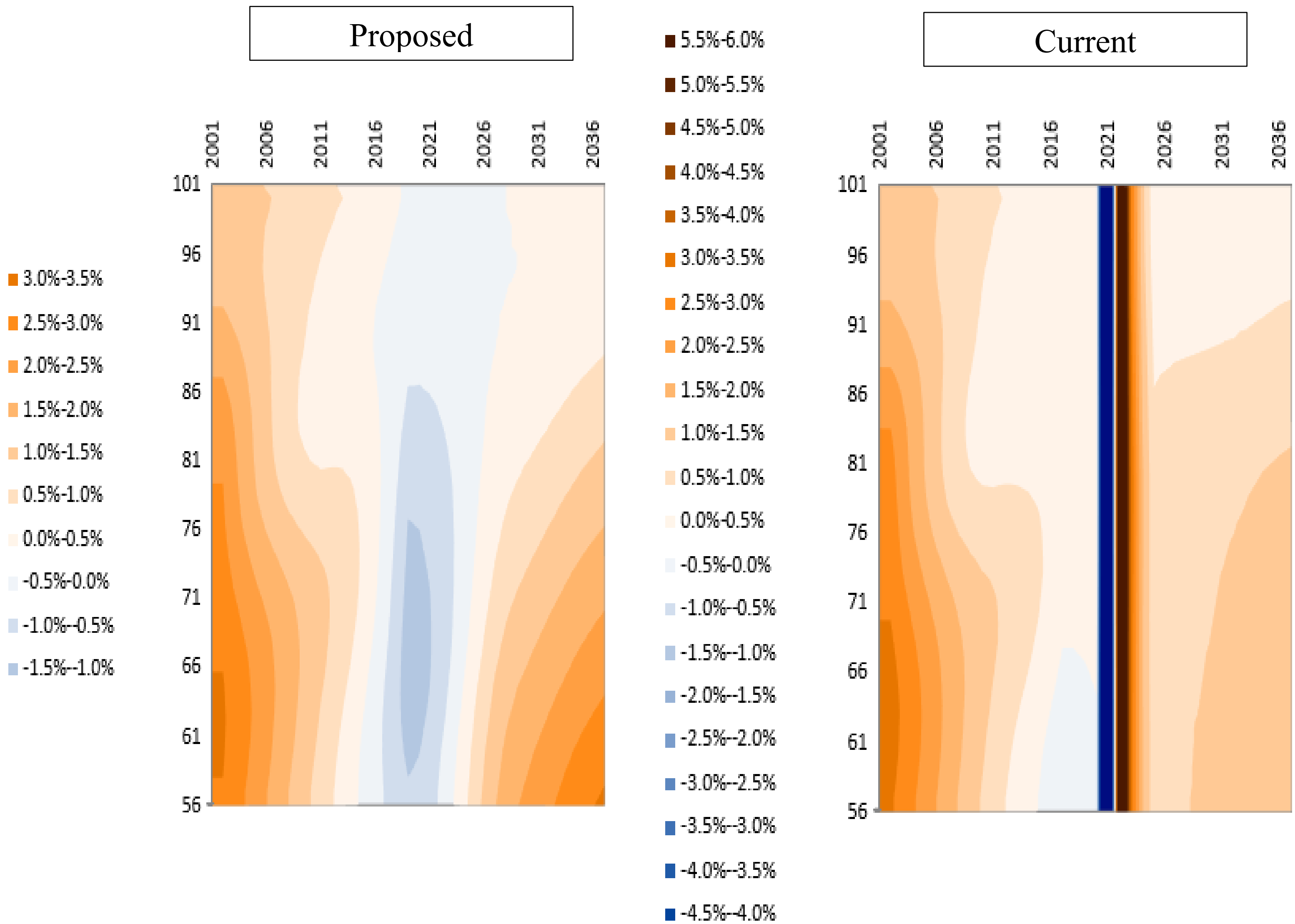




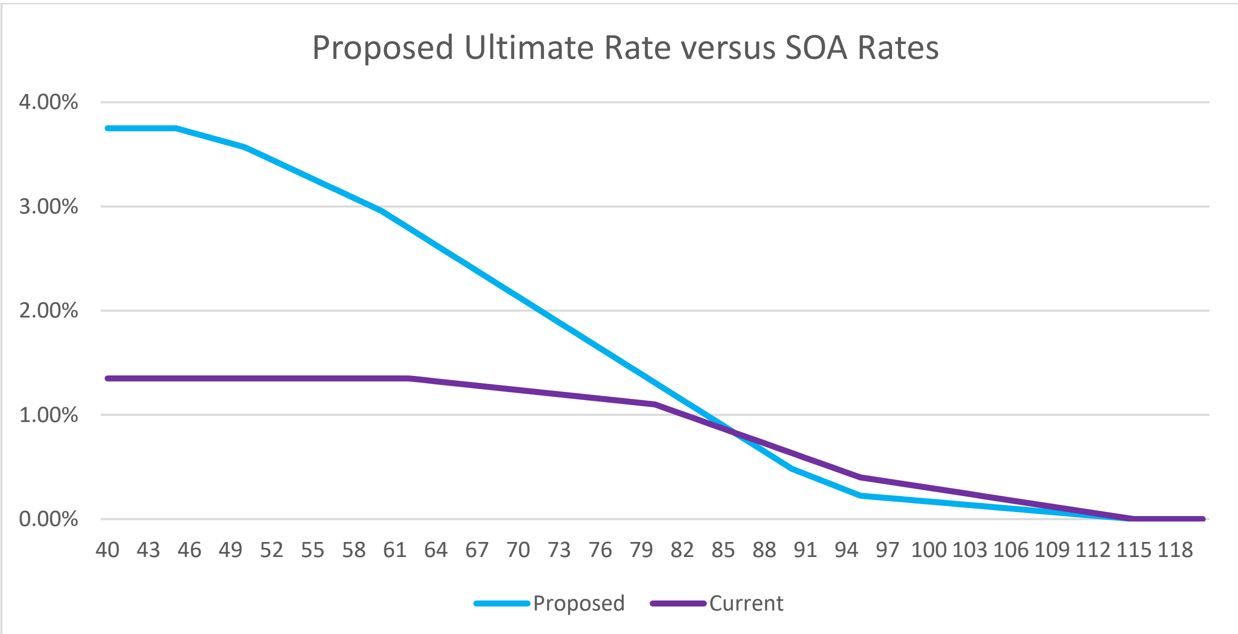
Attachment 4 (Cont.): DoD Mortality Improvement Heat Map – Retired Officer



<u>Attachment 4 (Cont.): DoD Mortality Improvement Heat Map – Spouse</u>

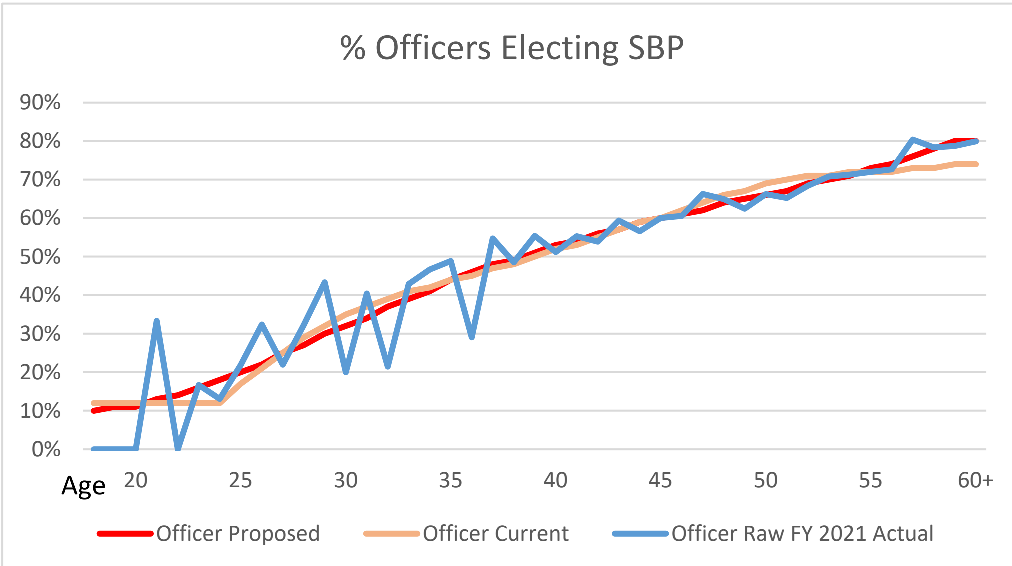


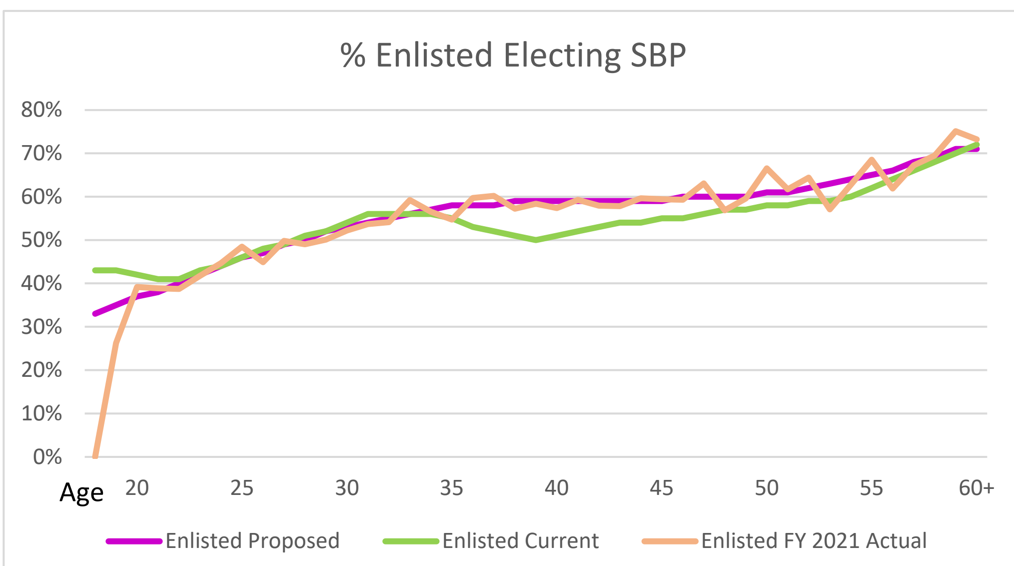
Attachment 5: Long Term Rate of Mortality Improvement for Survivors



Attachment 6: SBP Participation Rate Assumptions

SBP Participation Rate Assumptions





The election rate is for Spouse and Spouse-Child elections only. Includes former spouse

Reserve
SBP & RCSBP Participation Rates

Current Assumptions

	RC-SBP Participation			SBP Participation	
	Immediate	Deferred		Immediate	Deferred
Officer	0.438	0.094		0.811	0.000
Enlisted	0.456	0.067		0.809	0.000

Proposed Assumptions

	RC-SBP Participation Rates			SBP Participation Rates	
	Immediate	Deferred		Immediate	Deferred
Officer	0.624	0.012		0.855	0.000
Enlisted	0.700	0.023		0.821	0.000

Participation Rate is for all elections

Attachment 7: Other Updated SBP Parameters

SBP New Retiree Premium Reduction Factors

Summary: The parameters updated are described in the FY 2021 Technical Reference to the MRS Valuation, Actives Table F-1 Item 6 as "Reduction Factors for SBP: Premium amounts, as a percent of retired pay, by age, officer/enlisted status, and benefit tier." Specifically, these parameters adjust between net and gross pay accounting for offset due to SBP premium along with effects due to VA offset. These parameters are used at retirement (Fig. 1), 30-year paid-up (Fig. 2), and adjusted for BRS lump sum election reduction in gross pay at retirement and used again for gross pay restoral at age 67 (Fig. 3).

Additionally, we propose to simplify the SBP premium reduction used at retirement by combining all ages and combining CSB and non-CSB. The proposed simplification does not change the NCPs at a 0.1% level when compared to simply updating the prior method with new experience.

Experience: Update from FYs 2007-2009 (2007-2008 with adjustments for the BRS parameters) to FY 2021

Summary Impact: FT NCP -0.1%, PT NCP no change

SBP Continuing Retiree Parameters Modeling Survivor Benefits

Summary: The parameters updated are described in Survivor Table F-1 Item 5 as "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. These are expressed as ratios to those electing spouse only or spouse/child coverage…" (Fig. 4-6) and Item 2 as "Ratio of SBP Base Amount to Net Retired Pay" (Fig. 7).

The people allocation factors go from electors in pay status to all electors. Therefore, values over 1 are possible and allocation factors for spouse/child are also needed. Insurable interest is not included in the following figures. The factors for it remain approximately zero except for disabled enlisted which saw a small increase for younger ages.

Experience: Update from FY 2008 to FY 2021

Summary Impact: FT NCP +0.4%, PT NCP +0.3%

Figure 1: SBP Premium Offset for New Retirees

Current, FYs 2007-2009

	NDIS NonCSB				NDIS CSB				DIS			
	All Retirees		Sp-SpCh Electors		All Retirees		Sp-SpCh Electors		All Retirees		Sp-SpCh Electors	
Age	Off	Enl	Off	Enl	Off	Enl	Off	Enl	Off	Enl	Off	Enl
16 to 25	-	-	-	-	-	-	-	-	0.99	0.981	0.962	0.958
26 to 30	-	-	-	-	-	-	-	-	0.986	0.973	0.938	0.948
31 to 35	-	-	-	-	-	-	-	-	0.972	0.968	0.938	0.944
36 to 40	0.971	0.97	0.939	0.941	0.973	0.973	0.932	0.933	0.97	0.967	0.938	0.942
41 to 45	0.966	0.969	0.942	0.941	0.969	0.971	0.934	0.934	0.963	0.963	0.939	0.941
46 to 50	0.962	0.968	0.942	0.943	0.964	0.97	0.934	0.935	0.96	0.963	0.939	0.939
51 to 55	0.957	0.966	0.941	0.942	0.96	0.968	0.933	0.934	0.962	0.956	0.938	0.939
56+	0.952	0.96	0.938	0.94	0.955	0.962	0.93	0.932	0.951	0.956	0.937	0.938

FY 2021 Experience

	NDIS NonCSB				NDIS CSB				DIS			
	All Retirees		Sp-SpCh Electors		All Retirees		Sp-SpCh Electors		All Retirees		Sp-SpCh Electors	
Age	Off	Enl	Off	Enl	Off	Enl	Off	Enl	Off	Enl	Off	Enl
16 to 25	-	-	-	-	-	-	-	-	0.987	0.980	0.940	0.953
26 to 30	-	-	-	-	-	-	-	-	0.982	0.973	0.941	0.947
31 to 35	-	-	-	-	-	-	-	-	0.974	0.968	0.936	0.943
36 to 40	0.967	0.963	0.936	0.936	0.966	0.957	0.928	0.927	0.966	0.962	0.936	0.938
41 to 45	0.963	0.963	0.936	0.936	0.961	0.959	0.931	0.930	0.961	0.963	0.936	0.937
46 to 50	0.958	0.962	0.937	0.937	0.967	0.960	0.938	0.934	0.961	0.957	0.937	0.936
51 to 55	0.956	0.962	0.938	0.937	0.963	0.960	0.937	0.934	0.959	0.958	0.936	0.937
56+	0.952	0.960	0.939	0.937	0.951	0.955	0.935	0.932	0.965	0.957	0.935	0.938

Proposed

NDIS				DIS			
All Retirees		Sp-SpCh Electors		All Retirees		Sp-SpCh Electors	
Off	Enl	Off	Enl	Off	Enl	Off	Enl
0.959	0.962	0.937	0.935	0.967	0.969	0.936	0.943

Figure 2: SBP Premium Offset Removal at 30-Year Paid-Up

Current

	SBP	Tot SBP & VA	DoD SBP & VA	Age
Ndis Off	0.946	0.929	0.867	79
Ndis Enl	0.954	0.918	0.849	76
Pdis Off	0.942	0.875	0.698	77
Pdis Enl	0.953	0.837	0.716	70
Res Off	0.940	0.931	0.919	91
Res Enl	0.954	0.939	0.934	91

