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

August 30, 2019

MEMORANDUM FOR THE RECORD

SUBJECT: Minutes of the July 11-12, 2019, Meeting of the DoD Board of Actuaries

These are the minutes of the July 11-12, 2019, meeting of the DoD Board of Actuaries. The Education Benefits Fund (EBF) was discussed on July 11th and the Military Retirement Fund (MRF) and Voluntary Separation Incentive (VSI) Fund were discussed on July 12th. The DoD Board of Actuaries (Board) advises on all three funds. The fund discussions appear in the order in which they were discussed.

List of Attachments:

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

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

James F. Verlautz, Chairperson
DoD Board of Actuaries

9/3/19
Date

Inger M. Pettygrove
Designated Federal Officer

9.5.19
Date

DEPARTMENT OF DEFENSE BOARD OF ACTUARIES
MEETING MINUTES

July 11-12, 2019
4800 Mark Center Drive
Alexandria, VA 22350
Conference Room 14, Level B1

EDUCATION BENEFITS FUND
(July 11, 1:00 PM – 4:00 PM)

HIGHLIGHTS/KEY BOARD DECISIONS

Agenda Item 3: September 30, 2018, Valuation Proposed Economic Assumptions

- Transcript Pages 23-32: Approved continuing to use Blue Chip Financial Forecasts to estimate CPI for Chapter 1606 basic, leading to an ultimate CPI of 2.1%. Approved maintaining interest rate assumption of 3.25%. Approved holding Chapter 1607 education cost increase assumption constant at 5.0%.

Agenda Item 4: September 30, 2018, Valuation Proposed Methods and Assumptions—Reserve Programs

- Transcript Pages 32-63: Valuation of the closed (sunset) group for Chapter 1607 presented. Motion passed to maintain the process of making asset transfers from Chapter 1607 to Chapter 1606. Chapter 1606 assumptions and methods presented—consistent with prior years (no motions).

Agenda Item 5: September 30, 2018, Valuation Proposed Methods and Assumptions—Active Duty Programs

- Transcript Pages 63-101: Chapter 30 kicker assumptions and methods presented. Consistent with prior years. No motions. Board requests an agenda item for next year's board meeting to discuss how normal costs would be developed for Chapter 30 kickers should they be utilized in the future.
- Transcript Pages 102-103: Roll-forward assumptions and methods were presented for Post-Funding Amounts for Voluntary and Involuntary Separatees. No changes from previous methodology. No motions.

DEPARTMENT OF DEFENSE BOARD OF ACTUARIES
MEETING MINUTES (CONTINUED)

MILITARY RETIREMENT FUND/VOLUNTARY SEPARATION INCENTIVE FUND
(July 12, 10:00 AM – 1:00 PM)

HIGHLIGHTS/KEY BOARD DECISIONS

Introduction: Presentation of the Office of the Secretary of Defense Exceptional Public Service Award

- Transcript Pages 4-8: William Booth, Director, DHRA, presented James F. Verlautz with the Exceptional Public Service Award for his tenure on the DoD Board of Actuaries.

Agenda Item 1: Legislative and Policy Update

- Transcript Pages 9-10: Board acknowledged receiving an earlier briefing regarding MRF legislative changes in the prior year, and potential changes in the upcoming year, along with a description of the progress made on the Blended Retirement System (BRS) implementation.
- Transcript Pages 9-10: Primary BRS opt-in period ended December 31, 2018. However, certain members will continue to have opportunities to opt in (e.g., hardships, breaks in service, cadets, midshipmen).
- Transcript Pages 9-10: As of June 30th, 404,863 service members had opted into BRS. 248,959 were auto-enrolled.
- Transcript Pages 9-10: The CY 2020 lump sum discount rate is 6.75%. (No lump sums have been elected so far.)
- Transcript Pages 9-10: Recent legislation in the FY2019 NDAA included: 2.6% pay raise; permanent extension of Special Survivor Indemnity Allowance; and removal of requirement that an officer be "able to complete 20 years of active commissioned service before his sixty-second birthday."
- Transcript Pages 9-10: Pending legislation in the FY2020 NDAA includes: 3.1% pay raise; BRS Implementation Congressional Report due May 2020; Service-specific MRF contributions; and allowing credit for reduced-age, non-regular retirement for every 90 days of service performed under 10 U.S.C. 12304b.

Agenda Item 2: Investment Experience

- Transcript Pages 10-23: DFAS presented an overview of the VSI and MRF trust funds which included detailed financial data and the current trust fund status.
- Transcript Pages 18-19: DFAS explained that the 44% increase in MRF interest income ($21.2B to $30.5B) was mainly a result of increased inflation earnings on TIPS.

Agenda Item 3: September 30, 2018, Valuation of the Military Retirement Fund

- Transcript Pages 23-27: The Treasury's FY 2020 amortization payment for the unfunded liability (UFL) is $91.873 billion, and Treasury's normal cost payment for Concurrent Receipt benefits is $9.305 billion, for a combined Treasury payment of $101.178 billion.

Agenda Item 4.a: Proposed Economic Assumptions for September 30, 2019, MRF Valuation and FY 2021 NCPs

- Transcript Pages 28-41: Approved long-term economic assumptions for the 2019 valuation and FY 2021 NCPs of 4.75% interest rate (0.25% decrease from last year), 3.25% across-the board salary increase (unchanged from last year), and 2.75% CPI (unchanged from last year).

Agenda Item 4.b: Proposed Non-Economic Assumptions for September 30, 2019, MRF Valuation and FY 2021 NCPs

- Transcript Pages 41-47: Approved the proposed non-economic assumptions for divorce rates— the proposed rates are based on the newer period (FY 2017-2018), which better captures recent data and result in a 30% drop in retiree divorces relative to those predicted by the current rates. This proposal results in no change (to the 3rd decimal place) to either the FY 2021 full- or part-time DoD NCPs, and increases the 9/30/2018 accrued liability by $1.1 billion (or 0.1%).
- Transcript Pages 67-68: Approved the use of actual BRS opt-in data (reported from DFAS) as assumptions for BRS opt-in elections are no longer needed. Additional opt-in elections made in the coming years will likely be captured as small experience gains as they emerge. Actual BRS data result in the following changes: +1.3% increase to the DoD full-time NCP, and a +0.1% increase to the DoD part-time NCP, and a $4B (or 0.3%) estimated increase to the 9/30/2018 accrued liability.
- Announced FY 2021 DoD NCPs of 34.6% (full-time) and 26.7% (part-time) and Treasury NCPs of 15.8% (full-time) and 4.2% (part-time).

Agenda Item 5: September 30, 2018, VSI Fund Valuation, Proposed Methods and Assumptions

- Transcript Page 55-65: Approved economic assumptions of 2.25% interest (unchanged from last year), 2.2% CPI (unchanged from last year), and 1.0% VA increase, (unchanged from last year), leading to a January 1, 2021, amortization payment of $21.4 million.

ATTACHMENT 1

DEPARTMENT OF DEFENSE BOARD OF ACTUARIES
MEETING AGENDA

July 11-12, 2019
4800 Mark Center Drive
Alexandria, VA 22350
Conference Room 14, Level B1

EDUCATION BENEFITS FUND
(July 11, 1:00pm – 4:00pm)

1. Fund Overview (Brad Ryder, DoD Office of the Actuary)

2. Investment Experience (Coralita Jones, DFAS)

3. September 30, 2018, Valuation Proposed Economic Assumptions*

    a. CPI (Rich Allen, DoD Office of the Actuary)
    b. Interest Rate (Brad Ryder)
    c. Education Cost Increase (Brad Ryder)

4. September 30, 2018, Valuation Proposed Methods and Assumptions – Reserve Programs*

    a. Chapter 1607 Benefits (Brad Ryder)
    b. Chapter 1606 Benefits (Brad Ryder)

5. September 30, 2018, Valuation Proposed Methods and Assumptions – Active Duty Programs*

    a. Kicker Benefits (Rich Allen)
    b. Funding Amounts for Post-Vietnam Era Voluntary and Involuntary Separatees (Rich Allen)

* Board approval required.

ATTACHMENT 1 (CONTINUED)

July 11-12, 2019
4800 Mark Center Drive
Alexandria, VA 22350
Conference Room 14, Level B1

MILITARY RETIREMENT FUND/
VOLUNTARY SEPARATION INCENTIVE FUND
(July 12, 10:00am – 1:00pm)

1. Legislative and Policy Update (Andy Corso, Assistant Director of Military Compensation)

    a. Blended Retirement System (BRS) Implementation Progress
    b. FY 2019 National Defense Authorization Act (Recent Changes)
    c. FY 2020 National Defense Authorization Act (Pending Changes)

2. Investment Experience (Coralita Jones and Lori Haines, DFAS)

    a. Military Retirement Fund
    b. Voluntary Separation Incentive (VSI) Fund

3. September 30, 2018, Valuation of the Military Retirement Fund*

    a. Starting Population (Pete Zouras, DoD Office of the Actuary)
    b. Valuation Results (Pete Zouras)
    c. Gain/Loss Analysis (Pete Zouras)
    d. 10/1/2019 Unfunded Liability Amortization and Normal Cost Payments (Pete Zouras)

4. September 30, 2019, Valuation of the Military Retirement Fund, Proposed Methods and Assumptions*

    a. Economic Assumptions – COLA, Interest Rate, and Across-the-Board Salary Increases

        i. Fund Yield Projection (Brad Ryder, DoD Office of the Actuary)
        ii. Historical Economic Statistics (Brad Ryder)

    b. Non-Economic Assumptions (Pete Zouras, Nick Garcia, Pete Rossi, DoD Office of the Actuary)

    c. FY 2021 Full-Time and Part-Time Normal Cost Percentages (Pete Zouras)

5. September 30, 2018, VSI Fund Valuation, Proposed Methods and Assumptions*

    a. Interest Rate (Brad Ryder)
    b. Valuation Update and Other Assumptions (Nick Garcia)
    c. Unfunded Liability Amortization Payments (Nick Garcia)

* Board approval required.

ATTACHMENT 2

Board of Actuaries Meeting
(Education Benefits Fund)
Attendee List
In-Person or by Call-In

Name	Position or Office
James F. Verlautz	Chair
Marcia A. Dush	Board Member
John Moore	Board Member
Pete Zouras	DoD Chief Actuary and Executive Secretary
Richard Allen	DoD OACT
Brad Ryder	DoD OACT
Inger Pettygrove	DoD OACT
Pete Rossi	DoD OACT
Nicholas Garcia	DoD OACT
Joel Sitrin	DoD HA
Patty Leopard	OSD P&R
Tom Liuzzo	M&RA
Kevin Lannon	OSD(C)
Colleen Hartman	OSD(C)
William Moorehouse	DHRA OGC
Lori Haines	DFAS-IN
Coralita Jones	DFAS-IN
Virginia Fortune	DFAS-IN
Otelia Anderson	DFAS-IN
Darius Hinton	ARNG G1
Luis Maldonado	NGB/FM
Tanya M. Harris	NGB/A1Y
Kenneth Hardy	NGB
Vincent Suich	DMDC
Pete Abraham	DMDC

ATTACHMENT 2 (CONTINUED)

Board of Actuaries Meeting
(Military Retirement Fund and VSI Fund)
Attendee List
In Person or by Call-In

James F. Verlautz	Chair
Marcia A. Dush	Board Member
John Moore	Board Member
Pete Zouras	DoD Chief Actuary and Executive Secretary
Richard Allen	DoD OACT
Brad Ryder	DoD OACT
Inger Pettygrove	DoD OACT
Pete Rossi	DoD OACT
Nicholas Garcia	DoD OACT
Joel Sitrin	DoD HA
William Booth	DHRA Director
Tom Liuzzo	M&RA
Kevin Lannon	OSD(C)
William Moorehouse	DHRA OGC
Lori Haines	DFAS-IN
Coralita Jones	DFAS-IN
Virginia Fortune	DFAS-IN
Andy Corso	ODASD(MPP-Compensation)
Edith Smith	Gold Star Wives of America
Brad Whitney	OUSD (P&R)
Richard Virgile	Chief Actuary USCG

ATTACHMENT 3

Meeting Handouts of the Board of Actuaries Meeting (Education Benefits Fund)

DEPARTMENT OF DEFENSE BOARD OF ACTUARIES
MEETING AGENDA

July 11-12, 2019
4800 Mark Center Drive
Alexandria, VA 22350
Conference Room 14, Level B1

EDUCATION BENEFITS FUND
(July 11, 1:00pm – 4:00pm)

1. Fund Overview (Brad Ryder, DoD Office of the Actuary)

2. Investment Experience (Lori Haines, DFAS)

3. September 30, 2018, Valuation Proposed Economic Assumptions*

    a. CPI (Rich Allen, DoD Office of the Actuary)
    b. Interest Rate (Brad Ryder)
    c. Education Cost Increase (Brad Ryder)

4. September 30, 2018, Valuation Proposed Methods and Assumptions – Reserve Programs*

    a. Chapter 1607 Benefits (Brad Ryder)
    b. Chapter 1606 Benefits (Brad Ryder)

5. September 30, 2018, Valuation Proposed Methods and Assumptions – Active Duty Programs*

    a. Kicker Benefits (Rich Allen)
    b. Funding Amounts for Post-Vietnam Era Voluntary and Involuntary Separatees (Rich Allen)

* Board approval required.