Proposed

	SBP	Tot SBP & VA	DoD SBP & VA	Age
Ndis Off	0.959	0.955	0.721	76
Ndis Enl	0.962	0.948	0.584	73
Pdis Off	0.967	0.384	0.349	74
Pdis Enl	0.969	0.414	0.368	71
Res Off	0.937	0.926	0.790	90
Res Enl	0.950	0.915	0.763	90

Figure 3: BRS Lump Sum SBP Factors

Current

	All Retirees		Sp-SpCh Electors	
	25% LS	50% LS	25% LS	50% LS
NDIS Off	0.96437	0.94167	0.96437	0.94167
NDIS Enl	0.97240	0.91474	0.97240	0.91474

Proposed

	All Retirees		Sp-SpCh Electors	
	25% LS	50% LS	25% LS	50% LS
NDIS Off	0.945	0.917	0.916	0.874
NDIS Enl	0.949	0.924	0.914	0.871

Figure 4: NDIS SBP People Allocation Factors

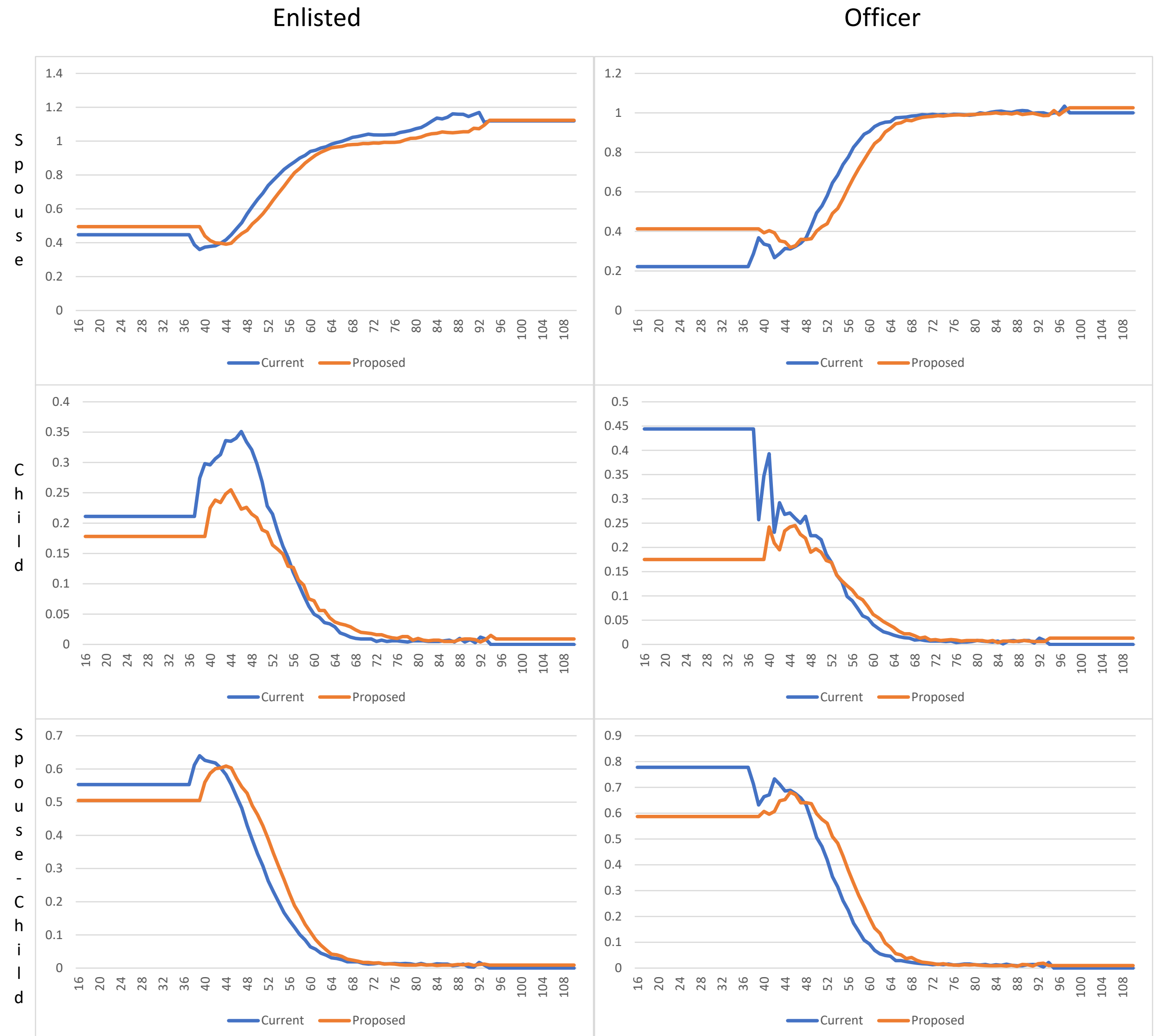


Figure 5: DIS SBP People Allocation Factors

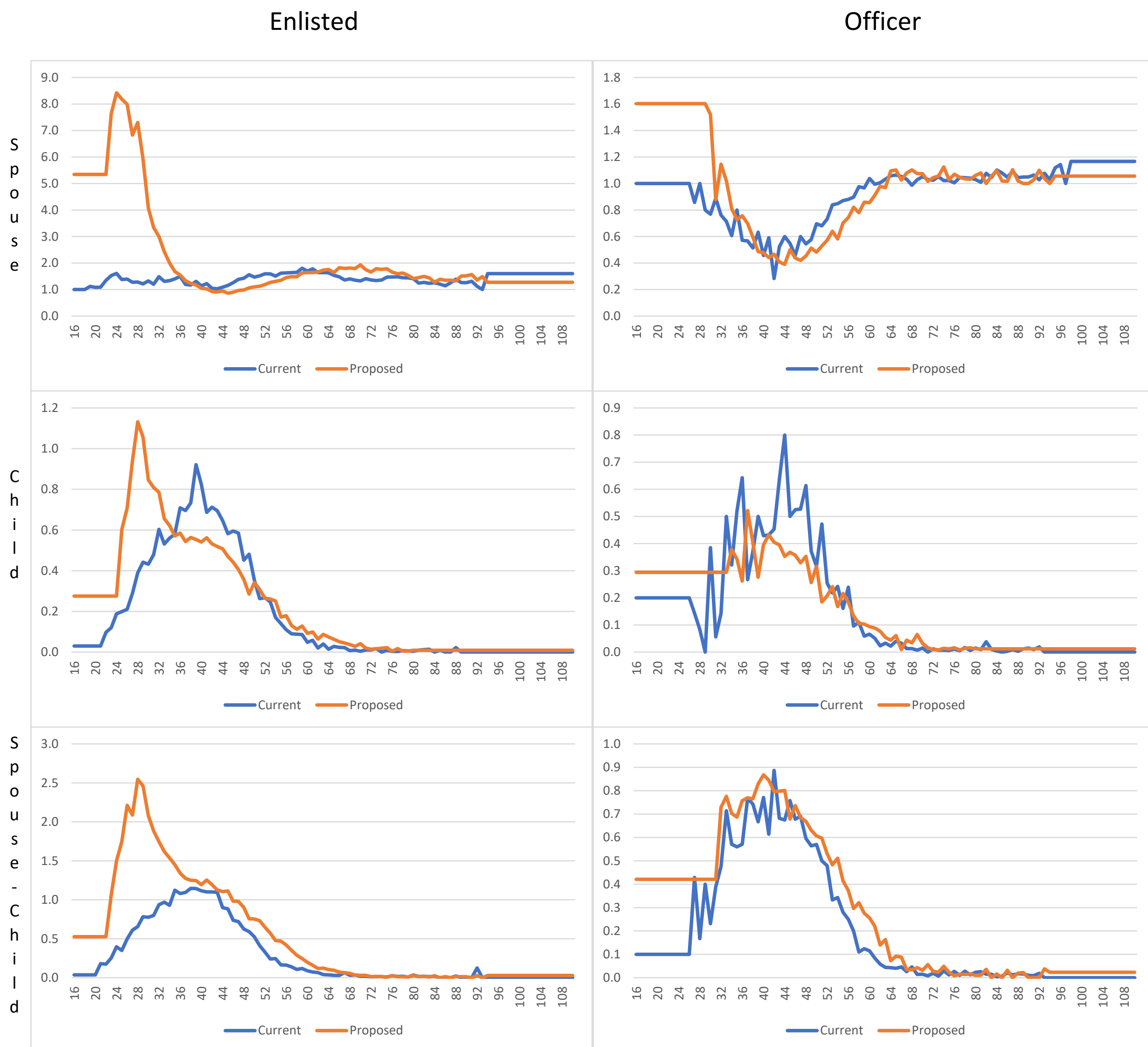


Figure 6: RESE SBP People Allocation Factors

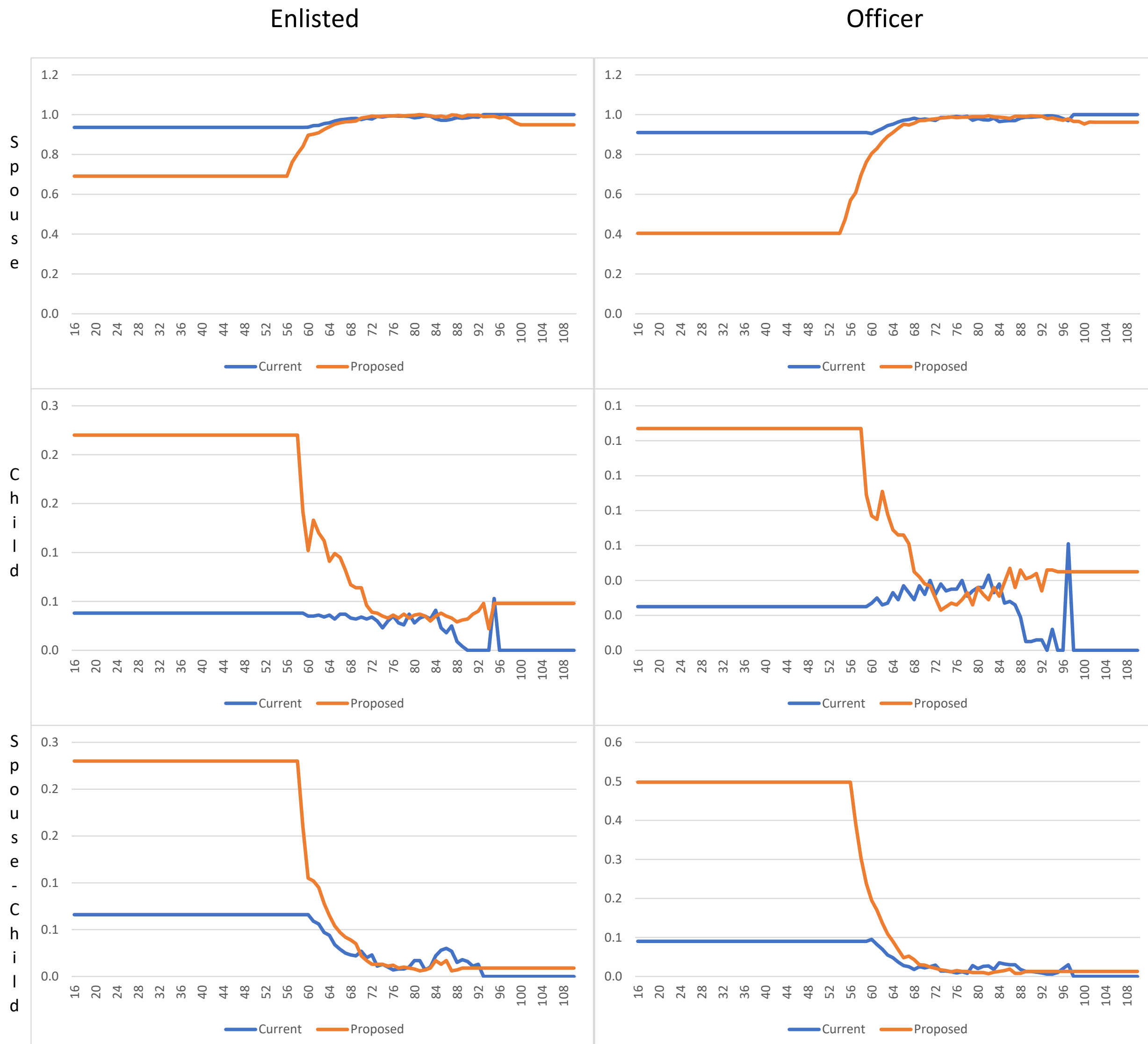
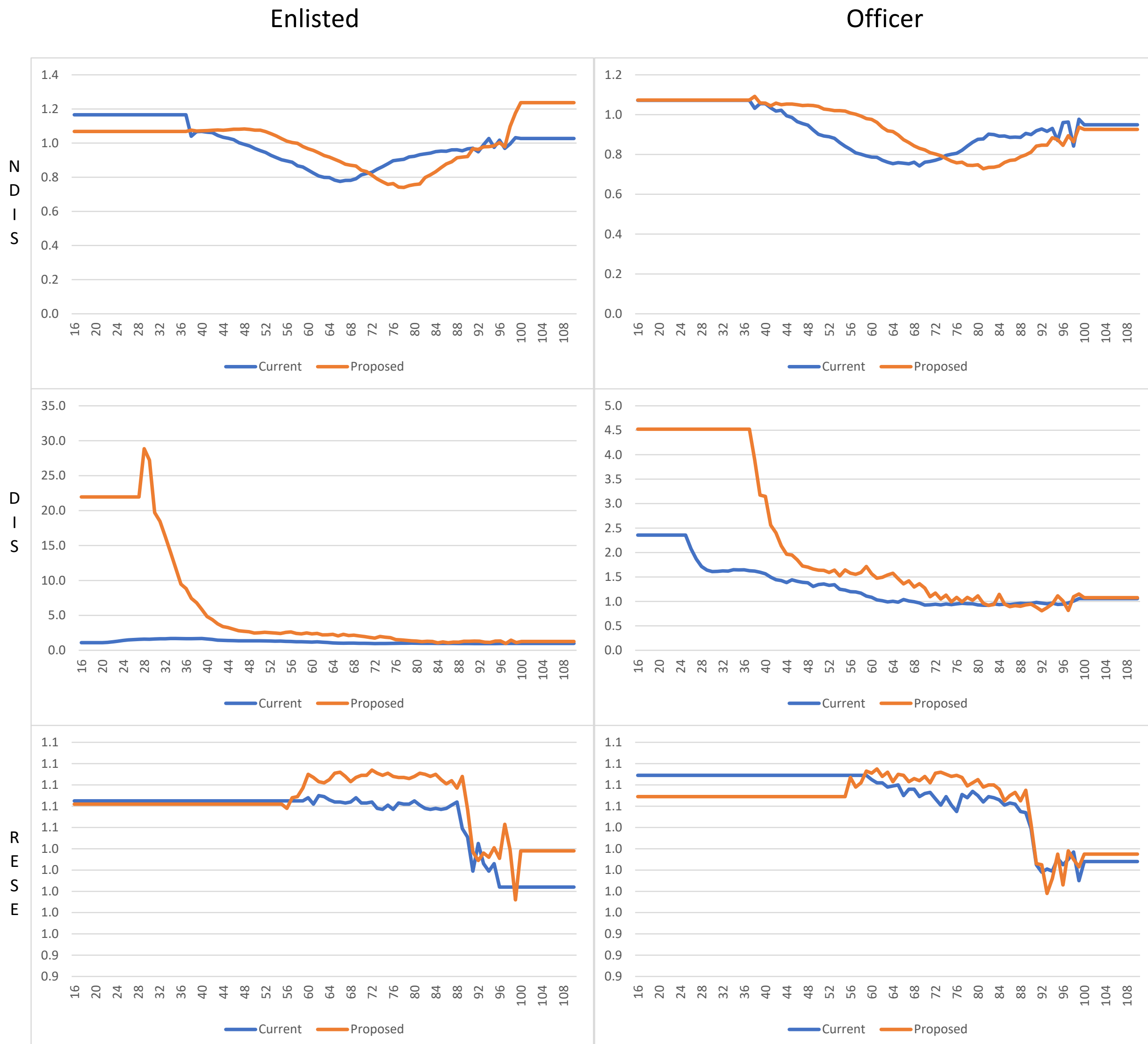


Figure 7: SBP Base/Net Factors



Attachment 8: Board’s Letter Regarding Concurrent Receipt

DEPARTMENT OF DEFENSE
BOARD OF ACTUARIES
4800 MARK CENTER DRIVE, SUITE 03E25
ALEXANDRIA, VA 22350

December 2, 2022

The Honorable Lloyd J. Austin III
Secretary of Defense
Department of Defense
1000 Defense Pentagon
Washington, DC 20301-1000

RE: Transferring the Cost of the Military Retirement Fund (MRF) from DoD to Treasury Due to Increasing Concurrent Receipt Benefits

Dear Secretary Austin:

The purpose of this letter is to share the DoD Board of Actuaries' ("Board") concerns about declining DoD, and increasing Treasury, Normal Cost Percentages (NCPs) resulting from increased combat-related disability and qualifying service-connected disability benefits under Sections 1413a and 1414 of Title 10, respectively ("Concurrent Receipt Benefits").

While the overall funding of the MRF remains on a sound actuarial basis, declining DoD NCPs, driven by the treatment of Concurrent Receipt Benefits, are arguably understating DoD's true MRF costs.

Background

Each year, the DoD Office of the Actuary (OACT) completes an actuarial valuation of the MRF to estimate the cost of the benefits payable. As part of that valuation, the "normal cost" is determined, which represents the actuarial value of benefits being earned during a fiscal year. An NCP is determined that is applied to basic pay to determine the amount to be funded. The valuation also determines amortization amounts for unfunded liabilities, but the focus of this letter is the NCPs, as they represent the actuarial "cost" of benefits earned each year.

Until 2004, the pension benefit payable to a retiree from the MRF was generally reduced by the amount of some types of VA disability benefits payable to the retiree. Thus, the MRF's costs were actually reduced by the cost of these VA disability benefits, and the NCPs reflected the offset accordingly.

FY 2004 NDAA eliminated this offset to the MRF pension, allowing for "Concurrent Receipt" of both VA disability benefits and full MRF pensions by retirees. Elimination of the offset resulted in a significant increase to the total benefits payable from the MRF, and the NCP increased accordingly.

Presumably so as not to burden DoD with the cost of the increased benefits associated with Concurrent Receipt, Section 1465(c)(1) of Title 10, USC, says that the DoD's NCP is "to be determined without regard to section 1413a or 1414 of this title." Thus, after Concurrent Receipt went into effect, the valuations determine a total NCP, and then a DoD share of NCP (DoD NCP) is determined as if MRF benefits are still offset by Concurrent Receipt Benefits. The remaining share, attributable to Concurrent Receipt, of the total NCP is then assigned to Treasury (Treasury NCP).

Current Observations

Since the enactment of Concurrent Receipt, VA disability benefits have increased rapidly, perhaps in ways not envisioned at the implementation of the new rules in 2004. Several factors appear to be driving these increases:

- Increased incentive to apply for benefits under Concurrent Receipt rules (since one's MRF benefit will no longer be reduced)
- Broader definitions of disability and higher disability ratings by the VA (such as for PTSD)
- Higher incidence of combat-related disability from recent conflicts

The increase in Concurrent Receipt Benefits has resulted in a decrease in the DoD's share of the total NCPs. To illustrate the impact, we can look at NCPs over time:

Fiscal Yr.	Total NCP	DoD NCP	Treasury NCP	DoD portion of Total NCP
2005	30.8%	27.5%	3.3%	89%
2024	58.3%	30.0%	28.3%	51%

A continuation of this trend could soon result in the DoD NCP for full-time service members falling below 50% of the total, meaning Treasury will fund more than half of the MRF pension normal costs.

It is worth noting the more recent numbers above reflect an increase in the assumed incidence of Concurrent Receipt Benefits for the September 30, 2022 MRF valuation, which determines the 2024 NCPs. The Board approved the change in assumptions based on data supporting increased VA disability benefit utilization, but also recognizes the new utilization assumptions are still lower than recent actual experience. Should the current level of increased VA disability benefits continue, or increase further, future assumption changes will decrease the share of the total MRF NCPs allocated to DoD even further. With the recent passage of the PACT Act, which expands VA disability benefits related to burn pits and other toxic substances, this outcome seems all but assured.

Recommendation

The Board members agree that the possibility of DoD covering less than half of total NCPs is significant enough to express our concerns now rather than waiting for our next Quadrennial

Report to the President and Congress. It does not seem appropriate that the majority of annual normal costs for service members should be funded directly from Treasury, as opposed to running through DoD's budget.

We believe the original intent of the Concurrent Receipt rules was to limit the increase in DoD costs triggered by eliminating VA disability benefit offsets and increasing MRF liabilities, not to transfer the majority of NCP funding responsibility to Treasury. The current situation appears to be an unintended consequence driven by the increased VA disability benefit utilization, and a potential misapplication of the Concurrent Receipt rule relative to its original intent.

We encourage policymakers to revisit the Concurrent Receipt rules to consider potential legislative or other solutions. We respectfully offer the following recommendations as starting points for future discussions on this topic.

- As we have said in prior Quadrennial Reports, the Board feels the appropriate way to fund NCPs would be to assign the total NCPs to DoD and include enough funding in its annual budget to cover that cost. We understand this would require significant changes to current law.

- We believe the original intent of Concurrent Receipt was to protect DoD from an unexpected jump in cost triggered by a law change beyond DoD's control. Elimination of the VA disability benefit offset in 2004 triggered a *one-time* increase of the total NCP based on utilization of VA disability benefits *at that time*. Increased utilization of VA disability benefits after 2004 should have no effect on NCP as these benefits were never offset. Currently, the language, "to be determined without regard to section 1413a or 1414 of this title," appears to bind us to an approach that continues to decrease DoD's NCP share. Amending or reinterpreting the Concurrent Receipt rule to align with its original intent, shielding the DoD budget from the one-time cost increase of 2004, would solve this issue.

Comment about VA Funding

Finally, though the funding of VA disability benefits is not within our purview, we recognize that these are essentially pensions. Experience is showing that VA disability benefits are becoming a meaningful lifetime income for a significant portion of the military population.

In our prior Quadrennial Reports, we have recommended that accrual accounting, rather than a pay-as-you-go basis, be used for VA-funded education benefits as it is for DoD-funded education benefits. We effectively make the same recommendation here. The increasingly significant VA disability benefits are becoming more like pension benefits, and we respectfully suggest that a long-term actuarial funding method like the one used for MRF is worthy of consideration. Shifting to an accrual basis would mean the predictable long-term costs associated with the current operations of VA could be recognized in a more timely, transparent manner.

Please let us know if we can be of any assistance in helping address these matters.

Sincerely,

Marcia A. Dush, FSA, EA, FCA, MAAA*
Chairperson
DoD Board of Actuaries

John H. Moore, FSA, EA, FCA, MAAA*
DoD Board of Actuaries

Michael E. Clark, FSA, EA, MAAA*
DoD Board of Actuaries

* Meets the qualification standards of the American Academy of Actuaries to determine the methods and assumptions referenced above

Voluntary Separation Incentive Fund Board of Actuaries Meeting

Defense Finance and Accounting Service

Jonathan Poe
Enterprise Accounting and Auditing Services (EAAS)
Financial Reporting
July 12, 2023

Agenda

- Overview
- Financial Data
- Fund Status

OVERVIEW

- Short Term Liquidity
  - ✓ No new investing
    - ✓ $ 27.5M in overnights (May 31)
    - ✓ $ 0.89M in cash (May 31)
  - ✓ Outflows on track to surpass inflows
    - ✓ FY 2023 program expense $12.9M (May 31), $25M Estimated as of September 2023
    - ✓ FY 2023 program revenue $13.0M (May 31)
    - ✓ FY 2023 interest revenue $1.4M (May 31)

- Long Term Liquidity
  - ✓ $26.6M long-term par (May 31)
  - ✓ No new program entrants since 2001

Summary Financial Analysis

Year Ended September 30

(In Millions)

	FY 2022	FY 2021	% Change
Service Contributions	$15.7M	$21.4M	-27%
Interest Income	$1.4M	$1.6M	-13%
Total Revenue	$17.1M	$23.0M	-26%
Benefit Payments	$30.4M	$37.4M	-19%
Total Expense	$30.1M	$37.1M	-19%

Interest Analysis

Year Ended September 30

(In Millions)

Interest Income

	FY 2022	FY 2021	$ Change
Interest Revenue--Par	$1.9	$2.1	-$0.2
Interest Revenue--Inflation	$0.0	$0.0	$0.0
Interest Revenue--Discount	$0.09	$0.1	-$0.01
Interest Revenue--Premium	-$0.6	-$0.6	$0.0
	$1.4	$1.6	-$0.2

FINANCIAL DATA

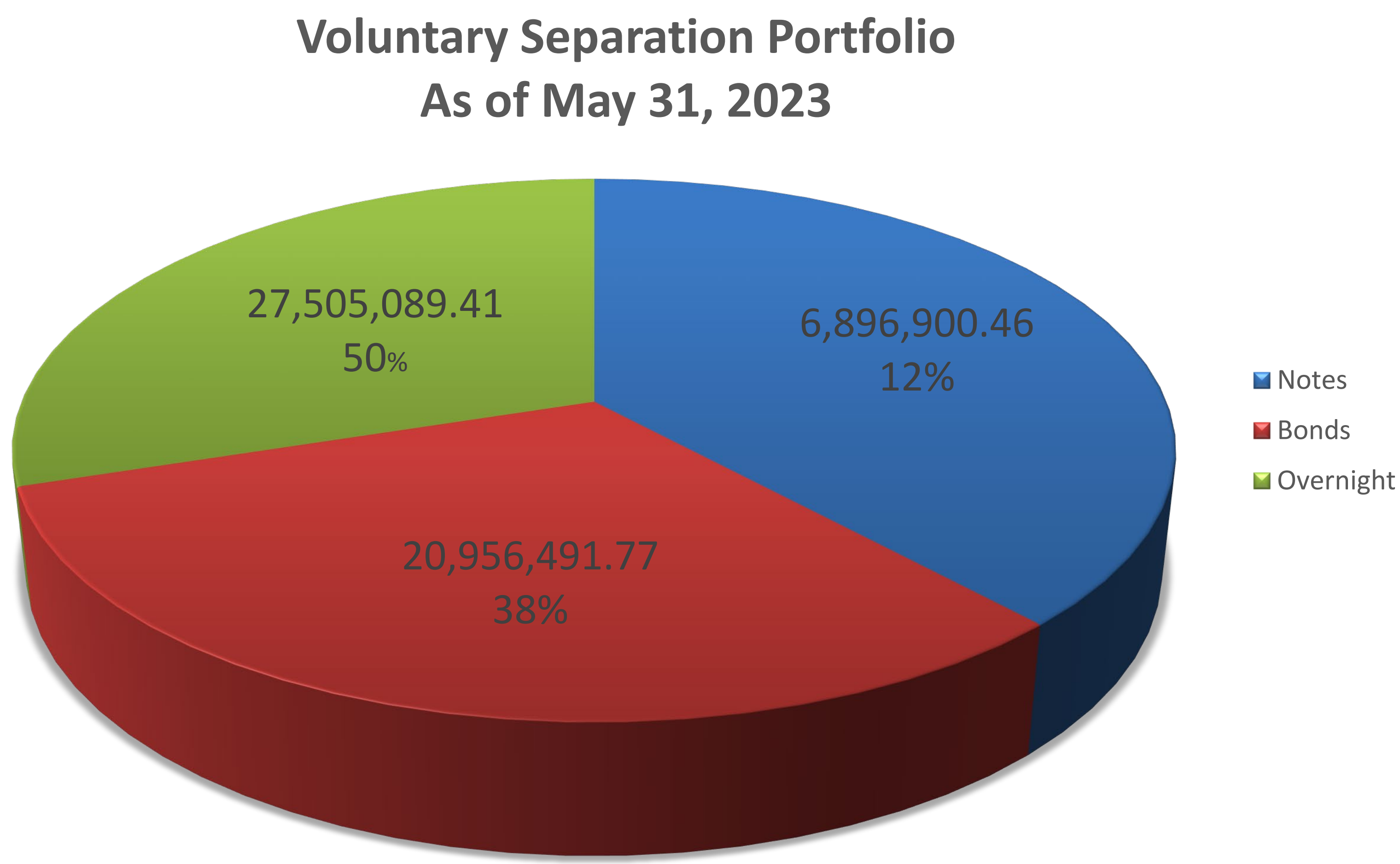
Voluntary Separation Incentive
For the Year Ending September 30, 2022

	(in millions)
Assets	
Fund Balance with Treasury	$ 1.60
Investments	
Overnight	$4.40
Long term	
Par	$46.32
Premium outstanding	$2..10
Discount outstanding	-$.01
Interest receivable	$.50
Total Long Term Investments	$48.91
Total Investments	$53.31
Total Assets	$54.91
Liabilities	
Military Retirement and Other Federal Employment Benefits	
Due and Payable	$1.50
Actuarial Liability	$107.74
Total Military and Other Federal Employment Benefits	$109.24
Total Liabilities	$109.24
Net Position	
Cumulative Results of Operations	$-54.33
Total Liabilities and Net Position	$54.91

Effective Fund Yields

FY	Yield
2012	3.19%
2013	2.60%
2014	1.43%
2015	1.41%
2016	1.50%
2017	1.75%
2018	2.15%
2019	2.43%
2020	2.21%
2021	2.08%
2022	2.29%

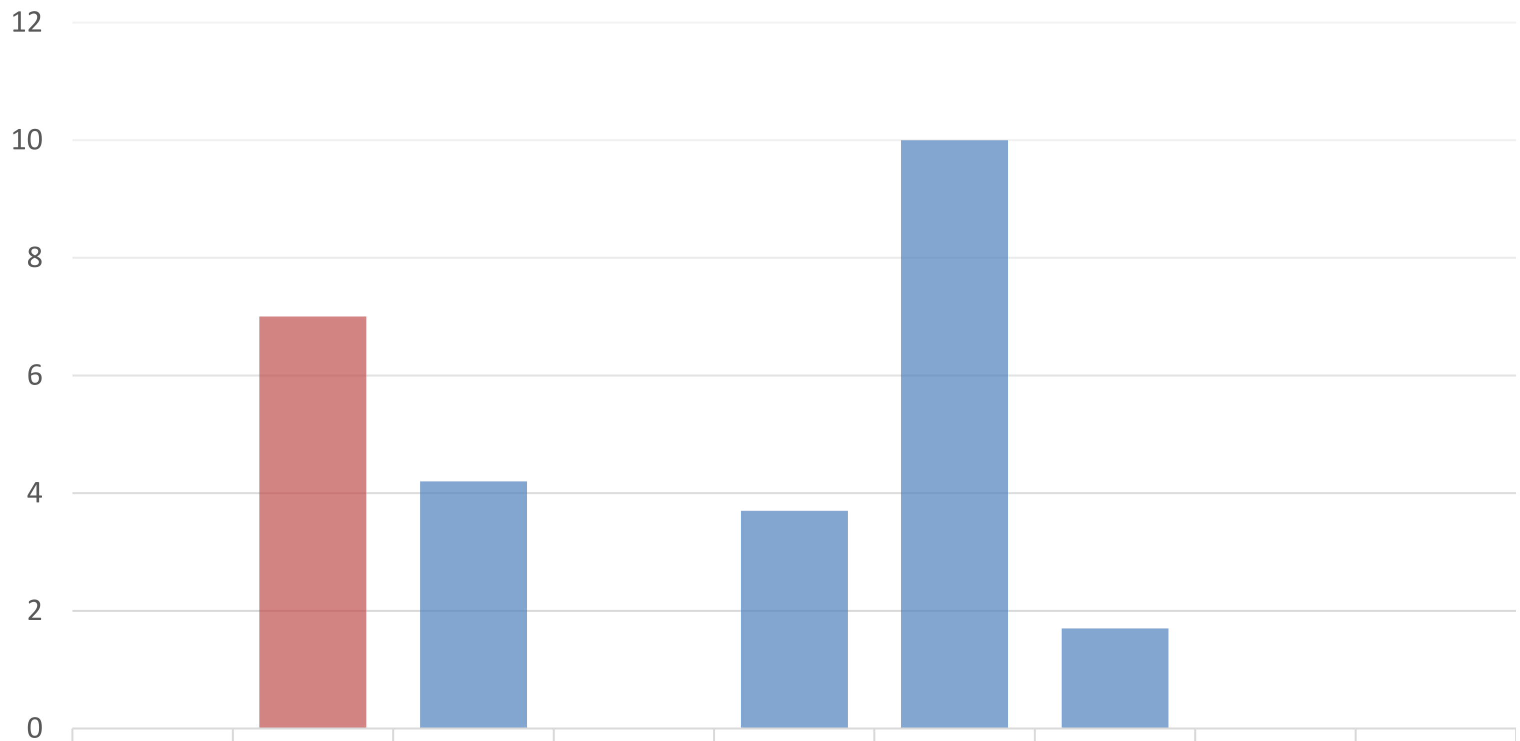
FUND STATUS


Voluntary Separation Portfolio
As of May 31, 2023
27,505,089.41
50%
6,896,900.46
12%
20,956,491.77
38%
Notes
Bonds
Overnight