DoD Education Benefits Fund Primer

Montgomery GI Bill Active Duty – MGIB-AD – Chapter 30

- **Chapter 30 Basic Benefits (Funded by VA/EBF) –**$**1,994** per month beginning **October 1, 2018** (indexed to NCES). Almost entirely funded by VA, save for a small closed group with approximately 1,000 members commonly referred to as Category III, which is funded through the EBF. Eligibility lost: 10 years after separation
- **Chapter 30 Kicker Benefits (Funded by EBF) -** The Chapter 30 / Chapter 33 basic benefits can be increased by $150, $250, $350, $450, $550, $650, $750, $850, or $950 per month. These amounts do not receive cost-of-living increases. Eligibility lost: 15 years after separation

Montgomery GI Bill Selected Reserve (Guard) – MGIB-SR – Chapter 1606

- **Chapter 1606 Basic Benefit (Funded by EBF) -** $**384** per month beginning **October 1, 2018**. Eligibility lost: when member leaves Sel-Res
- **Chapter 1606 Kicker Benefits (Funded by EBF) -** The Chapter 1606 / Chapter 1607 / Chapter 33 basic benefits may be increased by $100, $200, or $350 per month for recruits in critical skills or critical specialties.

Reserve (Guard) Educational Assistance Program - REAP – Chapter 1607

Closed to new enrollments Nov. 25, 2015 (No per capitas because no new eligibles) – All benefits end Nov. 25, 2019

- **.** Each member is eligible for a portion of the Montgomery GI Bill Active Duty (MGIB-AD) 3-year benefit rate (indexed to NCES). Eligibility lost: 10 years after member separates**.** The following rates become effective **October 1, 2018**:
  - Those serving 90 days to less than 1 year receive 40% of the MGIB-AD 3-year rate or $**797.60** per month
  - Those serving 1 year but less than 2 years receive 60% of the MGIB-AD 3-year rate or $**1,196.40** per month
  - Those serving 2 or more continuous years (or 3 years cumulative) receive 80% of the MGIB-AD 3-year rate or $**1,595.20** per month

The Post 9/11 GI Bill for Active Duty and Reserve/Guard – Post 9/11 – Chapter 33

- **Chapter 33 Basic Benefits (Funded by VA) -** includes tuition & fees, housing allowance, and books and supplies stipend, and the Yellow Ribbon Program, where participating schools enter a contract to pay tuition and fees above the in-state maximums and general maximum of $**23,671.94** effective **August 1, 2018** (indexed to NCES). VA matches dollar for dollar in the Yellow Ribbon Program.
- **Chapter 33 Kicker Benefits (Funded by EBF but not currently used) -** Chapter 30 kickers and Chapter 1606 kickers can be paid out under Chapter 33.

EBF Funding

- Payments are determined two years in advance for budgeting purposes.
- **Monthly Per Capita Rates:** General funding method is net single premium (one payment for all future benefits) for each eligible participant with a discount of an amortization payment (5 year for reserve programs, 10 year for active duty programs) for projected surpluses.
- **Annual Amortization Payments:** For projected deficits, the first payment of 5 year amortization schedule is requested from the component or service.

Education Benefits Fund Board of Actuaries Meeting

Defense Finance and Accounting Service

Coralita Jones/Lori Haines
Trust Fund Accounting and Reporting Division
Defense Finance and Accounting Service

July 11, 2019

AGENDA

- Overview
- Financial Data
- Fund Status

OVERVIEW

- Short Term Liquidity
  - Current Year Purchases
    - ✓ Oct 2018 purchased a $10.0M TIPS and $110.0M Bond
    - ✓ Feb 2019 purchased $85.0M TIPS
    - ✓ Apr 2019 purchased $10.0M Note
    - ✓ May 2019 purchased $30.0M TIPS
    - ✓ Anticipate continued ability to invest annually going forward
  - Current Year Maturities
    - ✓ Jan 2019 maturities $123.5M
  - Inflows exceeding outflows
    - ✓ FY 2019 disbursements through May $158.3M ($16.4M under projected)
    - ✓ FY 2019 receipts through May $240.4M ($12.5M under projected)
    - ✓ FY 2019 overnights/cash as of May 31 $97.8M
- Long Term Liquidity
  - New investing for FY 2020
    - ✓ As of EOM May, $150M
    - ✓ Average 5-year term
    - ✓ Will be used to rebalance investment mix
  - FY 2021-2024 projected investments of $635M

Summary Financial Analysis

Year Ended September 30

(In Thousands)

	FY 2018	FY 2017	% Change
Service Contribution	$167,707	$43,807	283%
Interest Income	35,608	35,431	.5%
Total Revenue	$203,315	$79,238	61%
Benefit Payments	$220,215	$255,733	-157%
Total Expense	$219,775	$256,214	-14%

FINANCIAL DATA

Summary Financial Analysis

Year Ended September 30

(In Thousands)

Interest Income

	FY 2018	FY 2017	$ Change
Interest Revenue - Par	$35,952	$47,216	-$11,264
Interest Revenue - Inflation	$13,380	$8,293	$5,087
Interest Revenue - Discount	$936	$677	$259
Interest Revenue - Premium	-$14,660	-$20,755	$6,095
	$35,608	$35,431	$177

FINANCIAL DATA

Education Benefits Trust Fund
For the Year Ending September 30, 2018

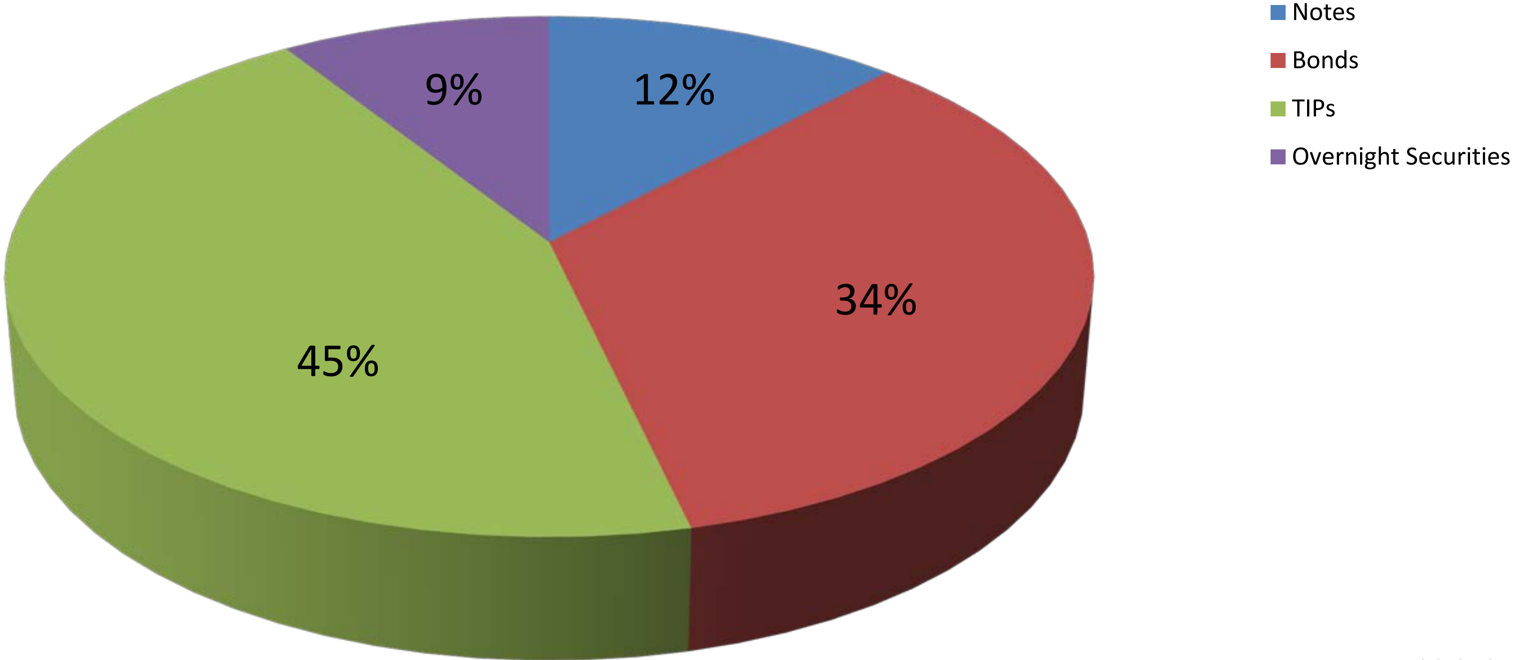
	(in thousands)
Assets	
Fund Balance with Treasury	$100.0
Investments	
Overnight	$230,789.1
Long term	
Par	$779,847.0
Inflation purchased	$23,973.9
Inflation earned	$25,659.1
Premium outstanding	$2,147.0
Discount outstanding	-$1,938.8
Interest receivable	$4,164.4
Total Long Term Investments	$853,175.6
Total Investments	$1,083,964.7
Accounts Receivable, net	$1,177.6
Total Assets	$1,085,242.3
Liabilities	
Military Retirement and Other Federal Employment Benefits	
Actuarial Liability	$921,657.0
Total Military and Other Federal Employment Benefits	$921,657.0
Accounts Payable and Other Liabilities	$637.1
Total Liabilities	$922,294.1
Net Position	
Cumulative Results of Operations	$162,948.2
Total Liabilities and Net Position	$1,085,242.3

FINANCIAL DATA

Effective Fund Yields

FY	Yield
2009	1.45%
2010	2.78%
2011	4.07%
2012	2.93%
2013	3.24%
2014	2.90%
2015	2.36%
2016	2.60%
2017	2.97%
2018	3.35%

Education Benefits Portfolio
As Of 05/31/19

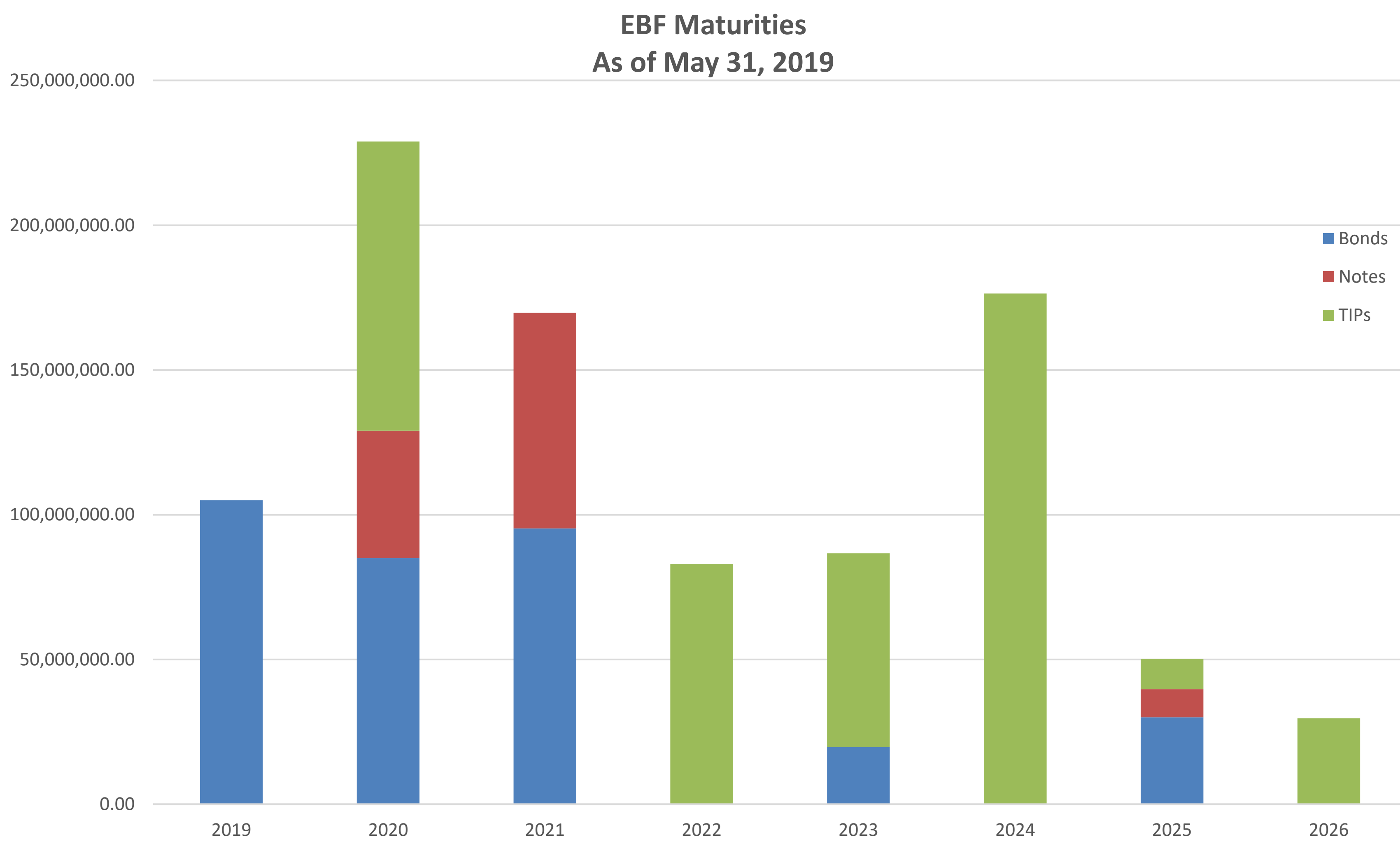


Notes	128,850,522.08
Bonds	367,219,066.91
TIPs	477,251,255.41
Overnight Securities	97,660,750.12
Total	$1,070,981,594.52

FUND STATUS

Account Description	Security Description	Shares/Par	Book Value	Market Value
EDUCATION BENEFIT DOD	MK BOND 6.875% 08/15/2025	30,000,000.00	34,687,115.86	38,437,500.00
EDUCATION BENEFIT DOD	MK BOND 7.125% 02/15/2023	19,659,651.19	23,493,178.32	23,284,399.38
EDUCATION BENEFIT DOD	MK BOND 8.125% 08/15/2019	75,000,000.00	75,705,712.48	75,820,312.50
EDUCATION BENEFIT DOD	MK BOND 8.125% 08/15/2019	30,000,000.00	30,286,997.45	30,328,125.00
EDUCATION BENEFIT DOD	MK BOND 8.125% 08/15/2021	95,258,545.88	105,925,748.53	107,761,230.03
EDUCATION BENEFIT DOD	MK BOND 8.750% 08/15/2020	85,000,000.00	89,940,618.29	91,587,500.00
	TOTAL BONDS	334,918,197.07	360,039,370.93	367,219,066.91
EDUCATION BENEFIT DOD	MK NOTE 1.250% 03/31/2021	30,503,112.81	30,234,645.38	30,102,759.45
EDUCATION BENEFIT DOD	MK NOTE 2.625% 08/15/2020	44,000,000.00	43,626,376.53	44,247,500.00
EDUCATION BENEFIT DOD	MK NOTE 2.625% 11/15/2020	44,000,000.00	43,524,486.21	44,357,500.00
EDUCATION BENEFIT DOD	MK NOTE 2.750% 02/28/2025	9,738,025.93	9,952,578.87	10,142,762.63
	TOTAL NOTES	128,241,138.74	127,338,086.99	128,850,522.08
EDUCATION BENEFIT DOD	MK TIPS 0.125% 01/15/2022	46,145,580.00	51,463,187.28	51,445,354.29
EDUCATION BENEFIT DOD	MK TIPS 0.125% 01/15/2023	14,183,455.00	15,584,999.01	15,485,489.83
EDUCATION BENEFIT DOD	MK TIPS 0.125% 04/15/2021	9,594,114.84	10,135,053.73	10,185,461.54
EDUCATION BENEFIT DOD	MK TIPS 0.125% 04/15/2022	29,803,437.00	31,134,792.42	30,864,411.14
EDUCATION BENEFIT DOD	MK TIPS 0.125% 07/15/2024	55,324,450.00	59,816,581.53	58,792,004.82
EDUCATION BENEFIT DOD	MK TIPS 0.125% 07/15/2024	29,392,907.00	31,224,846.48	31,235,157.87
EDUCATION BENEFIT DOD	MK TIPS 0.250% 01/15/2025	9,767,448.00	10,402,805.84	10,425,279.98
EDUCATION BENEFIT DOD	MK TIPS 0.375% 07/15/2023	47,066,944.00	51,299,032.13	51,659,764.64
EDUCATION BENEFIT DOD	MK TIPS 0.625% 01/15/2024	78,694,565.08	85,893,717.14	86,843,104.49
EDUCATION BENEFIT DOD	MK TIPS 0.625% 01/15/2026	27,772,869.71	29,947,535.32	30,226,561.78
EDUCATION BENEFIT DOD	MK TIPS 1.375% 01/15/2020	85,000,000.00	99,888,681.27	100,088,665.03
	TOTAL TIPS	432,745,770.63	476,791,232.15	477,251,255.41
EDUCATION BENEFIT DOD	ONE DAY 2.370% 06/03/2019	97,660,750.12	97,660,750.12	97,660,750.12
	TOTAL PORTFOLIO	993,565,856.56	1,061,829,440.19	1,070,981,594.52

FUND STATUS



2019	2020	2021	2022	2023	2024	2025	2026	Total
105.0	228.9	169.8	83.0	86.7	176.4	50.2	29.7	929.6

Bureau of Labor Statistics Consumer Price Index (CPI-W) & O-Act Projected CPI-W's

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	July - June	July - June CPI Increase	Chapter 1606 Monthly Basic Benefit
2017							**238.6**	**239.4**	**240.9**	**240.6**	**240.7**	**240.5**			
2018	**241.9**	**243.0**	**243.5**	**244.6**	**245.8**	**246.2**	**246.2**	**246.3**	**246.6**	**247.0**	**245.9**	**244.8**	242.1	**2.3%**	$375
2019	**245.1**	**246.2**	**247.8**	**249.3**	**249.9**	250.5	251.0	251.5	251.9	252.4	252.8	253.2	247.1	**2.1%**	$384
2020	253.7	254.1	254.6	255.0	255.5	255.9	256.3	256.8	257.2	257.7	258.1	258.6	253.5	**2.6%**	$392
2021														**2.1%**	$402
2022														**2.1%**	$410
2023														**2.2%**	$419
2024														**2.2%**	$428
2025														**2.1%**	$437
2026														**2.1%**	$446
2027														**2.1%**	$455

Bold indicates actual CPI. Otherwise, O-ACT projection.
Annual CPI = July - June 12 Month Average Divided by Previous July - June 12 Month Average rounded to the nearest tenth of percent.
Chapter 1606 monthly benefit is previous year's benefit increased by annual CPI rounded to the nearest dollar.

Source: Bureau of Labor Statistics, Urban Wage Earners and Clerical Workers CPI through May, 2019
Blue Chip Financial Forecasts, June, 2019 Consumer Price Index Estimates
Estimates are Quarterly Through 2020; Annually Thereafter

EBF Fund Yield Projection and Current Interest Assumption

FY	Inflation	Real*	Fund Yield	Blue Chip Return on New Invests (Cumulative)**
2019	2.18%	0.89%	3.07%	2.35%
2020	2.15%	0.67%	2.82%	2.43%
2021	2.10%	0.33%	2.43%	2.55%
2022	2.10%	0.33%	2.43%	2.58%
2023	2.20%	0.45%	2.65%	2.68%
2024	2.10%	0.68%	2.78%	2.76%
2025	2.10%	0.89%	2.99%	2.99%
2026	2.10%	1.02%	3.12%	3.12%
2027	2.10%	1.04%	3.14%	3.14%
2028	2.10%	1.07%	3.17%	3.17%
10 Yr Avg	2.12%	0.74%	2.86%	2.78%
10 Yr Fund Wgt	2.13%	0.72%	2.85%	2.75%

NC Duration	Liability Duration	Asset Duration
2	2	2

Sensitivity Analysis Interest Assumption	Sensitivity Analysis NC Inc / -Dec	Sensitivity Analysis Liability Inc / -Dec
3.00%	0.61%	0.61%
3.50%	-0.61%	-0.61%

Current Interest Assumption
3.25%

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 an amount equal to 1.07% of expected annual benefit payments is invested in overnights and new bond purchases are invested in 5 yr bonds.

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

--- Portfolio Allocation: 50% conventional / 50% TIPS.

--- Investment Policy: Match cash flows to cash outflows plus a margin. Minimize risks to the funds--all securities are market based Treasury special issues. Hold to maturity policy.

Cost of College Assumption
Nominal Increases in the Cost of College

Year	Cost [1]	Actual Annual Increase	Aug to Aug CPI-W Inflation[2]	Real Annual Increase	Board Annual Increase Assumption	Diff From 10 Year Moving Average
2008-09	$ 8,893	4.83%	5.93%	-1.10%	6.00%	0.10%
2009-10	$ 9,135	2.72%	-1.90%	4.62%	6.00%	0.25%
2010-11	$ 9,575	4.82%	1.44%	3.37%	6.00%	0.06%
2011-12	$ 10,179	6.31%	4.26%	2.05%	6.00%	-0.07%
2012-13	$ 10,681	4.93%	1.67%	3.26%	6.00%	0.07%
2013-14	$ 11,073	3.67%	1.45%	2.22%	6.00%	0.70%
2014-15	$ 11,487	3.74%	1.59%	2.15%	5.00%	0.10%
2015-16	$ 11,862	3.26%	-0.28%	3.55%	5.00%	0.45%
2016-17	$ 12,219	3.01%	0.66%	2.35%	5.00%	1.10%
2017-18	$ 12,615	3.24%	1.93%	1.31%	5.00%	1.59%
			2.88%			

		Chap 1607 Liab Change	Chap 1606 NC Change	Chap 30 NC Change
Sensitivity	4.75%	-0.21%	-0.11%	-0.12%
Current	**5.00%**			
Sensitivity	5.25%	0.21%	0.11%	0.11%

[1] **Source:**
NCES Digest of Education Statistics **2018**. Found at http://nces.ed.gov/programs/digest/
Table 330.10. Average undergraduate tuition and fees and room and board rates charged for full-time students in degree-granting postsecondary institutions, by level and control of institution: Selected years, 1963-64 through 2017-18. Current Dollars. Tuition and required fees (in-state for public institutions). All Institutions.
This statistic includes public and private institution costs. For the public institutions, numbers are based on in-state tuition.
Legal Reference:

Title 38 Sect. 3015 (h) (1) With respect to any fiscal year, the Secretary shall provide a percentage increase in the rates payable under subsections (a)(1) and (b)(1) equal to the percentage by which -- (A) the average cost of undergraduate tuition in the United States, as determined by the National Center for Education Statistics, for the last academic year preceding the beginning of the fiscal year for which the increase is made, exceeds (B) the average cost of undergraduate tuition in the United States, as so determined, for the academic year preceding the academic year described in subparagraph (A). (2) Any increase under paragraph (h) (1) in a rate with respect to a fiscal year after fiscal year 2004 and before fiscal year 2014 shall be rounded down to the next lower whole dollar amount. Any such increase with respect to a fiscal year after fiscal year 2013 shall be rounded to the nearest whole dollar amount.
[2] Beginning of school year / beginning of last school year.

Chapter 1607 / REAP
Valuation of Education Benefits

Presented before the DoD Board of Actuaries
by Brad Ryder (571) 372-1994, john.b.ryder2.civ@mail.mil
DoD Office of the Actuary
Summer 2019

Chapter 1607 Sunset PVFB and Benefit Payments

PVFB

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
PVFB								
FY 2019	$ 918,958.25	$ 368,573.98	$ 37,979.61	$ 67,050.35	$ 206,758.64	$ 37,721.12	$ 3,559.08	$ 1,640,601.03
FY 2020	$ 158,691.42	$ 63,647.64	$ 9,782.76	$ 13,597.25	$ 42,770.88	$ 7,803.14	$ -	$ 296,293.10
FY 2021	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FY 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FY 2023	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Benefit Payments

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
FY 2019	$ 778,602.02	$ 312,280.17	$ 29,001.67	$ 54,820.36	$ 168,216.17	$ 30,689.42	$ 3,621.12	$ 1,377,230.93
FY 2020	$ 161,457.73	$ 64,757.15	$ 9,953.30	$ 13,834.28	$ 43,516.46	$ 7,939.16	$ -	$ 301,458.08
FY 2021	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FY 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FY 2023	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
Oct-18	$ 99,801.68	$ 40,028.26	$ 2,064.87	$ 4,074.48	$ 19,555.76	$ 3,567.76	$ 3,030.27	$ 172,123.08
Nov-18	$ 123,165.31	$ 49,398.90	$ 3,463.95	$ 11,804.96	$ 22,489.51	$ 4,103.00	$ 517.04	$ 214,942.67
Dec-18	$ 141,427.41	$ 56,723.43	$ 2,174.28	$ 5,053.04	$ 20,917.34	$ 3,816.17	$ 739.63	$ 230,851.30
Jan-19	$ 59,249.75	$ 23,763.78	$ 941.04	$ 2,179.10	$ 13,734.54	$ 2,505.74	$ -	$ 102,373.95
Feb-19	$ 41,764.67	$ 16,750.89	$ 1,014.72	$ 5,208.18	$ 7,464.91	$ 1,361.90	$ -	$ 73,565.27
Mar-19	$ 65,887.43	$ 26,426.00	$ 4,886.06	$ 4,444.31	$ 15,506.60	$ 2,829.03	$ (589.69)	$ 119,389.74
Apr-19	$ 62,317.12	$ 24,994.03	$ 3,265.43	$ 10,482.81	$ 22,342.45	$ 4,076.16	$ -	$ 127,478.00
May-19	$ 73,771.69	$ 29,588.20	$ 4,335.19	$ 2,044.01	$ 16,229.60	$ 2,960.93	$ (76.13)	$ 128,853.49
Jun-19	$ 30,259.53	$ 12,136.43	$ 1,865.39	$ 2,592.74	$ 8,155.62	$ 1,487.91	$ -	$ 56,497.64
Jul-19	$ 27,574.37	$ 11,059.47	$ 1,699.86	$ 2,362.67	$ 7,431.91	$ 1,355.88	$ -	$ 51,484.16
Aug-19	$ 25,706.35	$ 10,310.25	$ 1,584.71	$ 2,202.61	$ 6,928.43	$ 1,264.03	$ -	$ 47,996.38
Sep-19	$ 27,676.71	$ 11,100.52	$ 1,706.17	$ 2,371.44	$ 7,459.49	$ 1,360.91	$ -	$ 51,675.25
Oct-19	$ 79,214.17	$ 31,771.07	$ 4,883.27	$ 6,787.35	$ 21,349.99	$ 3,895.10	$ -	$ 147,900.96
Nov-19	$ 82,243.56	$ 32,986.09	$ 5,070.02	$ 7,046.92	$ 22,166.48	$ 4,044.06	$ -	$ 153,557.13

Chapter 1607 Projected Analysis of Funds ($M)