FUND STATUS

Security Description	Shares/Par	Book Value	Market Value
MK BOND 7.500% 11/15/2024	$ 4,218,497.61	$ 4,540,369.60	$ 4,378,009.55
MK BOND 6.000% 02/15/2026	$ 3,667,977.19	$ 4,065,547.61	$ 3,835,328.65
MK BOND 6.625% 02/15/2027	$ 10,000,000.00	$ 11,063,628.54	$ 10,903,125.00
MK BOND 5.250% 11/15/2028	$ 1,721,664.16	$ 1,945,206.48	$ 1,840,028.57
Total BONDS	$ 19,608,138.96	$ 21,614,752.23	$ 20,956,491.77
MK NOTE 2.750% 11/15/2023	$ 6,997,578.71	$ 6,998,122.12	$ 6,896,900.46
Total NOTES	$ 6,997,578.71	$ 6,998,122.12	$ 6,896,900.46
ONE DAY 5.23 % 06/01/2022	$ 27,505,089.41	$ 27,505,089.41	$ 27,505,089.41
Total	$ 54,090,807.08	$ 56,117,963.76	$ 55,358,481.64

VSI Maturities
As of May 31, 2023



		2023	2024	2025	2026	2027	2028		
Notes		7.00		0.00					
Bonds			4.20	0.00	3.70	10.00	1.70		

Bonds Notes

QUESTIONS

Voluntary Separation Incentive (VSI)

BRIEF HISTORY: At the end of the 1980s, the Department of Defense (DoD) began drawing down the size of the U.S. military's active force, from a post-Vietnam peak of 2.2 million in FY 1987 to 1.6 million by FY 1997, a decline of about 25 percent. Initially, the focus of the drawdown was on cutting the number of entrants into the armed forces, but DoD also needed to reduce the number of mid-careerists. To accomplish this reduction in personnel while treating service members fairly and maintaining a high state of readiness, DoD chose to rely on voluntary rather than involuntary separations.

In January 1992, the Voluntary Separation Incentive (VSI) was authorized for all branches of the armed forces to help DoD complete the reduction-in-force while avoiding serious skill and grade imbalances. The program stopped taking new applicants in October 2001. VSI offered members an annuity payable for twice as long as their years of service and equal to 2.5 percent of basic pay times years of service.

To be eligible to receive VSI, an individual must have met all of the following requirements:

- six years of active duty as of December 1991
- five years of continuous active service at separation
- be in a rank that has more people in it than are needed to maintain force readiness
- continue military service in a reserve component

VSI Fund Yield Projection and Current Interest Assumption

FY	Inflation	Real*	Fund Yield	Blue Chip Return on New Invests**
2023	3.21%	0.35%	3.56%	4.44%
2024	2.70%	1.10%	3.80%	3.77%
2025	2.30%	1.39%	3.69%	3.25%
2026	2.20%	1.77%	3.97%	3.20%
2027	2.20%	1.36%	3.56%	3.12%
2028	2.20%	1.47%	3.67%	3.10%
2029	2.15%	1.29%	3.44%	3.10%
2030	2.10%	1.34%	3.44%	3.10%
2031	2.10%	1.29%	3.39%	3.10%
2032	2.10%	1.29%	3.39%	3.10%
5 Yr Avg	2.52%	1.19%	3.72%	3.56%
5 Yr Fund Wgt Avg	2.50%	1.22%	3.72%	3.53%

FY	Inflation	Real*	Fund Yield	Blue Chip Return on New Invests**
2033	2.10%	1.29%	3.39%	3.10%
2034	2.10%	1.26%	3.36%	3.10%
2035	2.10%	1.26%	3.36%	3.10%
2036	2.10%	1.26%	3.36%	3.10%
2037	2.10%	1.26%	3.36%	3.10%
2038	2.10%	1.26%	3.36%	3.10%
2039	2.10%	1.26%	3.36%	3.10%
2040	2.10%	1.26%	3.36%	3.10%
2041	2.10%	1.26%	3.36%	3.10%
2042	2.10%	1.26%	3.36%	3.10%

Current Interest Assumption	Proposed Interest Assumption
2.25%	2.75%

Asset Duration	Liability Duration
3.7	3.2

Notes:

* Real = Fund Yield - Inflation (after 3 mths TIPS inflation lag). For inflation, fund yield, and Blue Chip return calculations, the "X Yr Avg" calculation is geometric and the "X Yr Fund Wgt Avg" is weighted by expected fund size during FY.

** Assumes available funds are invested in 2 yr bonds, until maturity values would be more than future expected payments.

--- Short Term Strategy: Mix of overnights and bills.
--- Portfolio Allocation: Notes and bonds (No TIPS).
--- Investment Policy: Maturities matched to cash flows and liquidity requirements. Minimize risks to the funds--all securities are market based Treasury special issues. Hold to maturity policy.

VSI Population by Number of Remaining Payments
(as of September 30, 2022)

Remaining Annual Payments	Enlisted					Officer				
	WITH VA Offset			W/O VA Offset		WITH VA Offset			W/O VA Offset	
	Count	Avg Annual VSI Gross	Avg Annual VA Pay	Count	Avg Annual VSI Gross	Count	Avg Annual VSI Gross	Avg Annual VA Pay	Count	Avg Annual VSI Gross
1	64	$7,817	$3,215	212	$7,464	44	$15,403	$4,966	142	$14,763
2	48	$8,338	$3,518	174	$7,862	49	$16,500	$6,225	136	$15,112
3	42	$8,900	$3,748	154	$8,046	35	$16,805	$6,121	108	$16,667
4	31	$8,876	$3,538	132	$8,799	26	$17,082	$4,960	97	$16,704
5	33	$9,667	$4,419	110	$9,643	31	$19,030	$4,687	54	$17,457
6	36	$9,706	$3,629	95	$9,574	25	$19,880	$4,132	57	$18,747
7	22	$10,429	$4,651	82	$9,572	10	$20,207	$6,650	38	$18,596
8	22	$10,473	$4,021	88	$9,355	9	$20,217	$9,812	41	$16,175
9	18	$11,304	$4,649	34	$10,674	4	$21,285	$11,112	28	$16,818
10	13	$11,969	$4,418	29	$11,784	9	$22,341	$7,735	18	$23,559
11	4	$12,405	$1,824	13	$12,317	5	$24,747	$5,395	11	$23,772
12	2	$13,365	$4,938	5	$11,955	1	$21,055	$1,824	6	$24,516
13	1	$22,747	$3,612	1	$22,808	1	$36,771	$1,824	0	$0
14	0	$0	$0	0	$0	1	$23,312	$1,824	4	$32,192
15	0	$0	$0	0	$0	2	$31,674	$16,830	0	$0
16	0	$0	$0	0	$0	2	$39,049	$11,436	0	$0
17	1	$24,676	$11,496	0	$0	1	$26,391	$8,964	0	$0
18	1	$27,253	$12,600	0	$0	1	$27,253	$15,900	0	$0
Total	338	$9,431	$3,831	1,129	$8,748	256	$18,264	$5,852	740	$16,737

NOTE: (i) Table includes 2,463 VSI annuitants who have remaining benefit payments.
(ii) Table includes 423 survivors receiving benefits from 322 deceased VSI members.
(iii) Table excludes 481 eligible VSI members who have a full VA offset.
(iv) A total of 18,430 service members have elected VSI since the program's inception.
(v) Final payment is often a partial payment.

10 U.S. Code § 1175 - Voluntary Separation Incentive: http://www.law.cornell.edu/uscode/text/10/1175

VSI
CHANGE IN UNFUNDED LIABILITY (UFL)

($ in Millions)

(A Negative Change Indicates a Gain and a Positive Change Indicates a Loss)

Based on 2.75% interest, 2.2% COLA on VA Offsets and 1.0% Non-COLA increase on VA Offsets

1. 10/1/2021 Unfunded Liability	$67.4		
2. 1/1/2022 Amortization Payment on UFL	$15.7		
3. Interest Rate Assumption	1.0225		
4. Expected Unfunded Liability on 10/1/2022 (1 X 3) - (2 X 3 ^ 0.75)	$52.9		
5. Actual Unfunded Liability on 10/1/2022	$49.0		
6. Total (Gain)/Loss in Unfunded Liability (5 - 4)	**-$3.86**	-3.8%	
A. Total (Gain)/Loss Due to Assets	**-$1.02**	-1.0%	
1. Asset (Gain)/Loss-Yield[1]	-$0.03	0.0%	--> -0.1%
2. Asset (Gain)/Loss-Benefit Payments[2]	-$1.0	-1.0%	
B. Total(Gain)/Loss Due to Liability	**-$2.84**	-2.8%	
1. Liability (Gain)/Loss-2022 COLA[3]	-$0.5	-0.5%	
2. Liability (Gain)/Loss-2021 VA Update[4]	-$0.4	-0.4%	
3. Liability (Gain)/Loss-Interest Rate	-$1.5	-1.5%	
4. Liability (Gain)/Loss-VA Incr. Assump.	$0.0	0.0%	
5. Liability (Gain)/Loss-Residual[5]	-$0.4	-0.4%	

(Percentages shown are ratios of values of each gain or loss component to the PVFB; the ratio of the yield loss to the VSI fund is shown as well).

NOTE:

[1] Valuation assumption: 2.25% fund yield; actual fund yield: 2.29%

[2] Projected FY22 benefit payments: $31.1M; actual FY22 benefit payments: $30.1M

[3] Projected 2023 COLA (excluding the VA Increase Assumption): 2.2%; actual 2023 COLA: 8.7%

[4] Represents actual 2022 VA offsets being different than expected.

[5] Represents DFAS data changes and residual.

VSI AMORTIZATION

($ in Millions)

Based on 2.75% interest, 2.2% COLA on VA Offsets and 1.0% Non-COLA increase on VA Offsets

VSI Valuation Results as of 9/30/2022:

a.	9/30/2022 PVFB	$102.4	PVFB Sensitivity at 25 basis points:	1%
b.	10/1/2022 Fund	$53.4		
c.	10/1/2022 UFL	$49.0		

Amortization Schedule - DECREASING Amortization Payments:

d.	1/1/2024	$10.6
e.	1/1/2025 - expiration	44.9% of FY Projected Benefit Payments

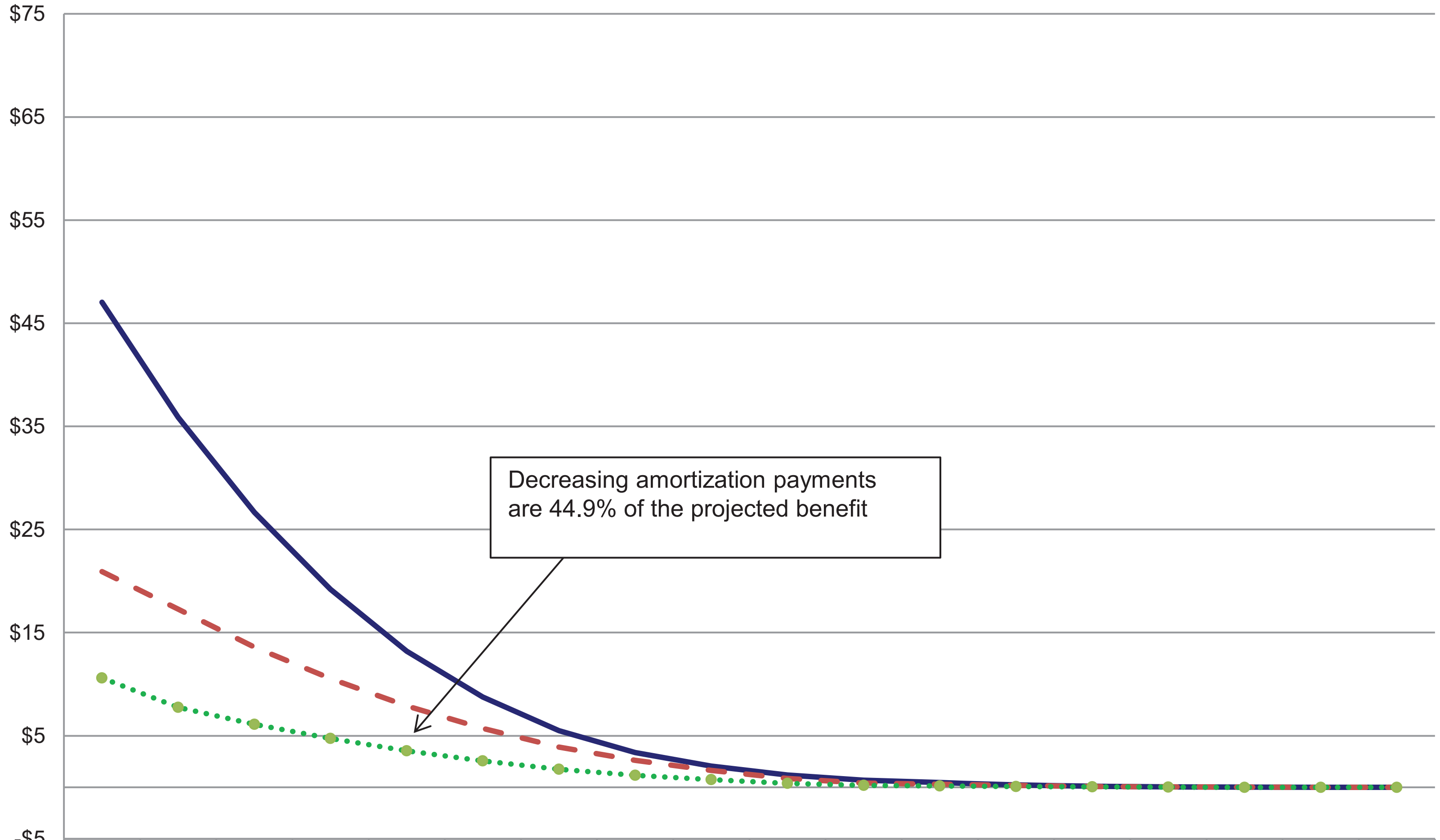
VSI Fund Projections:

	Contributions (paid on Jan. 1)	Jan-1 Fund Balance (After Contribution)	Interest Earned during FY	Benefit Payments during FY	End-of-Fiscal Year Fund Balance
FY 2023	$13.0	$59.7	$1.4	$25.5	$42.3
FY 2024	$10.6	$47.0	$1.1	$20.9	$33.1
FY 2025	**$7.8**	$35.9	$0.8	$17.3	$24.4
FY 2026	$6.1	$26.6	$0.6	$13.6	$17.6
FY 2027	$4.7	$19.2	$0.4	$10.5	$12.2
FY 2028	$3.5	$13.2	$0.3	$7.9	$8.2
FY 2029	$2.6	$8.7	$0.2	$5.7	$5.2
FY 2030	$1.8	$5.5	$0.1	$3.9	$3.2
FY 2031	$1.2	$3.4	$0.1	$2.6	$1.8
FY 2032	$0.7	$2.1	$0.0	$1.6	$1.0
FY 2033	$0.39	$1.2	$0.0	$0.9	$0.5
FY 2034	$0.19	$0.7	$0.0	$0.4	$0.3
FY 2035	$0.13	$0.5	$0.0	$0.3	$0.2
FY 2036	$0.08	$0.2	$0.0	$0.2	$0.1
FY 2037	$0.04	$0.1	$0.0	$0.1	$0.0
FY 2038	$0.02	$0.0	$0.0	$0.0	$0.0
FY 2039	$0.00	$0.01	$0.0	$0.00	$0.0
FY 2040	$0.00	$0.00	$0.0	**$0.000**	$0.0
FY 2041	$0.00	$0.000	$0.0	$0.0000	$0.0

NOTE: VA compensation offsets VSI payments; VSI liability calculations reflect VA offsets
The last net VSI payment is projected to be in 2039.
44.9% is calculated by finding the percentage that draws fund to zero by the last benefit payment.