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
FY 2019								
Starting Fund (Oct 18)	$1.936	$0.686	$0.097	$0.116	$0.424	$0.186	$0.004	$3.449
Present Value of Benefits	$0.919	$0.369	$0.038	$0.067	$0.207	$0.038	$0.004	$1.641
Unfunded Liability (Surplus)	($1.017)	($0.317)	($0.059)	($0.049)	($0.218)	($0.148)	($0.000)	($1.808)
Amortization Payments	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Asset Transfer	($0.833)	($0.244)	($0.051)	($0.036)	($0.176)	($0.141)	$0.001	($1.480)
Start + Amortization + Transfer	$1.103	$0.442	$0.046	$0.080	$0.248	$0.045	$0.004	$1.969
Funded Percentage	120%	120%	120%	120%	120%	120%	120%	120%
Receipts (excludes amortization)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Benefit Payments	($0.779)	($0.312)	($0.029)	($0.055)	($0.168)	($0.031)	($0.004)	($1.377)
Benefit Payments Returned	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Benefit Payments after Returns	($0.779)	($0.312)	($0.029)	($0.055)	($0.168)	($0.031)	($0.004)	($1.377)
Net Receipts (w.o. amorts)	($0.779)	($0.312)	($0.029)	($0.055)	($0.168)	($0.031)	($0.004)	($1.377)
Interest (w.o. amorts)	$0.024	$0.010	$0.001	$0.002	$0.006	$0.001	$0.000	$0.044
Net Receipts with Interest (w.o. amorts)	($0.754)	($0.303)	($0.028)	($0.053)	($0.163)	($0.030)	($0.004)	($1.334)
Ending Fund	$0.348	$0.140	$0.018	$0.027	$0.085	$0.016	$0.001	$0.635

Chapter 1607 Projected Analysis of Funds ($M)

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
FY 2020								
Starting Fund (Oct 19)	$0.348	$0.140	$0.018	$0.027	$0.085	$0.016	$0.001	$0.635
Present Value of Benefits	$0.159	$0.064	$0.010	$0.014	$0.043	$0.008	$0.000	$0.296
Unfunded Liability (Surplus)	($0.190)	($0.076)	($0.008)	($0.014)	($0.043)	($0.008)	($0.001)	($0.339)
Amortization Payments	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Asset Transfer	($0.158)	($0.063)	($0.006)	($0.011)	($0.034)	($0.006)	($0.001)	($0.280)
Start + Amortization + Transfer	$0.190	$0.076	$0.012	$0.016	$0.051	$0.009	$0.000	$0.356
Funded Percentage	120%	120%	120%	120%	120%	120%	N/A	120%
Receipts (excludes amortization)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Benefit Payments	($0.161)	($0.065)	($0.010)	($0.014)	($0.044)	($0.008)	$0.000	($0.301)
Benefit Payments Returned	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Benefit Payments after Returns	($0.161)	($0.065)	($0.010)	($0.014)	($0.044)	($0.008)	$0.000	($0.301)
Net Receipts (w.o. amorts)	($0.161)	($0.065)	($0.010)	($0.014)	($0.044)	($0.008)	$0.000	($0.301)
Interest (w.o. amorts)	$0.004	$0.002	$0.000	$0.000	$0.001	$0.000	$0.000	$0.007
Net Receipts with Interest (w.o. amorts)	($0.158)	($0.063)	($0.010)	($0.014)	($0.042)	($0.008)	$0.000	($0.294)
Ending Fund	$0.033	$0.013	$0.002	$0.003	$0.009	$0.002	$0.000	$0.061

Chapter 1607 Projected Analysis of Funds ($M)

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
FY 2021								
Starting Fund (Oct 20)	$0.033	$0.013	$0.002	$0.003	$0.009	$0.002	$0.000	$0.061
Present Value of Benefits	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Unfunded Liability (Surplus)	($0.033)	($0.013)	($0.002)	($0.003)	($0.009)	($0.002)	$0.000	($0.061)
Amortization Payments	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Asset Transfer	($0.033)	($0.013)	($0.002)	($0.003)	($0.009)	($0.002)	$0.000	($0.061)
Start + Amortization + Transfer	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Funded Percentage	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Receipts (excludes amortization)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Benefit Payments	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Benefit Payments Returned	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Benefit Payments after Returns	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Net Receipts (w.o. amorts)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Interest (w.o. amorts)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Net Receipts with Interest (w.o. amorts)	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Prepayment of Amortization	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
Ending Fund	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000

Chapter 1606 / MGIB-SR
Valuation of Education Benefits

Presented before the DoD Board of Actuaries
by Brad Ryder (571) 372-1994, john.b.ryder2.civ@mail.mil
DoD Office of the Actuary
Summer 2019

Chapter 1606 Fund History
for Basic and Kicker Combined

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
FY 2018								
Starting Fund (Oct 2017)	$262.4	$126.5	$30.4	$44.5	$80.6	$62.9	$4.1	$611.3
Present Value of Benefits	$153.9	$82.6	$12.7	$23.4	$79.0	$26.1	$0.6	$378.4
Unfunded Liability (Surplus)	($108.5)	($43.9)	($17.6)	($21.1)	($1.6)	($36.8)	($3.5)	($232.9)
Amortization Payments	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Asset Transfer	$4.5	$1.5	$0.0	$0.0	$0.7	$0.0	($0.0)	$6.8
Start+Amortization+Transfer	$266.9	$128.0	$30.4	$44.5	$81.3	$62.9	$4.1	$618.1
Receipts (incl. amortization)	$66.3	$32.4	$0.1	$3.9	$20.8	$2.9	$0.0	$126.3
Receipts (w.o. amortizations)	$66.3	$32.4	$0.1	$3.9	$20.8	$2.9	$0.0	$126.3
Benefit Payments	($59.8)	($27.5)	($4.5)	($9.2)	($24.2)	($6.0)	($0.2)	($131.4)
Benefit Payments Returned	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Net Benefit Payments	($59.8)	($27.5)	($4.5)	($9.2)	($24.2)	($6.0)	($0.2)	($131.4)
Net Receipts	$6.5	$4.9	($4.4)	($5.4)	($3.3)	($3.1)	($0.2)	($5.1)
Interest	$9.2	$4.5	$1.0	$1.4	$2.7	$2.1	$0.1	$21.0
Net Rec w/ Int	$15.7	$9.3	($3.5)	($3.9)	($0.6)	($1.1)	($0.1)	$15.9
Ending Fund	$282.6	$137.3	$26.9	$40.6	$80.7	$61.8	$4.0	$634.0

Chapter 1606 Count of Basic Eligibles

Chapter 1606 Basic Program	Number of Persons As of September 30, 2017	2018
1606 Eligibles who are not 33 Eligible	**194,317**	**197,569**
Army National Guard	105,775	109,765
Army Reserve	45,406	44,116
Navy Reserve	9,679	8,526
Marine Corps Reserve	20,429	18,376
Air National Guard	9,460	13,570
Air Force Reserve	3,071	2,791
Coast Guard Reserve	497	425
1606 Eligibles who are 33 Eligible	**268,414**	**247,383**
Army National Guard	106,807	102,095
Army Reserve	61,883	55,057
Navy Reserve	23,992	23,042
Marine Corps Reserve	8,284	7,042
Air National Guard	41,788	36,111
Air Force Reserve	24,323	23,039
Coast Guard Reserve	1,337	997
Total 1606 Eligibles	**462,731**	**444,952**
Army National Guard	212,582	211,860
Army Reserve	107,289	99,173
Navy Reserve	33,671	31,568
Marine Corps Reserve	28,713	25,418
Air National Guard	51,248	49,681
Air Force Reserve	27,394	25,830
Coast Guard Reserve	1,834	1,422

Chapter 1606 Kicker Eligibles

	Number of Persons As of September 30, 2017	2018
Eligible for a $100 Kicker Benefit	**10,928**	**7,578**
Army National Guard	63	53
Army Reserve	10,865	7,525
Navy Reserve	0	0
Marine Corps Reserve	0	0
Air National Guard	0	0
Air Force Reserve	0	0
Coast Guard Reserve	0	0
Eligible for a $200 Kicker Benefit	**48,286**	**47,477**
Army National Guard	35,015	36,093
Army Reserve	12,795	10,986
Navy Reserve	476	398
Marine Corps Reserve	0	0
Air National Guard	0	0
Air Force Reserve	0	0
Coast Guard Reserve	0	0
Eligible for a $350 Kicker Benefit	**64,968**	**61,815**
Army National Guard	6,799	9,584
Army Reserve	13,424	10,539
Navy Reserve	0	0
Marine Corps Reserve	281	358
Air National Guard	32,334	30,059
Air Force Reserve	12,130	11,275
Coast Guard Reserve	0	0
Total Eligible for a Kicker Benefit	**124,182**	**116,870**
Army National Guard	41,877	45,730
Army Reserve	37,084	29,050
Navy Reserve	476	398
Marine Corps Reserve	281	358
Air National Guard	32,334	30,059
Air Force Reserve	12,130	11,275
Coast Guard Reserve	0	0

Chapter 1606 Gain/Loss for Basic and Kicker Combined

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
Projected Model 9/30/2018 Assets ($ Millions)	$260.6	$135.1	$26.9	$40.6	$92.0	$62.9	$4.0	$622.2
Projected Model 9/30/2018 PVB	$158.8	$83.6	$12.7	$23.6	$79.7	$24.9	$0.4	$383.8
Projected Model 9/30/2018 Unfunded PVB	**($101.8)**	**($51.5)**	**($14.2)**	**($17.0)**	**($12.3)**	**($37.9)**	**($3.6)**	**($238.4)**
9/30/2018 Assets	$282.6	$137.3	$26.9	$40.6	$80.7	$61.8	$4.0	$634.0
9/30/2018 PVB	$134.0	$70.1	$10.3	$20.3	$76.2	$22.6	$0.4	$333.9
9/30/2018 Unfunded PVBs	**($148.6)**	**($67.2)**	**($16.6)**	**($20.3)**	**($4.5)**	**($39.2)**	**($3.6)**	**($300.0)**
FY 2018 Asset (Gain) Loss	($22.0)	($2.2)	$0.0	$0.1	$11.3	$1.0	($0.0)	($11.8)
FY 2018 PVB (Gain) Loss	($24.7)	($13.5)	($2.4)	($3.3)	($3.5)	($2.3)	($0.0)	($49.8)
FY 2018 Unfunded PVB (Gain) Loss	**($46.7)**	**($15.7)**	**($2.4)**	**($3.3)**	**$7.8**	**($1.3)**	**($0.0)**	**($61.7)**
Percentage of Projected Model PVB	-29.4%	-18.8%	-19.0%	-13.8%	9.8%	-5.3%	-7.5%	-16.1%

Chapter 1606 Gain/Loss for Basic and Kicker Combined

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
(Gain)/Loss Walk for PV Benefits:								
2018 New Entrant Experience ($ Millions)	$30.9	($7.7)	($1.9)	($1.0)	($7.0)	($0.5)	$0.0	$12.8
(LY NC) * (one yr DMDC data - expected) +	19.5%	-9.2%	-14.6%	-4.1%	-8.8%	-2.2%	3.3%	3.3%
(LY-2 NC) * (two yrs DMDC - one yr DMDC)								
Withdrawal Experience and Census Changes[1]	($9.6)	($3.7)	($0.5)	($0.8)	$4.3	($1.0)	$0.08	($11.2)
	-6.0%	-4.5%	-3.9%	-3.2%	5.4%	-4.2%	18.1%	-2.9%
Usage Rate and Demo Assump Changes (includes True Up)	($46.1)	($2.0)	($0.1)	($1.6)	($0.8)	($0.8)	($0.11)	($51.5)
	-29.0%	-2.4%	-0.5%	-6.8%	-1.0%	-3.0%	-25.1%	-13.4%
Interest Rate Assumption Change	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Economic Assumption Changes	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	($24.7)	($13.5)	($2.4)	($3.3)	($3.5)	($2.3)	($0.0)	($49.8)
	-15.6%	-16.1%	-19.0%	-14.1%	-4.4%	-9.4%	-3.7%	-13.0%

[1] Captures the difference between this year's liability valued at old assumptions using (1) last year’s census vs. (2) this year’s census

Chapter 1606 Gain/Loss for Basic and Kicker Combined

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
(Gain)/Loss Due to Assets:								
MOY to EOY Ben Projection Experience ($ Millions)	($0.8)	($0.7)	($0.1)	($0.2)	($0.2)	($0.2)	($0.0)	($2.3)
Projected to EOY w/ model	-0.5%	-0.8%	-1.1%	-0.9%	-0.2%	-0.9%	-2.9%	-0.6%
Contributions	($20.9)	($1.4)	$0.2	$0.3	$11.6	$1.3	$0.0	($8.9)
	-13.2%	-1.7%	1.4%	1.4%	14.5%	5.2%	0.0%	-2.3%
Interest Earnings[2]	($0.3)	($0.1)	($0.0)	($0.0)	($0.1)	($0.1)	($0.0)	($0.6)
	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Total	($22.0)	($2.2)	$0.0	$0.1	$11.3	$1.0	($0.0)	($11.8)
	-13.9%	-2.6%	0.0%	0.3%	14.2%	4.1%	-3.8%	-3.1%

[2] Given in % of Projected Model Assets. All other %s given as % of Projected Model PV Benefits.