VSI CASH FLOW PROJECTIONS

($ in Millions)



	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041
FY Fund Dollars	$47.0	$35.9	$26.6	$19.2	$13.2	$8.7	$5.5	$3.4	$2.1	$1.2	$0.7	$0.5	$0.2	$0.1	$0.0	$0.01	$0.00	$0.000
Benefit Payments	$20.9	$17.3	$13.6	$10.5	$7.9	$5.7	$3.9	$2.6	$1.6	$0.9	$0.4	$0.3	$0.2	$0.1	$0.0	$0.00	$0.000	$0.0000
Contributions	$10.6	$7.8	$6.1	$4.7	$3.5	$2.6	$1.8	$1.2	$0.7	$0.39	$0.19	$0.13	$0.08	$0.04	$0.02	$0.00	$0.00	$0.00

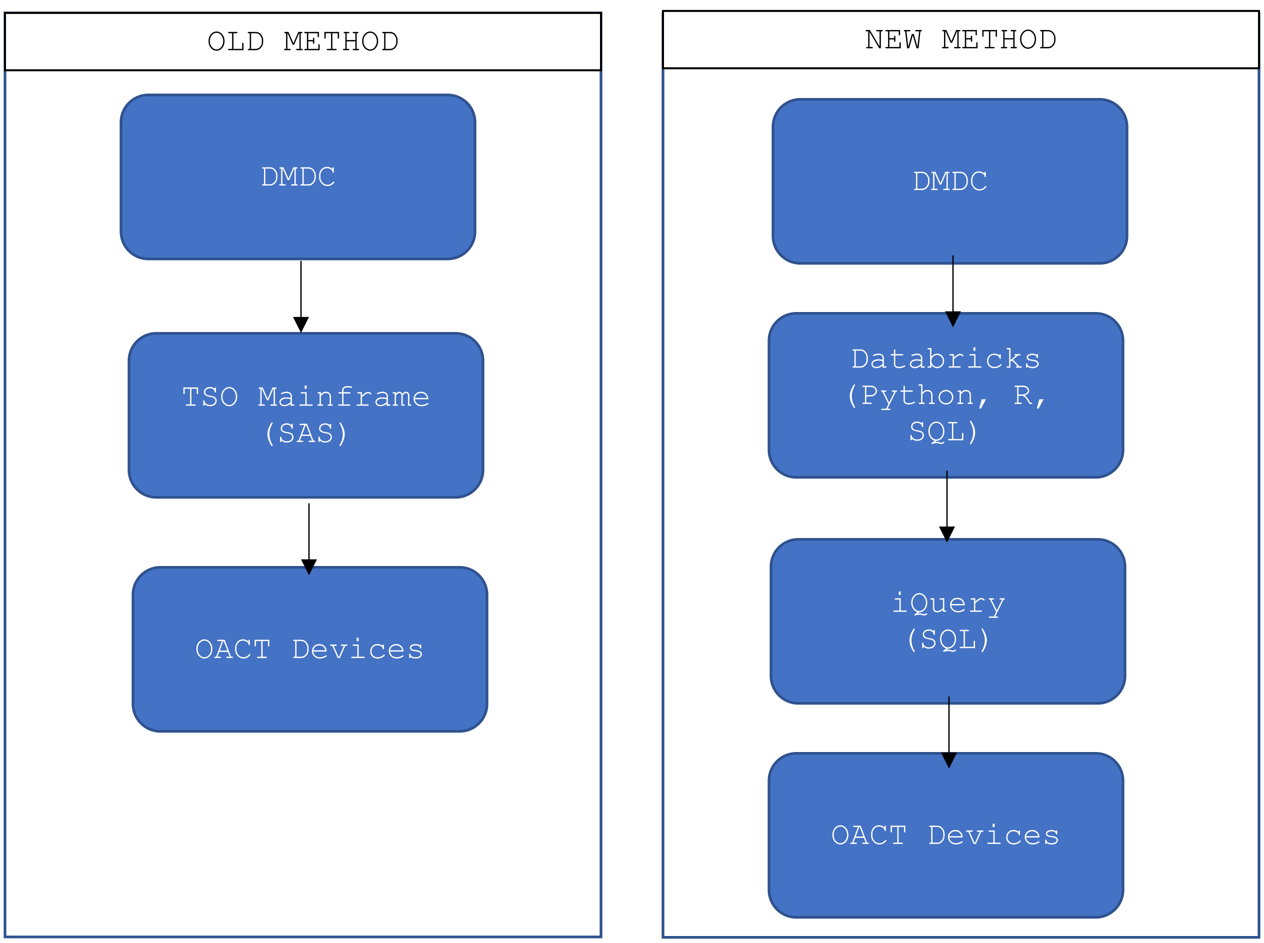
ADVANA CONVERSION

DoD Office of the Actuary

Converting to ADVANA for Data Extraction

Introduction

The Census data used for valuation purposes is extracted from files maintained by the Defense Manpower Data Center (DMDC) in Monterey, California. In the past, OACT has accessed this data through TSO Mainframe utilizing programs written in the SAS language. DoD has introduced a cloud computing system called ADVANA where DoD is able to combine 1,200 systems into one central platform for data and analytics, simplifying more than 3,000 business systems and tracking everything from finance to infrastructure. This comes with the decommissioning of the TSO Mainframe in the coming months. The ADVANA platform is accessed through Internet Browsers allowing streamlined access, especially compared to the TSO Mainframe. ADVANA has several 'Data Tools' available to users, in which two are what is used primarily by OACT. The first tool Databricks, which allows users to access the files maintained by DMDC and perform operations using three different programming languages: Python, R, and SQL. The second tool is iQuery, which allows users to access and export the files maintained by DMDC as well as user-created files using SQL. For OACT's purposes, DMDC files are extracted and manipulated in Databricks and then exported using iQuery. Several OACT members have undertaken the monumental task of converting all TSO Mainframe SAS programs to Databricks and iQuery programs and performing parallel runs for the 2021 and 2022 valuation.



Impact of Conversion

Causes of Impacts

The OACT members tasked with converting the TSO Mainframe programs have tried to as closely as possible replicate the exact operations performed, however there will always be some differences. These can be caused by small differences in how the different programming languages perform operations. For example, by default SAS stores up to 16 digits for a numeric variable, while Python stores up to 28. Some differences can also be traced back to changes within the files by DMDC, and these differences have been reported back to them when noticed. Additionally, some differences can be traced to OACT members removing sections of the original programs that are no longer or should no longer be used. Since the conversion is solely on replicating the census files used in the valuation model, there are no changes to the NCP.

The conversion has been broken down into 4 different areas: Active Duty, Reserves, Retirees, and Survivors. After incorporating the 4 different census into our valuation model, there is a 0.004% difference in accrued liability compared to the mainframe census.

For the data used in the FY21 valuation:

BRS Counts	Active Duty	Reserves	Retirees	Survivors
TSO Mainframe	698,122	269,069	0	0
Advana	698,125	269,069	0	0
Difference	(3)	0	0	0

Non-BRS Counts	Active Duty	Reserves	Retirees	Survivors
TSO Mainframe	767,373	624,789	1,996,477	317,764
Advana	767,604	624,789	1,996,551	317,764
Difference	(231)	0	(74)	0

For the data used in the FY22 valuation:

BRS Counts	Active Duty	Reserves	Retirees	Survivors
TSO Mainframe	747,236	296,156	0	0
Advana	747,173	296,156	0	0
Difference	62	0	0	0

Non-BRS Counts	Active Duty	Reserves	Retirees	Survivors
TSO Mainframe	685,998	566,174	2,043,695	319,238
Advana	685,997	566,174	2,043,761	319,238
Difference	1	0	(66)	0

BRS + NON BRS Liability	Mainframe	Mainframe with Surv	Mainframe with Surv + Ret	Mainframe with Surv+Ret+Res	Mainframe with Surv + Ret+Res+Act	
Liability	2,107,963,965	2,107,957,424	2,108,003,567	2,107,998,545	2,108,057,856	
Different		(6,541)	46,144	(5,022)	59,311	
Total Difference		(6,541)	39,603	34,580	93,891	0.004%

ATTACHMENT 4

Transcript of the Department of Defense Board of Actuaries Meeting

UNITED STATES DEPARTMENT OF DEFENSE
OFFICE OF THE ACTUARY

+ + + + +

BOARD OF ACTUARIES MEETING

+ + + + +

FRIDAY
JULY 14, 2023

+ + + + +

The Department of Defense Board of Actuaries met via Videoconference, at 10:00 a.m. EDT, Marcia Dush, Chair, presiding.

PRESENT
MARCIA DUSH, Chair
MICHAEL CLARK, Board Member
JOHN MOORE, Board Member

CONTENTS

VOLUNTARY SEPARATION INCENTIVE FUND

September 30, 2022, VSI Fund Valuation, Proposed Methods and Assumptions

P-R-O-C-E-E-D-I-N-G-S

(10:00 a.m.)

MS. DUSH: Good morning. It is 10 o'clock Eastern on Friday, July 14th, 2023. This is a meeting of the Department of Defense Board of Actuaries.

Today we'll be discussing the valuations concerning the military retirement fund as well as the Voluntary Separation Incentive Fund referred to as VSI.

This meeting is being recorded. And I would, my name is Marcia Dush. I am the Chair of the Board. I would like my two Board Co-Board Members to introduce themselves. John?

MR. MOORE: Yes, I am John Moore. I'm one of the side Board Member.

MS. DUSH: Mike?

MR. CLARK: And I am Mike Clark. I am a Board Member.

MS. DUSH: During this meeting I'm going to ask if you would please keep your audio muted if you're not speaking. But when you do speak, I would ask you to identify yourself before asking a question.

And if you are a guest of this meeting, we're going to ask that you send an email to Inger Pettygrove to ensure that we have a complete record of everybody who's attending the meeting. Inger, would you give the details on that?

MS. PETTYGROVE: I will. I just put in the chat and actually Anita who's on the phone I already got an email from her. Thank you, Anita. Not the easiest name.

My email address is Inger, I-N-G-E-R dot M as in Marie dot Pettygrove, P-E-T-T-Y-G-R-O-V-E dot CIV, C-I-V and that's @mail.mil.

MS. DUSH: Okay, thank you.

MS. PETTYGROVE: Yes, if you didn't get all of that, if you have contact with anybody in the Office of the Actuary, they can get the information through.

MS. DUSH: Okay. So at this point, I would like to turn this over to Qian Magee to take us through an introduction of what we will be discussing today.

MS. MAGEE: Well, thank you so much, Marcia. I'm going to go over the agenda and the meeting objectives. But before I do that, I want to introduce our newest member, Jonathan Wong.

Jon graduated from UC-Santa Barbara with a Bachelor of Science Degree in Actuarial Science and has been with us for about nine months. He has already been making significant contributions to the office.

You can see from the agenda that he will be presenting on various subjects. We are very glad to have him. All right.

MS. DUSH: Thank you, Qian.

MS. MAGEE: So now for the, yes, thank you. Now, please look at the agenda for today. We will start with the military retirement fund. The first item is the September 30, 2022 valuation of this fund.

Drew May of this office will discuss the population and actuarial status as of

September 30, 2022, the change in our founded liability for fiscal 2022, the amortization period for coast guard liability and the October 1st, 2023 treasury payments.

The items with an asterisk mean Board approval is required. Following this, we will present the proposals for the September 30, 2023 valuation methods and assumptions. Phil Davis will present the proposed economic assumptions.

I will present the proposed fiscal 2025 normal cost percentages. And Drew May, Jonathan Wong and Rich Allen will present the full proposals of the changes to the non-economic assumptions for the September 30, 2023 evaluation.

Following the MRN, Phil and Jon will go over the valuation methods and assumptions for the September 30, 2022 VSI found valuation. Finally, we have added a brief presentation to the agenda which is converting from mainframe to a cloud-based platform called ADVANA for our valuation data extraction.

Phil will go over that and we hope that you'll find this topic interesting. All right let's move on to the meeting objective. So we want to be clear on our meeting objectives.

First, the board will review the September 30, 2022 closed group valuation results and the 10-1-2023 Treasury payments as well as approve the amortization schedule for the coast guard liability.

Next, the Board will review the proposed methods and assumptions used to compute the liability for the September 30, 2023 valuation and the fiscal 2025 normal cost percentages.

Item 2 is for the Board to set the long-term economic assumptions and Item 3 is to approve the non-economic assumptions. Item 4 is to formally approve the fiscal 2025 DoD normal cost percentages.

Lastly, the Board will review and approve the September 30, 2023 VSI evaluation. So with that, I'm turning it over to Drew May for the September 30, 2022 valuation results for MRF. Drew?

MR. MAY: Thank you Qian. We will begin the closed group valuation results with the starting population as of September 30, 2022.

Please note that the 2022 figures include the addition of coast guard while the 2021 figures do not. The pre-retirement population includes active duty, which also includes full time reservists, part time selected reservists and non-selected reservists with 20 good years.

It's also referred to as gray area. Last year we mentioned that we had heard that services were having trouble meeting recruiting targets and this difficulty has continued into 2022.

Without the addition of coast guard, we have seen a decrease in both total active duty about 1.39 million or a 2.2 percent decrease and a decrease in total selector reservists, about 600, 76,000 or a 3.8 percent decrease.

We also that likely due to inflation, the percentage pay increase from 2021 to 2022 exceeds the population increase. For example, for both active duty and selected reserve VRS, we are seeing a population increase of about 10 percent, but a pay increase of about 16 percent.

We will continue to work with the services to monitor these changes and ensure that the population does not differ from our assumptions.

The retirement population includes non-disabled retirees, disabled retirees, and surviving families. Again, 2022 numbers include coast guard while the 2021 numbers do not.

Without the addition of coast guard, there is still an increase in the retiree population, but there is a decrease in survivors going from 2021 to 2022.

This could be attributed to 2022 having better mortality than 2021. Initially, the largest percent increase in retirees is disability retirees.

We will cover mortality and disability updates in more detail in the proposed non-economic assumptions later. With that, are there any questions or comments on this page?

MS. DUSH: I think again what we're seeing especially when you look at the retired population, you are seeing the effect of the COLA in here which is that average benefits are going up, you know, much faster or the total benefits are going up much faster than the increase in the number of retirees.

MR. MAY: Yes, if you look at the pay increase, it is larger for the retirees as well not just those in the service.

MS. DUSH: Okay, please continue.

MR. MAY: Great. Next page please. On this page we have the actuarial status as of September 30th, 2022 with the prior year for comparison purposes.

The present value of future benefits has increased 14 percent to 2.526 trillion. The present value of future normal cost contributions has increased 15 percent to 418 billion.