Chapter 1606 Historic and Projected New Entrants

Basic Benefit

Fiscal Year		Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve
2016	**OACT Projected**	**28,319**	**15,725**	**3,164**	**4,558**	**4,329**	**2,015**	**284**
2016	Actual DFAS	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas
2016	Actual DMDC 1st Yr	15,979	10,667	2,892	4,764	3,481	1,521	11
2016	Actual DMDC 2nd Yr	19,748	13,599	5,107	4,772	4,016	1,820	20
2016	Actual DMDC 3rd Yr	24,865	11,230	3,720	4,078	4,022	1,961	20
2017	**OACT Projected**	**28,319**	**15,725**	**2,892**	**4,764**	**4,329**	**1,521**	**284**
2017	Actual DFAS	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas	$0 Per Capitas
2017	Actual DMDC 1st Yr	10,208	13,965	2,966	4,635	3,010	1,285	16
2017	Actual DMDC 2nd Yr	20,111	12,657	4,946	4,261	3,668	1,658	32
2018	**OACT Projected**	**19,748**	**13,965**	**5,107**	**4,772**	**4,016**	**1,820**	**20**
2018	Actual DFAS	24,313	18,579	$0 Per Capitas	3,722	3,859	$0 Per Capitas	$0 Per Capitas
2018	Actual DMDC 1st Yr	20,625	12,330	2,064	4,429	3,415	1,453	17
2019	**OACT Projected**	**30,000**	**18,579**	**5,107**	**4,772**	**4,022**	**1,961**	**32**
2020	Model Projected	30,000	18,579	5,107	4,772	4,022	1,961	32
2021	Model Projected	30,000	18,579	5,107	4,772	4,022	1,961	32

Chapter 1606 Historic and Projected New Entrants

Kicker Benefit

Fiscal Year		Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve
2016	**OACT Projected**	2,837	3,897	0	0	3,133	957	0
2016	Actual DFAS	5,886	4,356	7	115	2,364	827	0
2016	Actual DMDC 1st Yr	2,565	3,466	0	0	2,191	775	0
2016	Actual DMDC 2nd Yr	3,831	3,566	48	0	2,422	871	0
2016	Actual DMDC 3rd Yr	4,159	3,132	43	0	2,398	886	0
2017	**OACT Projected**	2,558	3,466	0	0	3,149	775	0
2017	Actual DFAS	973	3,165	106	275	3,503	647	0
2017	Actual DMDC 1st Yr	2,564	1,986	7	1	1,806	627	0
2017	Actual DMDC 2nd Yr	3,727	1,882	48	2	2,189	758	0
2018	**OACT Projected**	5,895	4,356	106	275	3,503	871	0
2018	Actual DFAS	6,879	1,831	25	363	2,528	600	0
2018	Actual DMDC 1st Yr	4,042	2,315	13	1	2,292	721	0
2019	**EOY Projected**	9,000	4,356	106	363	3,503	886	0
2020	Model Projected	6,000	4,356	106	363	3,503	886	0
2021	Model Projected	4,000	4,356	106	363	3,503	886	0

New Entrant Count Sources: FY 2018: DMDC Experience. FY 2019 - 2021; OACT Estimate of new entrants.

*Navy Reserve and Marine Corps Reserve are contributing for kicker new entrants, but this data is not coming through in the individual data. In such cases, basic rates are "trued up" to account for the potential missing kicker eligibles.

Chapter 1606 Projected Model Analysis of Funds

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
FY 2019								
Starting Fund (Oct 18) $ Millions	$282.6	$137.3	$26.9	$40.6	$80.7	$61.8	$4.0	$634.0
Present Value of Benefits	$134.0	$70.1	$10.3	$20.3	$76.2	$22.6	$0.4	$333.9
Unfunded Liability (Surplus)	($148.6)	($67.2)	($16.6)	($20.3)	($4.5)	($39.2)	($3.6)	($300.0)
Amortization Payments	$0.0	$0.0	$0.0	$0.0	$1.7	$0.0	$0.0	$1.7
Asset Transfer	$0.8	$0.2	$0.1	$0.0	$0.2	$0.1	($0.0)	$1.5
Start+Amortization+Asset Transfer	$283.4	$137.6	$27.0	$40.6	$82.6	$62.0	$4.0	$637.2
Receipts (excludes amortization)	$93.0	$27.0	$0.2	$6.5	$25.0	$2.9	$0.0	$154.5
Benefit Payments	($55.7)	($24.7)	($3.9)	($8.2)	($23.7)	($5.0)	($0.2)	($121.4)
Net Receipts (excludes amortization)	$37.2	$2.3	($3.7)	($1.7)	$1.3	($2.2)	($0.2)	$33.1
Interest	$10.0	$4.6	$0.8	$1.3	$2.8	$2.0	$0.1	$21.6
Net Receipts with Interest	$47.3	$6.8	($2.9)	($0.4)	$4.1	($0.2)	($0.0)	$54.7
Prepayment of Amortization	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Ending Fund	$330.7	$144.4	$24.1	$40.2	$86.7	$61.8	$4.0	$691.9

Chapter 1606 Projected Model Analysis of Funds

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	Total
FY 2020								
Starting Fund (Oct 19) $ Millions	$330.7	$144.4	$24.1	$40.2	$86.7	$61.8	$4.0	$691.9
Present Value of Benefits	$167.9	$76.9	$10.5	$21.1	$75.2	$21.9	$0.3	$373.9
Unfunded Liability (Surplus)	($162.8)	($67.5)	($13.6)	($19.1)	($11.4)	($39.9)	($3.7)	($318.0)
Amortization Payments	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Asset Transfer	$0.2	$0.1	$0.0	$0.0	$0.0	$0.0	$0.0	$0.3
Start+Amortization+Asset Transfer	$330.9	$144.5	$24.1	$40.2	$86.7	$61.8	$4.0	$692.2
Receipts (excludes amortizations)	$83.0	$20.3	$2.2	$6.6	$19.5	$2.8	$0.0	$134.3
Benefit Payments	($65.4)	($26.8)	($3.9)	($8.5)	($21.5)	($4.7)	($0.1)	($131.0)
Net Receipts (excludes amortization)	$17.6	($6.5)	($1.7)	($1.9)	($2.1)	($2.0)	($0.1)	$3.4
Interest	$11.2	$4.7	$0.8	$1.3	$2.8	$2.0	$0.1	$22.9
Net Receipts with Interest	$28.9	($1.8)	($0.9)	($0.6)	$0.8	$0.0	$0.0	$26.3
Ending Fund	$359.7	$142.6	$23.2	$39.6	$87.5	$61.8	$4.0	$718.4
FY 2021								
Starting Fund (Oct 20)	$359.7	$142.6	$23.2	$39.6	$87.5	$61.8	$4.0	$718.4
Present Value of Benefits	$183.6	$82.3	$10.9	$21.8	$76.5	$21.6	$0.2	$397.0
Unfunded Liability (Surplus)	($176.2)	($60.4)	($12.3)	($17.8)	($10.9)	($40.3)	($3.7)	($321.5)

Chapter 1606 Amortization Payments (Adjustments) for Basic & Kicker Programs

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve	TOTAL
Amount in Fund on September 30, 2018	$282,616,609	$137,332,865	$26,917,625	$40,579,038	$80,679,909	$61,844,617	$4,019,054	$633,989,717
Present Value of Benefits	$134,035,306	$70,113,037	$10,311,368	$20,297,962	$76,168,218	$22,598,068	$421,750	$333,945,710
Unfunded Liability (Surplus)	($148,581,303)	($67,219,828)	($16,606,257)	($20,281,075)	($4,511,691)	($39,246,548)	($3,597,304)	($300,044,007)
Amortization Payment on October 1, 2018	$0	$0	$0	$0	$1,697,265	$0	$0	$1,697,265
Net Receipts (Asset Xfers + Contribs - Ben Pmts + Int)	$48,090,199	$7,085,521	($2,840,167)	($352,423)	$4,273,116	($27,524)	($41,179)	$56,187,544
Amount in Fund on September 30, 2019	$330,706,809	$144,418,386	$24,077,458	$40,226,615	$86,650,290	$61,817,093	$3,977,875	$691,874,526
Present Value of Benefits	$167,885,438	$76,883,044	$10,518,859	$21,130,603	$75,231,091	$21,947,741	$313,015	$373,909,791
Unfunded Liability (Surplus)	($162,821,370)	($67,535,342)	($13,558,599)	($19,096,012)	($11,419,199)	($39,869,352)	($3,664,859)	($317,964,735)
Amortization Payment on October 1, 2019	$0	$0	$0	$0	$0	$0	$0	$0
Net Receipts (Asset Xfers + Contribs - Ben Pmts + Int)	$28,858,228	($1,838,186)	($894,846)	($633,862)	$768,141	$24,518	$5,037	$26,289,030
Amount in Fund on September 30, 2020	$359,723,063	$142,643,581	$23,188,499	$39,603,879	$87,452,573	$61,847,840	$3,983,647	$718,443,082
Present Value of Benefits	$183,567,809	$82,280,807	$10,915,749	$21,848,611	$76,510,736	$21,596,760	$248,262	$396,968,735
Unfunded Liability (Surplus)	($176,155,254)	($60,362,774)	($12,272,750)	($17,755,269)	($10,941,836)	($40,251,079)	($3,735,385)	($321,474,347)
Amortization Payment on Oct 1, 2020	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Amortization Adjustment to FY 2021 Costs	**($38,075,554)**	**($13,047,275)**	**($2,652,727)**	**($3,837,761)**	**($2,365,053)**	**($8,700,178)**	**($807,395)**	**($69,485,943)**

Note: Surpluses are amortized over 5 years and deficits are amortized over 5 yrs. The interest rate is assumed to be 3.25%

Chapter 1606 Amortization Offsets

	Army National Guard	Army Reserve	Navy Reserve	Marine Corps Reserve	Air National Guard	Air Force Reserve	Coast Guard Reserve
Projected Basic Normal Cost Contributions Before Offset	$56,850,000	$23,743,962	$3,804,715	$7,472,952	$10,332,518	$1,182,483	$50,048
Amortization Offset	$38,075,554	$13,047,275	$2,652,727	$3,837,761	$2,365,053	$8,700,178	$807,395
% of Normal Costs Being Offset	67.0%	54.9%	69.7%	51.4%	22.9%	100.0%	100.0%
Projected Model Entrants	30,000	18,579	5,107	4,772	4,022	1,961	32
Potential Offset Per New Entrant for FY 2021	$1,269	$702	$519	$804	$588	$4,437	$25,231

Chapter 1606 Per Capita Contribution Amounts

Item	Fiscal Year	Army National Guard Basic	Army Reserve Basic	Navy Reserve Basic	Marine Corps Reserve Basic	Air National Guard Basic	Air Force Reserve Basic	Coast Guard Reserve Basic
Normal	2020	$2,753	$1,459	$830	$1,744	$2,766	$866	$1,685
Cost	2021	$1,895	$1,278	$745	$1,566	$2,569	$603	$1,564
Amortization	2020	$944	$752	$444	$661	$824	$866	$1,685
Adjustment	2021	$1,269	$702	$519	$804	$588	$603	$1,564
Per Capita	**2020**	**$1,809**	**$707**	**$386**	**$1,083**	**$1,942**	**$0**	**$0**
Amount	**2021**	**$626**	**$576**	**$226**	**$762**	**$1,981**	**$0**	**$0**

Normal Cost = Assumed Benefit X % Benefit Used X Discount Factor X 36 Months
Per Capita Amount = Normal Cost - Amortization Adjustment

Chapter 1606 Per Capita Contribution Amounts

Item	Fiscal Year	Army National Guard $100 Kicker	Army Reserve $100 Kicker	Navy Reserve $100 Kicker	Marine Corps Reserve $100 Kicker	Air National Guard $100 Kicker	Air Force Reserve $100 Kicker	Coast Guard Reserve $100 Kicker
Normal	2020	$698	$588	$1,068	$1,041	$833	$802	$641
Cost	2021	$481	$540	$1,038	$977	$755	$750	$588
Amortization	2020	$0	$0	$0	$0	$0	$0	$0
Adjustment	2021	$0	$0	$0	$0	$0	$0	$0
Per Capita	**2020**	**$698**	**$588**	**$1,068**	**$1,041**	**$833**	**$802**	**$641**
Amount	**2021**	**$481**	**$540**	**$1,038**	**$977**	**$755**	**$750**	**$588**

Normal Cost = Assumed Benefit X % Benefit Used X Discount Factor X 36 Months
Per Capita Amount = Normal Cost - Amortization Adjustment

A boxed variable means that this kicker amount is currently offered by the component

Chapter 1606 Per Capita Contribution Amounts

Item	Fiscal Year	Army National Guard $200 Kicker	Army Reserve $200 Kicker	Navy Reserve $200 Kicker	Marine Corps Reserve $200 Kicker	Air National Guard $200 Kicker	Air Force Reserve $200 Kicker	Coast Guard Reserve $200 Kicker
Normal	2020	$1,445	$1,331	$2,103	$1,767	$1,726	$1,656	$1,732
Cost	2021	$987	$1,202	$1,986	$1,611	$1,551	$1,536	$1,471
Amortization	2020	$0	$0	$0	$0	$0	$0	$0
Adjustment	2021	$0	$0	$0	$0	$0	$0	$0
Per Capita	**2020**	**$1,445**	**$1,331**	**$2,103**	**$1,767**	**$1,726**	**$1,656**	**$1,732**
Amount	**2021**	**$987**	**$1,202**	**$1,986**	**$1,611**	**$1,551**	**$1,536**	**$1,471**

Normal Cost = Assumed Benefit X % Benefit Used X Discount Factor X 36 Months
Per Capita Amount = Normal Cost - Amortization Adjustment
A boxed variable means that this kicker amount is currently offered by the component

Chapter 1606 Per Capita Contribution Amounts

Item	Fiscal Year	Army National Guard $350 Kicker	Army Reserve $350 Kicker	Navy Reserve $350 Kicker	Marine Corps Reserve $350 Kicker	Air National Guard $350 Kicker	Air Force Reserve $350 Kicker	Coast Guard Reserve $350 Kicker
Normal	2020	$4,796	$2,476	$4,580	$3,825	$3,329	$3,107	$4,037
Cost	2021	$3,353	$2,265	$4,265	$3,445	$2,932	$2,829	$3,313
Amortization	2020	$0	$0	$0	$0	$0	$0	$0
Adjustment	2021	$0	$0	$0	$0	$0	$0	$0
Per Capita	**2020**	**$4,796**	**$2,476**	**$4,580**	**$3,825**	**$3,329**	**$3,107**	**$4,037**
Amount	**2021**	**$3,353**	**$2,265**	**$4,265**	**$3,445**	**$2,932**	**$2,829**	**$3,313**

Normal Cost = Assumed Benefit X % Benefit Used X Discount Factor X 36 Months
Per Capita Amount = Normal Cost - Amortization Adjustment
A boxed variable means that this kicker amount is currently offered by the component

Chapter 1606 Per Capita Basic Contributions

Chapter 1606 Basic Programs	Sept, 2016 Valuation For FY019	Sept, 2017 Valuation For FY020	Sept., 2018 Valuation For FY021
Army National Guard	$1,680	$1,809	$626
Army Reserve	$1,033	$707	$576
Navy Reserve	$0	$386	$226
Marine Corps Reserve	$1,061	$1,083	$762
Air National Guard	$2,653	$1,942	$1,981
Air Force Reserve	$0	$0	$0
Coast Guard Reserve	$0	$0	$0

Chapter 1606 Per Capita Kicker Contributions

Chapter 1606 Kicker Programs		Sept, 2016 Valuation For FY019	Sept, 2017 Valuation For FY020	Sept., 2018 Valuation For FY021
Army National Guard	$100	$723	$698	$481
Army Reserve	$100	$625	$588	$540
Navy Reserve	$100	$1,055	$1,068	$1,038
Marine Corps Reserve	$100	$1,058	$1,041	$977
Air National Guard	$100	$976	$833	$755
Air Force Reserve	$100	$807	$802	$750
Coast Guard Reserve	$100	$674	$641	$588
Army National Guard	$200	$1,512	$1,445	$987
Army Reserve	$200	$1,453	$1,331	$1,202
Navy Reserve	$200	$2,108	$2,103	$1,986
Marine Corps Reserve	$200	$1,794	$1,767	$1,611
Air National Guard	$200	$2,040	$1,726	$1,551
Air Force Reserve	$200	$1,682	$1,656	$1,536
Coast Guard Reserve	$200	$1,799	$1,732	$1,471
Army National Guard	$350	$4,729	$4,796	$3,353
Army Reserve	$350	$2,670	$2,476	$2,265
Navy Reserve	$350	$4,712	$4,580	$4,265
Marine Corps Reserve	$350	$3,971	$3,825	$3,445
Air National Guard	$350	$4,084	$3,329	$2,932
Air Force Reserve	$350	$3,257	$3,107	$2,829
Coast Guard Reserve	$350	$3,942	$4,037	$3,313

DoD Active Duty Kicker Benefits

September 30, 2018

Valuation of Education Benefits

Methods & Assumptions

DMDC & DFAS Reported Activity for FY 2018

Service	Chapter 30 Kicker Used With Chapter 30 Basic **DMDC** Reports	Chapter 30 Kicker Used With Chapter 33 Basic **DMDC** Reports	Chapter 30 Kicker Used With Ch 30 or 33 Basic **DMD**C Reports	Chapter 30 Kicker Used With Chapter 30 Basic **DFAS** Reports	Chapter 30 Kicker Used With Chapter 33 Basic **DFAS** Reports	Chapter 30 Kicker Used With Ch 30 or 33 Basic **DFAS** Reports	DMDC Reports as % of Total	Kicker Used With Chapter 30 Basic as % of Total **DFAS** Reports
Army	$5,793,485	$50,646,583	$56,440,069	$4,425,610	$57,214,320	$61,639,930	91.6%	7.2%
Navy	$816,825	$9,129,651	$9,946,475	$706,847	$12,128,999	$12,835,846	77.5%	5.5%
Marine Corps	$968,940	$8,432,905	$9,401,845	$728,278	$10,121,823	$10,850,102	86.7%	6.7%
Coast Guard	$752	$6,781	$7,532	$13,934	$68,079	$82,013	9.2%	17.0%
Total	$7,580,002	$68,215,920	$75,795,921	$5,874,669	$80,086,775	$85,961,445	88.2%	6.8%
FY 2017	$7,746,055	$83,080,267	$90,826,322	$7,925,653	$93,069,138	$100,994,791	89.9%	7.8%
FY 2016	$16,566,886	$95,900,249	$112,467,135	$10,603,078	$106,839,563	$117,442,641	95.8%	9.0%
FY 2015	$18,828,096	$0	$18,828,096	$13,975,036	$113,042,727	$127,017,763	14.8%	11.0%
FY 2014	$14,677,933	$0	$14,677,933	$18,203,972	$111,516,901	$129,720,874	11.3%	14.0%

FY 2018 Active Duty Kicker Benefit Usage (DMDC)

Benefit Used With	Users	Kicker $$	Percent of Total ($)
Chapter 30	2,278	$7,580,002	10.1%
Chapter 33 Member	26,679	$65,269,021	86.7%
Chapter 33 Spouse	588	$1,313,476	1.7%
Chapter 33 Child	569	$1,081,842	1.4%
Total - Family	30,114	$75,244,341	

Kicker Benefit Distribution

	DMDC	[1]DFAS/Hines
Benefit Used With		
Chapter 30	10.1%	6.8%
Chapter 33	89.9%	93.2%
Chapter 33		
Member	96.5%	82.2%
Dependent	3.5%	17.8%
Dependent		
Spouse	54.8%	17.6%
Child	45.2%	82.4%
Total Benefit to;		
Member	96.8%	83.4%
Spouse	1.7%	2.9%
Child	1.4%	13.7%

[1]The Chapter 30/Chapter 33 split is from the DFAS Trial Balance. The Member/ Dependent and Spouse/Child splits are the basic benefit proportions from Hines.

Per Capita Contributions Added to the Fund by Fiscal Year

(Dollars in Millions)

Fiscal Year	Army	Navy	Marine Corps	Coast Guard	Total - Active
1985	$52.0	$0.0	$0.0	$0.000	$52.0
1986	$114.8	$0.0	$0.0	$0.000	$114.8
1987	$74.3	$8.3	$0.0	$0.000	$82.6
1988	$36.3	$4.9	$0.0	$0.000	$41.2
1989	$54.4	$0.1	$0.0	$0.000	$54.5
1990	-$2.4	$2.3	$0.0	$0.000	-$0.2
1991	$0.0	$1.1	$0.0	$0.000	$1.1
1992	$0.0	$2.2	$0.0	$0.000	$2.2
1993	$7.0	$2.3	$0.8	$0.000	$10.1
1994	$25.2	$5.4	$1.8	$0.000	$32.5
1995	$31.0	$19.9	$2.2	$0.000	$53.1
1996	$39.5	$12.0	$2.9	$0.000	$54.4
1997	$35.5	$17.7	$4.2	$0.000	$57.4
1998	$41.6	$24.2	$4.5	$0.000	$70.3
1999	$51.8	$31.7	$17.7	$0.000	$101.2
2000	$74.9	$20.3	$17.4	$0.000	$112.6
2001	$76.6	$32.5	$19.6	$0.000	$128.7
2002	$55.4	$23.7	$12.7	$0.000	$91.7
2003	$20.7	$5.2	$7.9	$0.000	$33.9
2004	$10.5	$5.7	$5.9	$0.005	$22.2
2005	$46.4	$6.6	$6.1	$0.000	$59.1
2006	$35.0	$1.8	$8.6	$0.000	$45.4
2007	$44.0	$4.0	$17.9	$0.000	$65.8
2008	$80.7	$6.2	$10.5	$0.000	$97.3
2009	$84.5	$5.7	$10.8	$0.000	$101.0
2010	$127.3	$5.3	$0.9	$0.000	$133.4
2011	$6.0	$0.1	$7.5	$0.000	$13.6
2012	$1.6	$0.0	$0.0	$0.000	$1.6
2013	$0.0	$0.0	$0.0	$0.000	$0.0
2014	$0.0	$0.0	$0.0	$0.000	$0.0
2015	$0.0	$0.0	$0.0	$0.000	$0.0
2016	$0.0	$0.0	$0.0	$0.000	$0.0
2017	$0.0	$0.0	$0.0	$0.000	$0.0
2018	$0.0	$0.0	$0.0	$0.000	$0.0
Total	$1,224.6	$249.2	$159.8	$0.005	$1,633.5

Source: DFAS Education Benefits Fund PreClosing Trial Balance (5420)

Benefits Paid by Fiscal Year

(Dollars in Millions)

Fiscal Year	Army	Navy	Marine Corps	Coast Guard	Total - Active
1985	$0.0	$0.0	$0.0	$0.000	$0.0
1986	$0.0	$0.0	$0.0	$0.000	$0.0
1987	$0.0	$0.0	$0.0	$0.000	$0.0
1988	$3.8	$0.1	$0.0	$0.000	$3.9
1989	$16.6	$0.2	$0.0	$0.000	$16.8
1990	$40.0	$2.7	$0.0	$0.000	$42.7
1991	$53.5	$4.5	$0.0	$0.000	$57.9
1992	$67.9	$4.0	$0.0	$0.000	$71.9
1993	$77.3	$3.3	$0.0	$0.000	$80.6
1994	$77.6	$2.2	$0.0	$0.000	$79.7
1995	$73.5	$2.7	$0.0	$0.000	$76.3
1996	$69.6	$3.7	$0.0	$0.000	$73.4
1997	$69.3	$5.1	$0.1	$0.000	$74.5
1998	$65.8	$9.3	$0.7	$0.000	$75.8
1999	$60.2	$13.6	$1.5	$0.000	$75.3
2000	$54.0	$15.0	$2.4	$0.000	$71.4
2001	$49.7	$16.7	$3.4	$0.000	$69.8
2002	$47.9	$20.3	$4.8	$0.000	$73.1
2003	$47.6	$25.2	$6.8	$0.000	$79.6
2004	$48.7	$29.1	$8.3	$0.015	$86.1
2005	$51.0	$32.4	$9.7	$0.059	$93.2
2006	$51.2	$34.0	$12.3	$0.055	$97.6
2007	$49.2	$34.0	$13.6	$0.057	$96.9
2008	$44.6	$33.2	$14.6	$0.058	$92.4
2009	$36.4	$31.6	$15.6	$0.075	$83.7
2010	$45.3	$37.4	$17.3	$0.133	$100.1
2011	$39.7	$28.0	$13.3	$0.120	$81.2
2012	$56.4	$30.1	$16.9	$0.141	$103.6
2013	$71.8	$27.8	$19.7	$0.156	$119.5
2014	$84.9	$24.8	$20.5	$0.146	$130.4
2015	$86.1	$21.9	$19.6	$0.111	$127.7
2016	$82.2	$18.7	$17.2	$0.104	$118.1
2017	$72.2	$14.7	$14.0	$0.079	$101.0
2018	$61.9	$12.9	$10.9	$0.082	$85.8
Total	$1,756.1	$539.1	$243.2	$1.392	$2,539.8

Source: DFAS Education Benefits Fund PreClosing Trial Balance (6403)

Comparison of Model Projections to Actual Spending
FY 2015 - 2019

	2014 Model Projection for 2015 Spending	2015 Actual Spending	Percent Difference
Army	$77,020,827	$86,074,353	-10.5%
Navy	$21,287,094	$21,917,783	-2.9%
Marine Corps	$18,970,620	$19,565,113	-3.0%
Coast Guard	$150,459	$111,290	35.2%
Total	**$117,429,000**	**$127,668,539**	**-8.0%**

	2015 Model Projection for 2016 Spending	2016 Actual Spending	Percent Difference
Army	$83,846,043	$82,170,867	2.0%
Navy	$20,890,336	$18,661,759	11.9%
Marine Corps	$19,238,784	$17,191,481	11.9%
Coast Guard	$156,912	$104,144	50.7%
Total	**$124,132,075**	**$118,128,252**	**5.1%**

	2016 Model Projection for 2017 Spending	2017 Actual Spending	Percent Difference
Army	$77,510,355	$72,222,158	7.3%
Navy	$18,857,095	$14,725,308	28.1%
Marine Corps	$18,039,210	$13,968,714	29.1%
Coast Guard	$107,370	$78,611	36.6%
Total	**$114,514,029**	**$100,994,791**	**13.4%**

	2017 Model Projection for 2018 Spending	2018 Actual Spending	Percent Difference
Army	$66,351,627	$61,928,337	7.1%
Navy	$13,440,280	$12,893,179	4.2%
Marine Corps	$13,461,333	$10,898,565	23.5%
Coast Guard	$83,436	$82,379	1.3%
Total	**$93,336,677**	**$85,802,460**	**8.8%**

	2018 Model Projection for 2019 Spending	*2019 Actual Spending	Percent Difference
Army	$56,567,458	$53,554,576	5.6%
Navy	$10,822,165	$11,778,729	-8.1%
Marine Corps	$9,607,312	$9,098,139	5.6%
Coast Guard	$100,886	$82,052	23.0%
Total	**$77,097,821**	**$74,513,495**	**3.5%**

	Model Projections **FY 2015 - 2019 Spending	****FY 2015 - 2019 Actual Spending**	**Percent Difference**
Army	**$349,805,166**	**$345,071,185**	**1.4%**
Navy	**$83,098,549**	**$77,642,357**	**7.0%**
Marine Corps	**$77,365,625**	**$68,946,965**	**12.2%**
Coast Guard	**$578,570**	**$443,279**	**30.5%**
Total	**$510,847,909**	**$492,103,787**	**3.8%**