And the fund has increased 16 percent to 1.279 trillion. Changes in the fund are outlined in more detail in footnote 3 below. And again, these numbers also reflect the inclusion of coast guard.

Scrolling back up, calculating the unfunded liability as present value, future benefits, minus present value, future normal costs and minus the fund value results in an unfunded liability of 829.3 billion.

And we'll go over the reconciliation of the 11 percent increase in the unfunded liability on the next page. Item 6 is the DoD NCP based upon the 2022 valuation. Items 7 and 8 are the DoD and Treasury NCPs respectively which were approved at last year's meeting and are applied to basic pay.

And you can see as a result of the VA perimeters approved last year, the allocation of the total NCPA shifted towards Treasury which you can see with the decrease in the DoD NCPs and the increase in the Treasury NCPs.

Lastly, on this page, at the bottom right, we have the long-term economic assumptions used for the valuation with COLA at 2.5 percent, salary at 2.75 percent and interest at 4 percent.

There was no change from the September 30, 2021 valuation. Are there any questions or comments on this page?

MS. DUSH: I'm good. Mike and John?

MR. CLARK: No comments.

MR. MOORE: No. Yes, I'm good. Thank you.

MS. DUSH: All right.

MR. MAY: The unfunded liability as of 9-30-2021 was 745.1 billion. Rolling that forward along with the fiscal year 2022 amortization payment, at the long-term interest assumption of 4 percent gives us an expected unfunded liability of 655.9 billion.

And as mentioned on the previous page, the actual unfunded liability was 829.3 billion so we have a loss of 173.3 billion. This loss can largely be attributed to three components.

First, the January 1, 2023 COLA was 8.7 percent compared to evaluation assumption of 2.5 percent which resulted in a loss of 76.2 billion.

It is worth nothing that the investment in TIPS led to a fund yield of 7.7 percent comparable valuation assumption of 4 percent which led to a gain of 40 billion, but this does not offset the loss due to COLA.

Furthermore, also tied to inflation, we have a salary increase of 4.6 percent compared to the valuation assumption of 2.75 percent which resulted in a loss of 8.9 billion combined less results in an economic experience loss of 45.1 billion.

Second, the plan amendment for coast guard results in an increase in un-fund liability of 59.7 billion and lastly the largest portion of change due to new assumptions was the VA offset parameters which resulted in a loss of 58.8 billion which is consistent with the increase in

9-30-2021 liability of 55.7 billion calculated last year when it was approved. Are there any questions or comments on this page?

MS. DUSH: The only comment that I would make is the very small difference for non-economic experience which I again commend OACT for doing a good job of monitoring and setting the non-economic assumptions.

I think this has traditionally been a very small item in the gain and loss.

MR. MAY: Thank you.

MS. DUSH: All right. So this year we are seeing at 9-1-22, we do see that we updated mortality improvement and it was a loss meaning that we were predicting longer life expectancy.

And I think we'll see some of that reversing out for the next valuation if I recall the proposals correctly. Anything else?

MR. CLARK: I would just point out, I think it's interesting to see the impact of past, you know, high inflation on the experience results.

And I think a key question we deal with is what do we think that's going to be in the future and I don't think we've seen that being maintained. So might just make a note.

MS. DUSH: Yes. Okay, I think we can go on.

MR. MAY: On this page, we have the amortization payments for the initial unfunded liability, benefit change, assumption change, experience gain loss and the prior year unpaid contribution.

The values here for Item B are using three years as a place holder for coast guard initial unfunded liability amortization which would align it with the amortization of the existing initial un-fund liability.

The amortization period for benefit change, assumption change and experienced game loss is 18.4 years which is the liability weighted average of the old basis and the new basis which will be amortized in 20 years.

Most of the amortization payment

increase is due to the inclusion of coast guard and the increase in normal cost payment as mentioned earlier is due to the shift in the allocation from the NACPs from DoD to Treasury due to the A perimeters. Are there any questions or comments on this page?

MS. DUSH: Again, we'll be talking more about the VA concurrent receipt issues I think down later on in today's meeting. But again, this was the increase that we're seeing here was based on several years of experience and did not even take into account very recent experience.

So we are seeing a tremendous shift in responsibility for normal costs from DoD to Treasury because of the concurrent receipt provisions.

I think at this point I need a motion to accept the proposal to amortize the initial unfunded for the coast guard liability over three years which will tie it to the amortization of the initial unfunded for the rest of the MRF.

MR. MOORE: Chair, I'll make the motion to approve the amortization method being used including the coast guard's initial amortization unfunded being set to what the remaining balance of three years.

MR. CLARK: I second that.

MR. MOORE: That was John, thank you, sorry.

MS. DUSH: And, Mike, I heard a motion from John Moore, a second from Mike Clark. All in favor?

(Chorus of ayes)

MS. DUSH: Any further discussion? All right, the motion is -- or any nays?

(No audible response)

The motion is passed. And let's move on.

MR. MAY: Great. Thank you. That concludes the valuation results. Next will be Phil Davis covering economic sanctions.

MS. DUSH: Thank you, Drew.

MR. DAVIS: Thank you, Drew. So like

Drew said, I'll be covering the economic assumptions so on this page, we just list some of the assumptions set by this Board last year as well as other Boards and other systems.

So as Drew said, in this first column, we list the current assumptions set by the Board last year of 2.5 percent inflation, 2.75 percent salary, and 4 percent interest rate.

To the right of that, we list the OPM assumptions which are all unchanged from last year. I just want to point out that the salary referred here for MRF and OPM does not include promotion of Social Security ones do.

Speaking of Social Security, here we list the three cost metrics for their assumptions, the low cost, intermediate and high cost set by them in March of this year.

And their inflation and interest rate assumptions were unchanged compared to last year and there was a slight increase in their salary assumptions.

Here we list the assumptions used

during our financial statements. And we also have the CBO inflation and ten-year Treasury note as well as the blue chip inflation and ten-year Treasury note for the most recent copy of blue chip we have which is December.

Are there any questions or comments for this page?

MS. DUSH: No, please continue.

MR. DAVIS: Okay. So on this page, we just do a little bit of math for the Board getting the salary and interest rate into real terms by just subtracting the inflation.

And then we also list the blue chip CPI and 30-year treasury assumptions that for every six months going back to December of 2020. Any questions or comments for this page?

MS. DUSH: The only comment is again to remember that the blue chip forecast is really a ten-year forecast and our outlook is longer than that.

I don't know, that would be the only thought I would have there. John or Mike, anything at this point?

MR. MOORE: Nothing here.

MS. DUSH: Okay, please continue.

MR. DAVIS: All right. So here we just have the page from the blue chip for the long-range survey. I won't go into any of these numbers in depth, but once we publish this, everyone can look at it to their hearts' content.

Now here we have the MRF fund yield projection. And this is based off the Social Security intermediate assumptions. As far as how to read this page, I'll zoom in a little.

We list the fiscal years from 2023 to 2066 and beyond and we have the inflation, the real-fund yield, the nominal fund yield and new investments on a cumulative basis and new investments on an annual basis.

And we have that for all of these fiscal years. We also have ten, 20, 30, 50 and 75 year geometric averages for all of these rates as well as fund-weighted averages for all of these time periods.

Now below we list the ultimate assumptions which is a 2.4 percent inflation, 2.26 percent real, 4.66 percent nominal and 4.66 for new investments on accumulative basis and new investments on an annual basis is 4.7 percent.

And again, just to reiterate, the assumptions set by the Board last year of 2.5 percent inflation, 1.5 percent real and 4 percent nominal. Any questions or comments for this page?

MS. DUSH: Well I think it's interesting. When I look at it that we don't hit on this set of assumptions, we don't hit a 4 percent return until about 2035.

Now we might expect since inflation is continuing that perhaps the 2023 real fund yield or the nominal fund yield may be a little bit higher, but it's, I still have concerns about trying to hike the interest rate too much in anticipation of higher real fund yields which is what is most important in the valuation of this fund.

You know, if you look at the 30-year average, we're still at a, at the 30-year fund weighted average, we're still just about 4 percent, you know, and I think when we look at the next page, we'll see something a little different which also gives us, I think some pause to be conservative.

John and Mike, would you like to comment on your thoughts at this point?

MR. CLARK: Sure, I can go. The, I agree with you, Marcia. The lines that I look at are the 20- to 50-year fund rate average real fund, you know, which is between about 1.5 and 2 roughly.

So it feels like there may be future room to increase that real rate, but in my opinion, we are in such a strange bond environment right now with the inverted curve, we're really not sure if inflation is transitory or not.

So I'm comfortable not making quick moves and collecting an additional year of data on this.

MS. DUSH: John, anything?

MR. MOORE: I think Mike stated things very nicely.

MS. DUSH: Phil, would you go on to the next page because I think that is also of interest. While we have anchored a lot of our thinking on the Social Security assumptions, it is interesting to look at the blue chip assumptions as well.

MR. DAVIS: Yes, ma'am, so just like the previous page, you can this the same, but now it is based off the blue chip assumptions and I'll just read out the ultimate assumptions for blue chip, which is 2.1 percent inflation, 1.88 percent real, 3.98 percent nominal, 3.98 percent for new investments on a cumulative basis and 3.98 for new investments on an annual basis.

MS. DUSH: Yes, so and again, blue chip is a, to look at it on the 20-, 30-, 50-year basis, is not really as good as looking at Social Security.

Their focus is much more on the ten, but if you look at really what they're talking about for the next ten to 20 years, it's only at the 20-year point are they getting a real fund yield of about 1.5, 1.49.

So again, I think this is just in my mind, you know, a little bit of a cautionary tale to maybe hold off before making any assumption changes, economic assumption changes at this point. Any further thoughts on this?

MR. CLARK: I agree, Marcia. These numbers support the proposed assumption thus far. I know we've used Social Security as the basis in the past.

If these numbers were perhaps on the other side of the Social Security numbers, then I think we would have a conversation, but the fact that these rates are lower makes me comfortable in maintaining what we have for assumptions here.

MS. DUSH: Good. John? Are you good?

MR. MOORE: Yes, no additional comments.

MS. DUSH: All right, if that's the case, then I would like to get a motion for the 9-1-23 valuation to use a 1.5 real rate of return, a 2.5 percent cost CPI assumption which results in a 4 percent nominal interest rate discount and a 2.75 across-the-board pay increase.

And again, remembering that the across the pay increase does not include the promotional increases.

MR. CLARK: Okay, you guys, I so move to approve the economic assumptions for the October 1st, 2023 evaluation which would include inflation of 2.5 percent, the interest rate of 4 percent which would result in a real yield of 1.5 percent, and across-the-board salary of 2.75 percent.

MS. DUSH: So that, the 2.75 is the sum of the inflation that 2.5 plus .25 percent of additional across the board pay increase.

MR. CLARK: Agreed.

MR. MOORE: I'll second that motion.

MS. DUSH: All in favor?

(Chorus of ayes)

MS. DUSH: Any nay?

(No audible response)

Motion is passed and I think we can move on.

MR. DAVIS: Okay. So now I believe I'm turning it over to Qian Magee.

MS. DUSH: Thank you.

MS. MAGEE: Thank you so much, Phil. So now we're going to discuss various proposals for the non-economic assumptions. I'm going to give a summary of the changes in normal cost percentages.

To be begin with, the fiscal 2024 DoD Implemented NCPs are 30 percent for full time and 23.1 percent for part time. Using prior assumptions and based on the September 30, 2022 evaluation, the DoD full-time NCP is 29.6 percent and part-time NCPs 22.8 percent.

With one year or mortality improvement to 9-30-2023, there are actually no changes in the NCPs. So the following are four proposals we have for this year. First is at update to reserve rates. If you remember, we updated the reserve rates a couple of years ago.

This time we did some clean up and make some improvements to the retirement rates. Drew will discuss in detail. The combining facts of this update have no effect on the full-time NCP and decrease the part-time NPC by 4.1 percent.

Next up is the update of mortality improvement skills. We have upped the mortality improvement skills in recent years. This year we did a lot of research to decide whether we should up the scales.

In the end, we decided to update which John will discuss in detail. The impact of NCP is a decrease of .1 percent for full time and a decrease of .2 percent for part time.

The next update is on several SBP perimeters. In the last two years we have updated the active rates, the reserve rates and the retire rates.

So this time we're updating some perimeters that affect the survivors. Rich Allen and Drew will discuss these updates. The NCP's increase by 24 percent for both full time and part time.

Lastly, we have updated some VA offset perimeters and the disability retirement rates to reflect the possible impact of PACT Act. Jonathan Wong will discuss in detail.

The impact on NCP is a decrease of 3.3 percent for full time, and a decrease of 1.4 percent for part time. The bottom line fiscal 2025 DoD NCP under these proposals will be 26.6 percent for full time and 21 percent, 21.5 percent for part time.

The estimated fiscal 2025 Treasury NCPs will be 30.8 percent for full time and 9.8 percent for part time. Please see Attachment 1. We have a list of Treasurer NCPs under each change. So do you have --

MS. DUSH: Qian, I think it's --

MS. MAGEE: -- any questions, go ahead.

MS. DUSH: Qian, I think it's really important to make a note that this is the first time that the DoD NCP has now slipped below 50 percent of the total NCP.

And with, so the implication is then that Treasury is now paying for more than half of the ongoing benefits. And again, this is related to concurrent receipt and the large increases in disability payments that are attributable to the large increases in disability benefits that are attributable to concurrent receipt.

MS. MAGEE: Definitely. So yes, this is the first time that happens. Thank you, Marcia, for your comment. So with that, I'm going to turn to Drew to start with discussion of the reserve rates. Drew?

MR. MAY: Thank you, Qian. Again, the reserve rate update results in no change to the DoD fiscal year 2025, full-time NCP. A 0.1 percent decrease in the part-time NCP and a decrease in the 9-30-2022 accrued liability of 17.8 billion or 0.8 percent.

The proposed rate changes are a combination of two updates. First, in order to address over-projection of reserve retirees that we've been seeing over several years, we are proposing to remove ad hoc increases to account for a period of six-year retirements per NDAA 2008 which had a minimal impact in changing reserve retirements applied at edge ages and year of service.

Which in the case of our model would be age 63 and 41 years of service which had a moderate impact. Lastly, we also updated the rates to include co-star which had been more impact.

At this point, could we go to Attachment 2 to go into more detail on the retirement rate change? Thank you. So the main change to these rates is that at age 63 or 41 years of service we no longer assume that all reserves will retire.

Therefore, the rate goes from 100 percent to one based on experience. The graph shows the rates by age. Additionally, we've added a dimension to these rates not shown in these graphs at 41 years of service which increases very slightly to better match experience.

Lastly, at age 59 and 41 years of service, we believe it is still reasonable to assume that upon hitting 60 one should retire. Therefore the rate of 100 percent is still used.

The rationale behind this change is that there are about 2,600 gray area reserves at or over age 63 not claiming benefits. A gray area reserve is one with 20 good years of service, but not receiving retirement benefits.

Typically this is because they have not reached age 60 to be eligible for them. But for those mentioned above, this is not the case.

And we reached out for expert opinion and were told that these could be unmanaged records where the person could already be retired, retired in another service, deceased, or simply not applying for ineligibility reasons such as being overseas.

Furthermore, these records are for inactive service members. Therefore, they are not likely being pursued to claim their benefits.

Given this explanation, we do not believe an assumption of everyone who reaches a certain age or year of service retiring to be appropriate for the reserves and instead changed our rates to be one based on experience.

The second update is a removal of the reserve career point adjustment factors. These factors model experience where people tend to have higher points when leaving than those who stay.

The factors are complicated and it is not intuitive to think that this difference should exist or persist to the future. Therefore, removing them would simplify the model and reduce both the risk of operational error and fitting too closely to current experience.

And this would not result in material experience, gain/loss to future valuations. Are there any questions or comments on this proposal?

MS. DUSH: Not from me.

MS. PAYNE: I have a question. I'm a guest, Tracy Payne. Are those retirees over 60 who are not receiving the pay, is there any way to contact those members?

It is perhaps they did not apply for some reason other than those listed.