*FY 2019 Through May Projected For A Full Year

**FY 2019 Through May

Number of Members in the Active Duty Kicker Programs

	Number Of Benefit Eligible Members As Of September 30,	
	2017	2018
Army 2-Year	**6,168**	**4,806**
Army 3-Year	**31,048**	**28,715**
Army 4-Year	**62,104**	**57,992**
Army 5-Year	**7,865**	**8,661**
Army 6-Year	**5,567**	**6,010**
Navy 2-Year	**33**	**29**
Navy 3-Year	**865**	**664**
Navy 4-Year	**47,601**	**37,383**
Marine 4-Year	**14,011**	**11,188**
Marine 5-Year	**7,584**	**6,949**
Marine 6-Year	**77**	**79**
Coast Guard 4-Year	**381**	**362**
Army	**112,752**	**106,184**
Navy	**48,499**	**38,076**
Marine Corps	**21,672**	**18,216**
Coast Guard	**381**	**362**
Total	**183,304**	**162,838**

	Number Who Have Been Approved to Transfer Benefits As Of September 30, 2018	
	Spouse	Child
Army	**911**	**654**
Navy	**665**	**406**
Marine Corps	**111**	**28**
Coast Guard	**6**	**1**
Total	**1,693**	**1,089**

Excludes 1,123 spouses and children who used all 36 months and are no longer eligible

	Active vs Inactive As Of September 30, 2018	
	Still on Active Duty	Separated From A.D.
Army	**20,096**	**86,088**
Navy	**10,250**	**27,826**
Marine Corps	**2,924**	**15,292**
Coast Guard	**160**	**202**
Total	**33,430**	**129,408**

	*Number Who Have Used Benefit As Of September 30, 2018	
	Has Used Benefit	Has Not Used Benefit
Army	**33,648**	**72,536**
Navy	**8,195**	**29,881**
Marine Corps	**3,247**	**14,969**
Coast Guard	**167**	**195**
Total	**45,257**	**117,581**

*Includes Dependents

Source of Data: DMDC September, 2017 & 2018 File

Transferability Potential Impact

	Army	Navy	Marine Corps	Coast Guard	Total
Approved to Transfer Benefit (Includes Members Who Used All 36 Months)	2,271	1,440	185	9	3,905
Approved to Transfer Benefit & Eligibility Remaining	1,565	1,071	139	7	2,782
Eligible to Transfer Benefit Now But Hasn't (Active & Served 10+ Years)	11,787	8,318	2,038	155	22,298
Could Become Eligible to Transfer Benefit in Future (Active & Served Less Than 10 Years)	6,446	987	741	0	8,174
Eligible Members With Potential Transferability	19,798	10,376	2,918	162	33,254
Total Eligible Population	106,184	38,076	18,216	362	162,838
% Eligible Members With Potential Transferability	18.6%	27.3%	16.0%	44.8%	20.4%

Source of Data: DMDC September, 2018 File

Active Duty Kicker Analysis of Funds for Fiscal Year 2018

(Dollars in Millions)

FY 2018	Army	Navy	Marine Corps	Coast Guard	Total - Active
Starting Fund (Oct 17)	$391.8	$33.5	$40.1	$1.034	$466.4
Present Value of Benefits (Liability)	$437.9	$100.4	$71.0	$1.077	$610.4
Funded Ratio	89.5%	33.3%	56.4%	96.0%	76.4%
Unfunded Liability (Surplus)	$46.1	$67.0	$30.9	$0.043	$144.0
Amortization Payments	$15.9	$16.6	$8.6	$0.244	$41.3
Start+Amortization	$407.7	$50.0	$48.7	$1.278	$507.7
Per Capita Amount Contributions	$0.0	$0.0	$0.0	$0.000	$0.0
Benefit Payments	($61.9)	($12.9)	($10.9)	($0.082)	($85.8)
Net Receipts (excludes amortization)	($61.9)	($12.9)	($10.9)	($0.082)	($85.8)
Interest	$12.7	$1.5	$1.5	$0.042	$15.7
Net Receipts with Interest	($49.2)	($11.4)	($9.4)	($0.041)	($70.1)
Ending Fund (Start +Amortization + PCA Contributions + Interest - Benefits Paid)	$358.5	$38.6	$39.2	$1.238	$437.6

Projected Analysis of Funds for Fiscal Year 2019
(Dollars in Millions)

FY 2019	Army	Navy	Marine Corps	Coast Guard	Total - Active
Starting Fund (Oct 18)	$358.5	$38.6	$39.2	$1.238	$437.6
Present Value of Benefits (Liability)	$344.4	$81.2	$48.4	$1.137	$475.1
Funded Ratio	104.1%	47.6%	81.1%	108.9%	92.1%
Unfunded Liability (Surplus)	($14.1)	$42.6	$9.2	($0.101)	$37.6
Amortization Payments	$0.8	$12.0	$4.7	$0.073	$17.5
Start+Amortization	$359.3	$50.6	$43.9	$1.311	$455.1
Receipts (excludes amortization)	$0.0	$0.0	$0.0	$0.000	$0.0
Benefit Payments	($54.2)	($11.6)	($9.2)	($0.086)	($75.0)
Net Receipts (excludes amortization)	($54.2)	($11.6)	($9.2)	($0.086)	($75.0)
Interest	$10.9	$1.5	$1.3	$0.041	$13.7
Net Receipts with Interest	($43.3)	($10.1)	($7.9)	($0.044)	($61.4)
Ending Fund (Start +Amortization + PCA Contributions + Interest - Benefits Paid)	$316.0	$40.5	$36.0	$1.270	$393.7

Active Duty Kicker Fiscal Year 2018 Gain/Loss Analysis

(Dollars in Millions)

	Army	Navy	Marine Corps	Coast Guard	Total - Active
Projected September 30, 2018 Assets	$356.9	$38.5	$38.6	$1.24	$435.3
Projected September 30, 2018 PV Benefits	$384.8	$90.0	$59.7	$1.03	$535.5
Projected September 30, 2018 Unfunded Liability	**$27.8**	**$51.5**	**$21.1**	**($0.21)**	**$100.2**
September 30, 2018 Assets	$358.5	$38.6	$39.2	$1.24	$437.6
September 30, 2018 PV Benefits	$344.4	$81.2	$48.4	$1.14	$475.1
September 30, 2018 Unfunded Liability	**($14.1)**	**$42.6**	**$9.2**	**($0.10)**	**$37.6**
FY 18 Loss (or Gain)	**($41.9)**	**($9.0)**	**($11.9)**	**$0.11**	**($62.7)**
	-10.9%	-10.0%	-19.9%	10.5%	-11.7%
<u>Loss (Gain) Due to PV Benefits:</u>					
Withdrawal Experience & Census Changes	$21.9	$2.6	$1.4	$0.04	$25.9
	5.7%	2.8%	2.3%	3.8%	4.8%
Interest Rate Assumption Change	$0.0	$0.0	$0.0	$0.00	$0.0
	0.0%	0.0%	0.0%	0.0%	0.0%
Usage Rate Assumption Changes	($62.3)	($11.4)	($12.7)	$0.07	($86.3)
	-16.2%	-12.7%	-21.2%	6.8%	-16.1%
Total (PV Benefits)	**($40.4)**	**($8.8)**	**($11.3)**	**$0.11**	**($60.4)**
	-10.5%	**-9.8%**	**-18.9%**	**10.6%**	**-11.3%**
<u>Loss (Gain) Due to Assets:</u>					
Benefit Usage Experience	($2.0)	($0.2)	($0.7)	($0.00)	($2.9)
	-0.5%	-0.2%	-1.1%	-0.3%	-0.5%
Per Capita Contributions	$0.0	$0.0	$0.0	$0.00	$0.0
	0.0%	0.0%	0.0%	0.0%	0.0%
Interest Earnings	$0.5	$0.1	$0.1	$0.00	$0.7
	0.2%	0.2%	0.2%	0.1%	0.2%
Total (Assets)	**($1.5)**	**($0.1)**	**($0.6)**	**($0.00)**	**($2.3)**
	-0.4%	**-0.1%**	**-1.0%**	**-0.2%**	**-0.4%**

Percents below itemized Gain/Loss are Gain/Loss as a percent of projected FY 2018 PV Benefits, except for Interest Earnings, whose percent is a percent of 2018 projected assets.

Amortization Payments (Adjustments) for Active Duty Kicker Program
Fiscal 2019 - 2021

	Army	Navy	Marine Corps	Coast Guard	Total - Active
Amount in Fund on September 30, 2018	$358,452,515	$38,631,257	$39,247,141	$1,237,543	$437,568,456
Present Value of Benefits	$344,400,908	$81,195,155	$48,412,970	$1,136,638	$475,145,671
Unfunded Liability (Surplus)	($14,051,607)	$42,563,898	$9,165,829	($100,905)	$37,577,215
Amortization Payment on October 1, 2018	$841,754	$11,964,756	$4,654,000	$73,479	$17,533,989
Net Receipts (Contributions - Benefits + Interest)	($43,291,748)	($10,116,412)	($7,906,904)	($44,199)	($61,359,264)
Amount in Fund on September 30, 2019	$316,002,521	$40,479,600	$35,994,236	$1,266,823	$393,743,181
Present Value of Benefits	$298,188,726	$72,851,559	$40,236,797	$1,071,199	$412,348,280
Unfunded Liability (Surplus)	($17,813,796)	$32,371,958	$4,242,560	($195,624)	$18,605,098
Scheduled Amortization on October 1, 2019	$5,936,275	$8,703,835	$3,607,805	$0	$18,247,915
Net Receipts (Contributions - Benefits + Interest)	($38,394,476)	($7,948,721)	($6,544,617)	($46,634)	($52,934,448)
Amount in Fund on September 30, 2020	$283,548,821	$41,234,714	$33,057,424	$1,220,190	$359,061,148
Present Value of Benefits	$259,022,226	$65,672,051	$33,712,809	$1,018,207	$359,425,294
Unfunded Liability (Surplus)	($24,526,594)	$24,437,337	$655,385	($201,982)	$364,145
Amortization Payment on Oct 1, 2020	**$0**	**$5,204,989**	**$139,593**	**$0**	**$5,344,582**

Amortization schedule based on 5 years at an interest rate of 3.25%.

Army Active Duty Kicker Projections 2019 - 2029

Fiscal Year	Fund - Start of Year	Amortization Payments	PCA Contributions	Benefits Paid	Interest	End Of Year	End of Year Liability	End of Year Unfunded Liability
FY 2017 Valuation								
2019	$356.9	$0.8	$0.0	$57.4	$10.8	$311.2	$339.1	$27.9
FY 2018 Valuation								
2019	$358.5	$0.8	$0.0	$54.2	$10.9	$316.0	$298.2	-$17.8
2020	$316.0	$5.9	$0.0	$48.1	$9.8	$283.5	$259.0	-$24.5
2021	$283.5	$0.0	$0.0	$42.5	$8.6	$249.7	$224.4	-$25.3
2022	$249.7	$0.0	$0.0	$37.4	$7.6	$219.8	$193.7	-$26.1
2023	$219.8	$0.0	$0.0	$32.4	$6.7	$194.1	$167.1	-$27.0
2024	$194.1	$0.0	$0.0	$27.3	$5.9	$172.7	$144.8	-$27.9
2025	$172.7	$0.0	$0.0	$22.6	$5.3	$155.4	$126.6	-$28.8
2026	$155.4	$0.0	$0.0	$18.7	$4.8	$141.5	$111.7	-$29.7
2027	$141.5	$0.0	$0.0	$16.0	$4.4	$129.8	$99.1	-$30.7
2028	$129.8	$0.0	$0.0	$14.3	$4.0	$119.4	$87.8	-$31.7
2029	$119.4	$0.0	$0.0	$13.2	$3.7	$109.9	$77.2	-$32.7

Dollars in Millions

Assuming no future gains or losses or changes to assumptions.

Navy Active Duty Kicker Projections 2019 - 2029

Fiscal Year	Fund - Start of Year	Amortization Payments	PCA Contributions	Benefits Paid	Interest	End Of Year	End of Year Liability	End of Year Unfunded Liability
FY 2017 Valuation								
2019	$38.5	$12.0	$0.0	$11.5	$1.5	$40.4	$81.3	$40.9
FY 2018 Valuation								
2019	$38.6	$12.0	$0.0	$11.6	$1.5	$40.5	$72.9	$32.4
2020	$40.5	$8.7	$0.0	$9.4	$1.5	$41.2	$65.7	$24.4
2021	$41.2	$5.2	$0.0	$9.0	$1.4	$38.8	$58.7	$19.9
2022	$38.8	$4.2	$0.0	$8.4	$1.3	$35.9	$52.1	$16.1
2023	$35.9	$3.4	$0.0	$7.7	$1.2	$32.8	$45.9	$13.1
2024	$32.8	$2.8	$0.0	$7.0	$1.1	$29.6	$40.3	$10.7
2025	$29.6	$2.3	$0.0	$6.2	$0.9	$26.7	$35.3	$8.7
2026	$26.7	$1.8	$0.0	$5.4	$0.8	$24.0	$31.0	$7.0
2027	$24.0	$1.5	$0.0	$4.7	$0.8	$21.5	$27.2	$5.7
2028	$21.5	$1.2	$0.0	$4.3	$0.7	$19.0	$23.7	$4.6
2029	$19.0	$1.0	$0.0	$4.0	$0.6	$16.6	$20.4	$3.8

Dollars in Millions

Assuming no future gains or losses or changes to assumptions.