MR. MAY: That would be a question I think for the services who would be managing them.

MS. PAYNE: Okay. Because I know, I personally know one who did not apply after the age of 60, but he passed after the age of 60 so that doesn't matter right now. So. Thank you.

MR. VIRGIL: Hi, this is Rick Virgil. I just joined a little while ago and at the coast guard, you know, we may not have exactly the same policies as DoD, but we're both military.

And I was in the private sector where

you have a program that requires employers to try to find missing participants. That doesn't happen in the military.

It's strictly up to the participant to call and collect their pension. But they can collect it retroactively I think up to three years if they wait beyond age 60.

MR. MAY: Thank you. That aligns with what we've heard as well. So at a certain point, they don't get the full benefit that they missed if they're late in claiming.

MS. PAYNE: This is Tracy Payne again. I know that that's up to the, pardon me -- frog in the throat. I know that that's up to the services.

But it seem like not informing reservists especially because there's a long time between when they become gray area retirees and when they actually retire.

They don't live in the military world. It would be nice to reach out to those members and give them the pay that they're due. And if there's any way that this Committee has any input on that, I am asking that this Committee take that action. Thank you.

MS. DUSH: Qian or Pete Zouras, --

MR. ZOURAS: Right so --

MS. DUSH: -- who would be the appropriate person to approach on that?

MR. ZOURAS: Right, your advisor from military pay and policy. I don't know if he's on the phone, but yes, he would be the person to, for us to contact to make that request.

MR. LIUZZO: Yes, this is Tom Liuzzo from MPP. We can, that would definitely be something the services would have to do, but it's something I can raise to our policy owner on the non-regular retirement and see what processes might be currently in place or if something else could be done in that arena. Over.

MS. DUSH: Thank you.

MR. MAY: If there are no further questions or comments, next we'll be going to Jon Wong who will cover mortality improvement.

MR. WONG: Thank you, Drew. Before I dive into mortality improvement, I'll have to take a second to properly introduce myself for those hearing or seeing me for the first time. My name is Jonathan Wong.

I joined OACT a little less than a year ago. While I'm still a fledgling, I do my best for reflective areas projects that our office has to show.

For mortality improvement, we are proposing a few changes. So the first change is incorporation of the 2021 and 2022 mortality data into the experience pier with the weights of zero percent for 2021 and 25 percent for 2022.

Secondly, we have the removal of the previous year's adjustment for the impact of COVID. And the last change is in new term rate of improvement for survivors.

And for those interested, Attachment 3 illustrates the differences and similarities between the SOA's mortality rate improvement model and our current model from last year and our proposed model.

It's worth mentioning that SOA did not produce a new projection scale in 2022. As the COVID impacted data wasn't certain to be predictive of future mortality.

MS. PETTYGROVE: Hey, John, it's Inger. I'm just going to jump in. SOA is the Society of Actuaries, they promulgate a lot of rates that, you know, they have a lot of numbers so just for the non-actuaries on the call, that's what that refers to.

MR. WONG: Thank you, Inger. And as Qian mentioned, the impact of this proposal would result in a .1 percent decrease for full time and a .2 percent decrease for part time of the NCP.

And a decrease in accrued liability of 35.5 billion or 1.7 percent. To moderate the rush and offer the use of weights, it is worth noting that uncertainty, pertaining to the state of COVID in the next couple of years.

As noted by the Society of Actuaries, the mortality and rates weren't nearly all causes of death was observed to be higher during 2020 than in recent prior years.

When we looked at including 2021 and 2022 data, it elevated future mortality projections so we looked at different approaches before settling with the continuous mortality investigation also known as CMI's approach on reflecting pandemic mortality.

And CMI has released its response on its plan for the next version of its mortality projection model and they believe that 2022 might be indicative of future mortality to some extent and have decided to place a 25 percent weight to the 2022 mortality data.

And furthermore, they plan to steadily increase this weight on mortality data until around 2025 by which time they expect to have a clear indication of mortality trends of the future.

And interestingly, we also attached the heat maps in Attachment 4 and those are just the mortality improvement heat maps. And lastly, we have a new long-term rate of improvement for survivors.

And these use an average blend of our officer and enlisted long-term rate of improvement. And the impact of this change in particular is a .04 percent increase and full-time NCP and a .03 percent increase in part time.

And we believe that using our retired data to reflect the survivor long-term rate of improvement is better than using the SOA's long-term improvement. Are there any questions or comments at this point? Marcia, I believe --

MS. PETTYGROVE: Marcia, we're not hearing you. Yes.

MS. DUSH: Sorry. All right, it's important to realize that this is just about mortality improvement. The underlying base table that we're using is still the same.

And when is the next time that a full mortality study would be scheduled to update the base table? Is that like once every ten years?

MR. ZOURAS: Five or ten years.

MS. DUSH: Okay.

MR. ZOURAS: Yes. We'll monitor it every year and make the decision if things get too far apart.

MS. DUSH: Okay. And again, so what we're really focused on here is just looking out as to what we think is going to happen to mortality of the future.

As we saw before, last year's valuation was a cost increase meaning that we were expecting mortality improvements more than had been expected before.

This year we're scaling back a little bit. We're seeing that the cost is bringing down the normal cost percentages a little bit. So it's just moderating what we had expected before. Any thoughts from Mike or John?

MR. CLARK: I think it's a reasonable change to ignore very high mortality experience during the height of COVID while still waiting for more data to consider longer term effects. So I think it's reasonable.

MS. DUSH: I do see a hand up from Tracy I believe.

MS. PETTYGROVE: I think that was probably left over, but Tracy unless there was a --.

MS. PAYNE: Yes.

MS. PETTYGROVE: Thank you, Tracy.

MS. DUSH: Yes, okay. John, any further comments on this?

MR. VIRGIL: Hi, Rick Virgil again. I have, I have one small comment which I think supports the Society of Actuaries has published a mortality improved table every year for about the last ten years almost.

And last year they said because of COVID they are not going to update the table first time. There's a lot of recognition that COVID had a, was a temporary dip, I'm sorry, temporary increase in mortality rates and it shouldn't be recognized in the tables on the lower.

MS. DUSH: Okay, any further

discussion on this subject? Thank you, John. And let's now go to the SBP perimeters. Is that Rich?

MR. ZOURAS: I'll hand it over to Rich. Yes.

RICHARD ALLEN: Yes. Hello, everybody. Richard Allen from Office of the Actuary. I'm going to talk about the proposed SBP parameters.

This proposal results in a .4 percent increase to the FY '25 full-time DoD NCP, a .4 percent increase in the part-time NCP and a decrease in the 9-30-22 accrued liability of 1.5 billion or .1 percent.

What we're proposing is an update to SBP perimeters from the experienced periods listed below to the FY21 for the following SBP new retiree elections from 2007 to '09, SBP new premium reduction factors from FY 2007, 2009 also and SBP continuing retiree perimeters modeling survivor benefits from FY 2008.

The rationale or purpose of the update is to reflect changes in SBP experience over time such as the potential effects of sunsetting the redux at the end of 2017 and the repeal of the DIC offset which was in the DNAA FY 2020.

The proposed perimeters also incorporate coast guard experience. In Attachment 6 and 7 we have a description of the rates that we're developing. And here we see the participation rate assumptions for SBP.

First, let me give a brief overview of what SBP and also RCSBP are. That is the survivor benefit plan. This is a plan which allows for retirees to have their retirement benefits continued to their dependents if they should die before their dependents.

Participation is optional and those who choose to enroll, there is a reduction in pay so it's important for retired pay purposes. As mentioned, the rates were last updated around 2009.

We have separate rates for officer and enlisted and we also have separate rates by age. And if you look at the chart here, I'll start with the officer, we see the current rates is the orange line.

And that's the participation rate on the left side and the age at retirement below. The blue line which is the one that goes up and down is the actual experience from 2021.

And then the red line is what we're proposing which is basically a smooth rate of what the 2021 actual is. For the officers, it really doesn't change that much from what we currently have.

If you look at the bottom chart, the enlisted, since the current rates are those rates in green, you can see that we're now proposing higher rates so that's a change.

And these are election rates for spouses, spouse/child elections which is the note at the bottom.

MS. DUSH: And since for enlisted participants, the rates we're proposing are now higher and there is some subsidy in this benefit. That's why cost circling up a little bit. Is that a correct assumption?

RICHARD ALLEN: That is correct. This is a subsidized benefit so if participation increases, then the amount that is subsidized will also increase which is why there was that increase in the NCP.

MS. DUSH: Thank you.

MS. PAYNE: I have a question. This is Tracy Payne.

RICHARD ALLEN: Hello, Tracy.

MS. PAYNE: Hi. So I understand that under the law insurable interest cannot be elected for a child. But the Department of Defense does allow that and it's on their website and in their manual.

So in that case, when a child is elected under insurable interest and that's a dependent child, can that be terminated arbitrarily or is that child protected as he would be under child coverage?

RICHARD ALLEN: Child coverage automatically terminates when the child is 18 or if they are enrolled in college when they're 22.

The exception being a child who is incapacitated and would need support after turning 22. The insurable interest election would allow somebody to cover that child indefinitely.

However, the insurable interest premium is significantly higher. But that election would have had to have been, the insurable interest election would have had to have been made at the point of retirement.

MS. PAYNE: Okay. And so if the child election is made, the member cannot terminate that until the child ages out or other requirements?

RICHARD ALLEN: That is correct.

MS. PAYNE: Okay. If he elects insurable interest coverage for that child, can he terminate that while that child is still underage and a dependent?

RICHARD ALLEN: Insurable interest coverage can be terminated at any point. If that happens, that's the end of insurable interest coverage.

He couldn't like come back later and then want to re-enroll that child.

MS. PAYNE: Why would the Department of Defense offer -- not allow you to terminate child coverage under normal circumstances, but then tell you that you can cover that child under insurable interest and allow you to terminate it at any time?

Why would they not protect that child just as they would protect another child?

RICHARD ALLEN: Well, first of all, you said Department of Defense. It's actually, these are Congressional laws.

MS. PAYNE: Okay.

RICHARD ALLEN: We just implement the policy.

MS. PAYNE: Yes, but the law doesn't say that you can cover a child. It says unmarried member without dependents.

RICHARD ALLEN: Again, --

MS. PAYNE: May not, but the DoD says that they can.

RICHARD ALLEN: Nothing personal, I'm not sure this is the right forum for this discussion, but I'll try to answer your questions anyway.

MS. PAYNE: Okay.

RICHARD ALLEN: SBP, when members have at retirement generally have to make an irrevocable decision on spouse coverage or child coverage.

They, if a member has a child at retirement, that is their one and only opportunity to elect coverage for that child. And if they do elect to cover that child, then that child will be covered until they're ineligible.

And that would also include if they have more than one child. So as I said, if barring if they're incapacitated, that would be until the member's youngest child turns 18 or 22 if still in school. And that's just simply what the rules of SBP are.

MS. PAYNE: Right. And I will end this, but I will say that the DoD is offering an alternative to the law that says an unmarried member may elect insurable interests for one child.

And, but not following the rules that would follow for any other child that was elected coverage for. Like why would you offer to elect to --

RICHARD ALLEN: Insurable interest, insurable interest is offered for a variety of reasons. Not just child coverage. It's designed to allow someone to cover somebody who has a financial interest in that retiree who is not the spouse or the child.

MS. PAYNE: Right.

RICHARD ALLEN: Some people may choose to cover a child because they want that child to have survivor coverage beyond age 18 or 22.

That's not really the intention, but you might say it's a little bit of a loophole in the program. There's very few retirees who cover a child through the insurable interest option.

MS. PAYNE: Yes, okay so the law says you can't, DoD says you can, but they're not provided the protection.

RICHARD ALLEN: Again, these are really questions that should be addressed probably to the DFAS legal counsel who would make these determinations.

This is, like I said, this is not really the right place for this discussion.

MS. PAYNE: All right. Thank you, Mr. Allen.

RICHARD ALLEN: You're very welcome. Okay, if we can continue with the SBP proposals on the next slide. And here I'm just going to talk about the reserve participation rates. I've described the SBP program.

The RCSBP program which stands for Reserve Component SBP are for reserves who want to make an election while they're in the gray area and have coverage for while they're in the gray area.

If they make that election, they can choose to either have an immediate benefit or a deferred benefit. An immediate benefit would be payable at the moment for the first month after the retiree's death.

A deferred benefit would be paid when that retiree would have turned age 60 since that's when they were, would have received retired pay.

And you can see what the current assumptions were or still are I guess technically. About four and a half, about 45 percent for immediate and a little under 10 percent for deferred is the current.

We're proposing the immediate go up based on recent experience to 62 percent for officers, 70 percent for enlisted and the deferred go significantly drop to 1 and 2 percent.

I also show the SBP participation rates for SBP which would be after age 60.

Everything is immediate coverage. And there are some slight increases there.

MS. DUSH: So Rich, just to be clear, is this reserves who are in the gray area meaning they have 20 good years, but they have not commenced a retirement benefit yet? And so what they're doing is they're electing spouse coverage that would begin while they have not begun retirement benefits.

But if they should die before they begin retirement benefits, either the spouse's benefit begins immediately or is deferred to age 60.

And so what we're seeing is very few choose a deferral to 60. Most choose an immediate benefit for the spouse. Have I stated that correctly?

RICHARD ALLEN: Yes, that is correct. And I should also add they pay for the coverage after they start receiving retired pay so kind of they're having coverage in the gray area without making any payments.

But then when they turn 60, they would have a reduction in pay had they elected while in the gray area.

MS. DUSH: Okay, thank you.

RICHARD ALLEN: Okay. Okay and that's the end of what I have.

MR. MAY: I will continue with the SBP perimeters. We can go to Attachment 7. First moving on to the second bulleted and the proposal above SBP new retiree premium reduction factors.

To understand these, I'll briefly go over how SBP works and that is when a retiree in electing SBP, a member will select a base amount up to full retired pay.

And this base amount elected determines both the benefit the survivor would receive and the premium that is deducted from retired pay for it.

This item here refers to perimeters used to model this reduction in retired pay because of SBP premium. And they are primarily used at retirement and SBP election to adjust the annuity for SBP premium.

But they are also used to account for SBP premium and combined with VA offsets during BRS lump sum election and the associated retired pay restoral at age 67.

And lastly, to return the premium to monthly pay when the member has reached the 30 year paid up status. The proposed perimeters also simplify the current perimeters by combining career status bonus and non-CSP and as well as ages whenever possible.

This simplification had no impact on the NCPs at the 0.1 percent level compared to keeping the exact same methodology and only updating the experience.

If anyone is interested in more detail, these perimeters are the first 30 sets of tables in Attachment 7 and they are also described in the technical reference to the MRS evaluation, Actives Table F1, Item 6, Reduction Factors for SBP.

The third bullet Continuing Retiree

Perimeters is split into two parts. The first part is people allocation factors. The current and proposed election shown earlier is for a spouse or a spouse/child elections for members in pay status.

These factors allocate the projected electors into all election types and also account for SB elections from people not in pay status.

If interested, more details on these perimeters are in the next third figures in Attachment 7 and they are also described in the technical reference, Survivor Table, F1, Item 5, Rates for Electing SBP Options.

The second part of the update is an update to the base or net factor. As mentioned earlier, the base amount elected determines the survivor's benefits as well as the premium.

And this perimeter is used to model future survivor benefits using information we have about a member's net retired pay amount. If interested, more detail on this perimeter is in the final set of graphs for Attachment 7.

And they are also described in the technical reference Survivor Table, F1, Item 2 or Issue of SBP Base Amount to Net Retired Pay. Are there any questions on the other SBP perimeters being proposed?

MS. DUSH: Drew, I did see a hand go up. I believe it was Ms. Alicia. Do you have a question?

MS. LITTS: Hello, ma'am. Hi, it's Alicia Litts from OUSD Comptroller. I have more of a comment and not necessarily I guess a question.

But as you know, Survivor Benefit Pay is paid out of military retirement fund, but the reduction to a member's retirement is not contributed to the fund. Is that taken into consideration here?

Because if the money that's being taken from the member to pay for this isn't going into the fund, isn't that considered an unfunded liability?

MR. MAY: I believe this is simply

adjusting the amount that the retiree at that point would be receiving through a retired pay.

MS. LITTS: Okay. All right so I just want to make sure. Okay. So this is just adjusting their amount that's actually going to be leaving the fund then?

MR. MAY: Yes.

MS. LITTS: For the retiree? Not the survivor benefit cost?

MR. MAY: The, --

MR. ZOURAS: That's correct. Yes, that's correct. The --

MS. LITTS: Okay.

MR. ZOURAS: -- the money coming out of the fund to pay retirees is net of the premium so the fund is, they'll be reimbursed in a sense for the future, payment of future survivor benefits.

I think what you're talking about are people who are not in paid status and the premiums that they pay do not get paid into the fund.

The amount that they remit and some don't remit, that's a -- there I think you're correct there. You know, those premiums are not reflected in our model and in reality, you know, they're not being funded properly.

MS. LITTS: Okay. Thank you, Pete.

MR. MAY: Is there any further questions? Hearing none, we'll go back to Jon Wong for the final set of proposals.

MR. WONG: Thank you, Drew. For our last proposal, we have the offset perimeters. So just to give some context, there's several legislative proposals that sought to expand can currently receive benefits and eligibility to military retirees and one such instance is being the PACT Act.

So the PACT Act was passed in August of 2022 and I guess let me go over the acronym for just a Promise to address Comprehensive Toxics and it seeks to expand the VA health care and benefits to Veterans who have been exposed to toxic substances, materials or environments during military service.

The number of new Veterans receiving the new disability compensation in 2031 is projected to be 20 percent higher because of this legislation.

For our proposals, we are proposing adjustments to VA offset perimeters and disability rates using valuation. And the impact of our proposals would be at 3.3 percent decrease to the FY2025 full-time NCP.

And a 1.4 percent decrease in the part-time NCP. And less than .01 percent change in the accrued liability. So for the VA offset perimeters, we are adjusting the VA offset perimeters in our model for new non-disabled retirees such that the increase in concurrent receipt outweighs in an opening group where there's a 10 percent over a 30 or 40 year horizon.

And for disability rates, as a result of PACT, we expect more non-disabled retirees to get disability compensation so as a result, we are proposing a 10 percent increase in the disability retirement rates for both actives and reserves while decreasing the lost incidents are the same number. And as my --

MS. DUSH: So, go ahead. Go ahead, I'm sorry.

MR. WONG: I just wanted to bring out that we also attached Attachment 8 which goes over the Board to the Secretary of Defense. And just going over some of the legislative issues and as repercussions of the recurring receipt.

MS. DUSH: So again, what's happening here is that we expect there to be more VA disability payments. And normally that would, before the PACT Act, you know, what we're saying is we don't expect any changes really to overall military retirement fund retirement payments.

So that stays the same and that's why the liability doesn't change. But because there are more VA disability benefits, those are being paid concurrently with retirement benefits.

And if they are subject to the laws

regarding concurrent receipt, then the cost of those benefits in the MRF should be passed to the Treasury.

And that is why an increase in the VA benefits causes a decrease in the DoD normal cost percentages based on the way the laws have been written.

And so, again, it doesn't change our estimates too much of what total MRF benefit payments are going to be. It just changes our estimate of what is attributable to DoD and what should be passed to Treasury. Have I said that correctly, Jon, Jon Wong?

MR. WONG: Yes, sorry.

MS. DUSH: Okay.

MR. WONG: I agree with that.

MS. DUSH: Good. Any further discussion on this subject?

MR. CLARK: I --

MS. DUSH: More for Jon?

MR. CLARK: I'll just comment, Marcia, that I think this is the good faith efforts to try to estimate the potential effect of a law that just recently passed.

I would not be surprised if we revisit this in the next few years, we figure that we need to actually increase it further, further accelerating the move of normal costs away from DoD towards Treasury.

I question whether that's the intent of the original law, but we're sort of stuck in that from a legal perspective. And I anticipate we'll just be bringing this question up again in future years.

MS. DUSH: Yes, I think that's really the basis for the letter we've wrote last year. John Moore, any further comments?

MR. MOORE: No, what agreed, well stated and the letters trying to lay out this issue a little better so that we can continue discussion on it.

MS. DUSH: All right, well at this point I would like a motion to support the changes to the non-economic assumptions regarding reserve rates, mortality improvement, SBP perimeters, and the VA offset perimeters and disability rates.

MR. MOORE: So moved, Chair.

MS. DUSH: Okay, a second?

MR. CLARK: I second.

MS. DUSH: If there's no further discussion, all in favor, aye?

(Chorus of ayes)

MS. DUSH: Any nay?

(No audible response)

MS. DUSH: Motion is passed. So at this point what I'd like to do is just restate then that the fiscal year '25 DoD NCPs will be 26.6 percent for full-time members and 21.5 percent for part-time members.

Is there any further discussion on the MRF before we move to the valuation of the voluntary separation incentive program? So if not, I think, Phil, are you up for that?

MR. DAVIS: Yes, ma'am.

MS. DUSH: Okay.

MR. DAVIS: I'll be providing a side level overview and an introduction of the voluntary separ ation incentive or VSI and then I'll be turning it over to Jon Wong who just spoke.

So VSI was a program that started in 1992 in an effort to downsize the active military force and to be eligible, members had to have six years of active duty service, have five years of continuous active service at the time of separation and a rank that had more members than were needed and they also have to continue drilling and reserves.

The benefit is an annuity payable for twice as long as the member's years of service and equal to two and a half percent of their base pay times their years of service.

And this is subject to a VA offset and can be passed to survivors. VSI has been closed since October of 2001 so we've had no new entrance since then.

Unless there are any questions, I

guess high level ones, I'll pass it on to Jon.

MR. WONG: Thanks, Phil. So again, start with this page and here we have the VSI funding projection and current interest rate assumptions.

So we have an interest rate assumption of a 2.25 percent, you know, set last year. And the proposed interest rate is shown as 2.75.

We also have the table above which is listing out the inflation real, inflation rate, the real interest rate and the fund yield for fiscal year 2023 and above.

And we also have the, below that we have the value averages and below that we also have an average as rated by the expected value of the fund. And in the notes we listed investment strategies and the funds are invested in the mix of overnights and bills and not invested in tips. So any comments or questions on this page?

MS. DUSH: I think on this, yes, I think the important point here is this fund has such a short duration that the interest discount rate almost has no effect.

And I think the proposal to go up a little bit based on current interest rate projections is good. To take it up much higher, again, I think that we'll see that an interest-rate change doesn't have a whole lot of effect upon this plan.

So again, I think the proposal to go to 2.75 from 2.25 is reasonable at this point in time. John and Mike, any comments?

MR. CLARK: I agree, Marcia. I think the short end of the yield curve is certainly strange right now. Rates are very high and I think we'll revisit this whenever we get to a point where maybe, you know, the curve looks more normal.

But as you said, the rate doesn't have a huge affect on liability anyway. So I think I'm comfortable taking incremental steps toward where we think it's going.

MS. DUSH: Okay.

MR. MOORE: Same here.

MS. DUSH: All right, please continue, Jon.

MR. WONG: So on the next page, we have the table showing the number of remaining payments broken down by various categories and details.

Pay grade, value offset status, count, average VSI payment, average VA payment, and something else about this table as you can read down below, the table excludes 481 eligible VSI members who have a full VA offset.

And the table includes 423 survivors receiving 2023 survivors receiving benefits from 322 deceased VSI members. And on the next page we have a list of breakdown of the changes in unfunded liability.

And these are based on the assumptions of a 2.75 percent interest, 2.2 percent COLA on VA offsets and a 1 percent non-COLA interest on VA.

So starting with the unfunded liability on October 1st of 2021, and the amortization payment made on January 1st of 2021, we can get the expected unfunded liability on October 1st, 2022, which we show here as 52.9 million and the actual unfunded liability if 49 million for a gain of 3.86 million.

And we could break down this gain into two components so 1.02 million due to gain due to assets and then 2.84 million gain due to liability.

And a larger portion of the gain is due to assets being attributed to benefits payment with a projected payment for fiscal year 2022 being 31.1 million when in actual it's 30.1 million.

And for liability, we see about a half a million gain due to COLA being higher than assumption as observed in the footnote 3. And then we also have a 400,000 gain due to the offsets being different than expected.

And similarly, a 400,000 gain due to residual and the fast data change.

MS. DUSH: All right, so what's really

interesting here is before we've said in the MRF because of VA increases in benefits, you know, that affected concurrent receipt.

Here and it didn't affect the total, you know, concurrent receipt benefits don't affect the total payment from the MRF. Here, they, an increase in a VA benefit does affect the payment from this plan because the VA benefits are offsets.

They reduce the payment from this plan. And so when you have a VA COLA that's higher than expected, that's going to be a gain to this plan.

When you have updated ratings, increases in ratings, that increased VA benefits, they increase the offsets so that becomes a gain here.

So here we see modest gains due to changes in the VA offsets. And then as I said before, we were proposing to update the interest rate from 2.25 to 2.75.

You know that has a million and a half

dollar affect for 50 basis points as a gain. So at that, you want to, any further discussion on this? Keep going, Jon.

MR. WONG: All right. Thanks. So the next two pages provide the detail of VSI amortization, but these are based on assumptions we stated earlier.

For the amortization schedule, we're looking for a contribution of 7.8 million for January 1st of the fiscal year 2025. This amount would be 44.9 percent of the fiscal year projected benefits payments.

In other words, this is a percentage such that if applied for the remaining payments, the fund will stay above zero until the last benefit payment in 2039. On the next page we also --

MS. DUSH: And then --

MR. WONG: -- we also have --.

MS. DUSH: Go ahead. That --

MR. WONG: On the next page, --

MS. DUSCH: -- that was the point.

MR. WONG: -- on the next page, we have the visual of the VSI fund table and we can see here that the fund balance benefit payment and the amortization payments gradually decrease as it converts to zero.

MS. DUSH: Okay. Any discussion on these results? Okay. So at this point, I'd like to call for a motion that supports the interest rate of 2.75 for this valuation for the COLA increase on VA offsets of 2.2 percent, for the non-COLA increase on VA offsets of 1 percent, for approval of these results of the 9-30-22 valuation.

And the resulting amortization payment of 7.8 million for fiscal year '25.

MR. CLARK: All right. So I will move to accept the assumptions so there is more and more time 2.75 percent interest, 2.2 percent COLA increase on the VA offset, and a 1 percent non-COLA increase on the VA offsets.

And I also move to accept these 9-30-2022 valuation results including a fiscal 2025

$7.8 million contribution to the VSI.

MS. DUSH: Any discussion? All in favor, aye?

(Chorus of ayes)

MS. DUSH: Any nay?

MR. MOORE: Oh, wait. I'm sorry. Marcia, I need to, I probably need to second that.

MS. DUSH: Oh, okay.

MR. MOORE: Should I second that?

MR. CLARK: Yes.

MS. DUSH: Seconding the motion.

MR. MOORE: Yes.

MS. DUSH: Any further discussion? All in favor?

(Chorus of ayes)

MS. DUSH: Any nay?

(No audible response)

MS. DUSH: And so the motion is passed. And I think that is it. I think that concludes, oh, I forgot. We are going on to a discussion of the ADVANA conversion. And is that you, Qian or?

MR. DAVIS: That's me.

MS. MAGEE: That will be Phil.

MS. DUSH: That's you, Phil.

MR. DAVIS: Yes.

MS. DUSH: Okay.

MR. DAVIS: And don't worry, everyone. It should be quick. So I'll be covering a project that mainly three OACTers have been working on for the last several months.

And it essentially boils down to a change in the method in which we access data coming from DMDC particularly in our producing of the retirement census data.

And none of the numbers we have shown so far during the presentation reflect these sort of come from this new method, but going forward they will for next year.

And so essentially the method that we have been using in the past and used for this year is outlined here in a crude graphic where DMDC produces and maintains the data files.

We then access them through a platform called TSO Mainframe or --

MS. PETTYGROVE: Phil, --

MR. DAVIS: -- or just the mainframe.

MS. PETTYGROVE: Phil, --

MR. DAVIS: Yes.

MS. PETTYGROVE: Phil, could you just say what DMDC is?

MR. DAVIS: DMDC are the Defense Manpower Data Center in Monterey, California. And as I was saying, we mainly access that through TSO Mainframe using SAS programs.

And then we'll transfer those to OACT devices where we can continue working on those. And this method has been somewhat cumbersome in the past.

I know for several OACTers, we have to have complete separate devices only dedicated to accessing DMDC data and then we have to transfer those to our day-to-day device using a method like DoD safe transfer.

And DMDC or the mainframe is actually

being shut down in the coming months. And with that comes the introduction of this new data system called ADVANA which is a combination of Advancing and Analytics which is a platform that's owned by the Comptroller.

And ADVANA is a cloud computing platform with several different data tools. And for OACT's purposes so far we've used two which are Databricks and IQuery.

And additionally, ADVANA has machine learning and built in protective analytics capabilities that we haven't been able to explore yet.

But we're really excited to be able to get the chance to do so. And so this new method going forward essentially boils down to this graphic where the data files are still maintained and produced by DMDC.

But now we are accessing those raw data files through Databricks forming whatever calculations and manipulations that we previously did in the mainframe using Databricks.

And then uploading these new files to our cluster which is essentially our office's dedicated digital workspace. And then we download those through IQuery straight to our devices.

So it's much more streamlined as it can all be accessed through the browser as opposed to having to pull out a new laptop. Are there any questions or comments for this page and the introduction of our data access methods?

MS. DUSH: No.

MR. DAVIS: Okay. So moving on, so we outperformed two parallel runs for using the 2021 data and the 2022 as a comparison for the census production for retirement.

And there are some impacts. And due to this conversion within the final data we'd be using and some of the causes of these impacts can be something as simple as a change in the programming languages so for mainframe, we use SAS programming.

And for this new method in ADVANA, we

use a combination of Python, R and Sequel. And so these different languages can result in some slight differences.

For example, by default, SAS stores up to 16 digits for numeric variables while Python can store up to 28. And additionally, some differences can be traced back to changes within the raw files that are produced by DMDC.

And as we notice those, we have reported them to DMDC and either received an explanation as to a reason for the change or there's been a fix in this which is nice.

And additionally, some differences can just be traced to OACTers removing sections of code that should no longer be used or are no longer being used.

And that can result in some minimal changes. And so the conversion talking about has been broken down into four population groups, active duty, reserves, retirees, and survivors.

And I'll just show the data counts so the counts of members within these population groups for FY21 and then going down, we also have the FY22 numbers as well as the liabilities produced by these censuses.

So for FY22 there was a total change in three people between the mainframe and ADVANA methods and additionally, there was a .004 percent difference within the liability of these two difference censuses. That concludes --

MS. DUSH: I think --

MR. DAVIS: Oh, yes, ma'am?

MS. DUSH: Yes, actually amazingly close for transferring, from changing completely different data accessing methods. I think this is working, it appears to work very well.

MR. DAVIS: Thank you, ma'am. No, I'm glad to hear that. I'm sure Drew and John are as well. Are there any other --

MS. DUSH: Okay.

MR. DAVIS: -- questions or comments? Then turning it over to you, Marcia, to conclude everything.

MS. DUSH: Okay. Well, we appreciate

all the hard work that OACT has put into this valuation and I'd like to ask if there are any final questions before we adjourn?

With no final questions, I adjourn this meeting of the Board of Actuaries for the Department of Defense. I would ask that guests sign off at this point.

I would like my fellow Board Members to stay on for just a couple of minutes and we'll discuss the transmission of the result of the NCPs via letters to the various parties that we have to communicate with.

So at this point, guests can sign off. Thank you.

(Whereupon, the above-entitled matter went off the record at 11:30 a.m.)

E

F

Q

R

C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Board of Actuaries Meeting

Before: U.S. DoD

Date: 07-14-23

Place: teleconference

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate complete record of the proceedings.

Neal R Gross

Court Reporter