Marine Corps Active Duty Kicker Projections 2019 - 2029

Fiscal Year	Fund - Start of Year	Amortization Payments	PCA Contributions	Benefits Paid	Interest	End Of Year	End of Year Liability	End of Year Unfunded Liability
FY 2017 Valuation								
2019	$38.6	$4.7	$0.0	$11.2	$1.2	$33.4	$50.3	$16.9
FY 2018 Valuation								
2019	$39.2	$4.7	$0.0	$9.2	$1.3	$36.0	$40.2	$4.2
2020	$36.0	$3.6	$0.0	$7.7	$1.2	$33.1	$33.7	$0.7
2021	$33.1	$0.1	$0.0	$6.4	$1.0	$27.7	$28.3	$0.5
2022	$27.7	$0.1	$0.0	$5.5	$0.8	$23.1	$23.6	$0.4
2023	$23.1	$0.1	$0.0	$4.7	$0.7	$19.2	$19.6	$0.4
2024	$19.2	$0.1	$0.0	$4.0	$0.6	$15.9	$16.2	$0.3
2025	$15.9	$0.1	$0.0	$3.1	$0.5	$13.3	$13.5	$0.2
2026	$13.3	$0.0	$0.0	$2.3	$0.4	$11.4	$11.6	$0.2
2027	$11.4	$0.0	$0.0	$1.8	$0.3	$9.9	$10.1	$0.2
2028	$9.9	$0.0	$0.0	$1.6	$0.3	$8.7	$8.8	$0.1
2029	$8.7	$0.0	$0.0	$1.4	$0.3	$7.5	$7.6	$0.1

Dollars in Millions

Assuming no future gains or losses or changes to assumptions.

Coast Guard Active Duty Kicker Projections 2019 - 2029

Fiscal Year	Fund - Start of Year	Amortization Payments	PCA Contributions	Benefits Paid	Interest	End Of Year	End of Year Liability	End of Year Unfunded Liability
FY 2017 Valuation								
2019	$1,236	$73	$0	$66	$42	$1,285	$994	-$291
FY 2018 Valuation								
2019	$1,238	$73	$0	$86	$41	$1,267	$1,071	-$196
2020	$1,267	$0	$0	$87	$40	$1,220	$1,018	-$202
2021	$1,220	$0	$0	$83	$38	$1,175	$967	-$209
2022	$1,175	$0	$0	$81	$37	$1,131	$916	-$215
2023	$1,131	$0	$0	$75	$36	$1,092	$870	-$222
2024	$1,092	$0	$0	$72	$34	$1,054	$825	-$230
2025	$1,054	$0	$0	$80	$33	$1,007	$770	-$237
2026	$1,007	$0	$0	$94	$31	$945	$700	-$245
2027	$945	$0	$0	$98	$29	$877	$624	-$253
2028	$877	$0	$0	$97	$27	$806	$546	-$261
2029	$806	$0	$0	$90	$25	$741	$472	-$269

Dollars in Thousands

Assuming no future gains or losses or changes to assumptions.

Fiscal Year 2020 Normal Costs

Service / Contract	$150	$250	$350	$450	$550	$650	$750	$850	$950
					Monthly Kicker Amount				
Army / 2 Year	$1,838	$3,099	$4,389	$5,706	$7,049	$8,419	$9,813	$11,231	$12,673
Army / 3 Year	$1,770	$2,985	$4,227	$5,494	$6,787	$8,104	$9,444	$10,807	$12,193
Army / 4 Year	$1,673	$2,818	$3,986	$5,176	$6,388	$7,621	$8,874	$10,146	$11,438
Army / 5 Year	$1,612	$2,712	$3,832	$4,970	$6,128	$7,303	$8,495	$9,704	$10,929
Army / 6 Year	$1,501	$2,525	$3,568	$4,627	$5,704	$6,797	$7,907	$9,031	$10,171
Navy / 4 Year	$1,961	$3,302	$4,670	$6,063	$7,481	$8,922	$10,386	$11,873	$13,380
Marine Corps / 4 Year	$1,859	$3,127	$4,417	$5,730	$7,063	$8,416	$9,789	$11,181	$12,592
Marine Corps / 5 Year	$1,821	$3,062	$4,324	$5,606	$6,909	$8,230	$9,570	$10,928	$12,304
Marine Corps / 6 Year	$1,779	$2,991	$4,223	$5,475	$6,746	$8,035	$9,342	$10,667	$12,008
Coast Guard / 4 Year	$1,695	$2,857	$4,043	$5,252	$6,485	$7,739	$9,015	$10,313	$11,630

Fiscal Year 2021 Normal Costs

Service / Contract	$150	$250	$350	$450	$550	$650	$750	$850	$950
					Monthly Kicker Amount				
Army / 2 Year	$1,901	$3,204	$4,537	$5,897	$7,284	$8,697	$10,136	$11,600	$13,088
Army / 3 Year	$1,828	$3,081	$4,362	$5,669	$7,001	$8,359	$9,740	$11,145	$12,573
Army / 4 Year	$1,736	$2,923	$4,135	$5,369	$6,625	$7,903	$9,201	$10,520	$11,859
Army / 5 Year	$1,665	$2,801	$3,957	$5,133	$6,326	$7,539	$8,768	$10,015	$11,279
Army / 6 Year	$1,533	$2,579	$3,642	$4,722	$5,820	$6,934	$8,064	$9,209	$10,369
Navy / 4 Year	$1,913	$3,222	$4,556	$5,915	$7,297	$8,702	$10,128	$11,576	$13,043
Marine Corps / 4 Year	$1,887	$3,173	$4,482	$5,811	$7,162	$8,532	$9,923	$11,332	$12,759
Marine Corps / 5 Year	$1,849	$3,109	$4,390	$5,692	$7,014	$8,355	$9,715	$11,093	$12,489
Marine Corps / 6 Year	$1,787	$3,006	$4,245	$5,504	$6,783	$8,081	$9,397	$10,730	$12,082
Coast Guard / 4 Year	$1,495	$2,508	$3,532	$4,569	$5,616	$6,675	$7,744	$8,824	$9,913

Post-Vietnam Era Involuntary and Voluntary Separatees
Fund Activity and Annual Payments For Fiscal Year 2019

	Army	Navy	Marine Corps	Air Force	Coast Guard	All DoD	DoD & Coast
FY 2019							
Fund Balance as of September, 30, 2018	-$53,109	-$5,195	-$5,773	-$24,481	$1,418	-$88,558	-$87,140
October 1, 2018 Receipts	$58,366	$4,502	$1,374	$27,642	$0	$91,884	$91,884
Balance as of Oct., 1, 2018	$5,257	-$693	-$4,399	$3,161	$1,418	$3,326	$4,744
Benefit Payments (thru May)	$45,155	$4,259	$281	$6,784	$0	$42,359	$56,479
Benefit Payments (Proj Full Year)	$61,260	$5,778	$381	$9,204	$0	$76,623	$76,623
Interest Owed	$739	$101	$122	$48	-$38	$1,010	$973
Projected Fund Balance on October 1, 2019	**-$56,742**	**-$6,572**	**-$4,902**	**-$6,091**	**$1,456**	**-$74,307**	**-$72,851**
Amount Due on October 1, 2019	**$56,742**	**$6,572**	**$4,902**	**$6,091**	**$0**	**$74,307**	**$74,307**

ATTACHMENT 3 (CONTINUED)

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

DEPARTMENT OF DEFENSE BOARD OF ACTUARIES
MEETING AGENDA

July 11-12, 2019
4800 Mark Center Drive
Alexandria, VA 22350
Conference Room 14, Level B1

MILITARY RETIREMENT FUND/
VOLUNTARY SEPARATION INCENTIVE FUND
(July 12, 10:00am – 1:00pm)

1. Legislative and Policy Update (Andy Corso, Assistant Director of Military Compensation)

   a. Blended Retirement System (BRS) Implementation Progress
   b. FY 2019 National Defense Authorization Act (Recent Changes)
   c. FY 2020 National Defense Authorization Act (Pending Changes)

2. Investment Experience (Coralita Jones and Lori Haines, DFAS)

   a. Military Retirement Fund
   b. Voluntary Separation Incentive (VSI) Fund

3. September 30, 2018, Valuation of the Military Retirement Fund*

   a. Starting Population (Pete Zouras, DoD Office of the Actuary)
   b. Valuation Results (Pete Zouras)
   c. Gain/Loss Analysis (Pete Zouras)
   d. 10/1/2019 Unfunded Liability Amortization and Normal Cost Payments (Pete Zouras)

4. September 30, 2019, Valuation of the Military Retirement Fund, Proposed Methods and Assumptions*

   a. Economic Assumptions – COLA, Interest Rate, and Across-the-Board Salary Increases

      i. Fund Yield Projection (Brad Ryder, DoD Office of the Actuary)
      ii. Historical Economic Statistics (Brad Ryder)

   b. Non-Economic Assumptions (Pete Zouras, Nick Garcia, Pete Rossi, DoD Office of the Actuary)

   c. FY 2021 Full-Time and Part-Time Normal Cost Percentages (Pete Zouras)

5. September 30, 2018, VSI Fund Valuation, Proposed Methods and Assumptions*

   a. Interest Rate (Brad Ryder)
   b. Valuation Update and Other Assumptions (Nick Garcia)
   c. Unfunded Liability Amortization Payments (Nick Garcia)

* Board approval required.

DoD Board of Actuaries
Legislative and Policy Update

Mr. Andrew Corso
Assistant Director, Military Compensation
Retired and Annuitant Pay
ODASD(MPP-Compensation)
July 12, 2019

Agenda

- Blended Retirement System Implementation
  - Opt-In Results
  - Current Status
- Recent Legislative Changes
  - FY2019 National Defense Authorization Act
- Pending Legislative Changes
  - FY2020 National Defense Authorization Act

Blended Retirement System

Blended Retirement System Implementation

- **Primary BRS Opt-In period ended December 31, 2018**
  - Certain members will continue to have opportunities to opt-in (hardships, break in service, cadets, midshipmen), but opt-in numbers will be small in future
  - All new entrants automatically enrolled in BRS
- **In Service as of June 30, 2019:**

	Full-Time	Part-Time	**Total**
Opted In	316,896	87,967	**404,863**
Auto-Enrolled	186,982	61,977	**248,959**
Total In-Service Participants as of June 30, 2019			**653,822**

- **Lump Sum:**
  - As of July 12, no members have elected lump sum
  - Discount rate for CY20 will be 6.75%

Recent Legislation

FY 2019 National Defense Authorization Act

- **Basic Pay**
  - Pay raise was 2.6% (MRF Impact: MINIMAL)
- **Permanent Extension of Special Survivor Indemnity Allowance (SSIA)**
  - Technical correction to the timing of SSIA annual COLA from "after December 2018" to "after November 2018" (MRF Impact: MINIMAL)
  - SSIA COLA is equal to the retired pay adjustment
  - Adjusted rate annually published on defense.gov website
- **Repeal of Requirement for Ability to Complete 20 Years by Age 62**
  - Removed requirement that an officer be "able to complete 20 years of active commissioned service before his sixty-second birthday" in order to accept an original appointment in the Regular Component (MRF Impact: MINIMAL)

Pending Legislation

FY 2020 National Defense Authorization Act

- **Basic Pay Raise**
  - **President's Budget:** Proposed 3.1% (MRF Impact: MINIMAL)
  - **Senate:** No specific provision, default is 3.1% increase
  - **House:** No specific provision, default is 3.1% increase
- **Blended Retirement System**
  - **Senate:** Report on BRS implementation due to Congress May 2020
- **Military Retirement Fund**
  - **Senate:** MRF Contributions on per-Service cost rather than single rate (MRF Impact: MINIMAL, although associated impacts are substantial)
- **Reduced Age of Eligibility for Retired Pay for Non-Regular Service**
  - **House:** Allows credit for reduced-age, non-regular retirement for every 90 days of service performed under 10 U.S.C. 12304b (preplanned Combatant Commander support) (MRF Impact: MINIMAL)

Military Retirement Fund Board of Actuaries Meeting

Defense Finance and Accounting Service

Coralita Jones Lori Haines
Trust Funds Accounting and Reporting Division
Defense Finance and Accounting Service

July 12, 2019

AGENDA

- Overview
- Financial Data
- Fund Status

OVERVIEW

- Short Term Liquidity
  - ✓ Invested approx $94.6B in October (Treas contrib $95.7B)
  - ✓ Inflows exceeding outflows
    - ✓ FY 2019 payments through May $45.0B
    - ✓ FY 2019 receipts through May $125.3B
    - ✓ FY 2019 overnights/cash as of 31 May $11.1B

- Blended Retirement
  - ✓ Working closely with DoD Office of the Actuary
  - ✓ Full implementation by 2021

- Long Term Liquidity
  - ✓ New investing for FY 2020
    - ✓ As of EOM May, $96.0B
    - ✓ Average 20-year term
  - ✓ FY 2021-2024 projected investments of $446B

Summary Financial Analysis

Year Ended September 30

(In Billions)

	FY 2018	FY 2017	% Change
Service Contributions	$18.4	$18.2	1%
Unfunded Liability Contribution	82.9	81.2	2%
Concurrent Receipts Contribution	6.8	6.8	0%
Interest Income	30.5	21.2	44%
Total Revenue	$138.6	$127.4	9%
Benefit Payments	$54.5	$57.7	-6%
Total Expense	$59.0	$57.7	2%

Summary Financial Analysis

Year Ended September 30

(In Billions)

Interest Income

	FY 2018	FY 2017	$Change
Interest Revenue--Par	$19.1	$17.7	$1.4
Interest Revenue--Inflation	16.4	8.6	$7.8
Interest Revenue--Discount	0.3	0.2	$0.1
Interest Revenue--Premium	-5.3	-5.3	$0.0
	$30.5	$21.2	$9.3

FINANCIAL DATA

Military Retirement Fund
For the Year Ending September 30, 2018

	(in millions)
Assets	
Fund Balance with Treasury	$24.9
Investments	
Overnight	$3,236.2
Long term	
Par	$628,391.3
Inflation purchased	$42,929.7
Inflation earned	$68,863.9
Premium outstanding	$71,692.6
Discount outstanding	-$7,029.2
Interest receivable	$5,471.3
Total Long Term Investments	$810,319.6
Total Investments	$813,555.8
Accounts Receivable, net	$294.5
Total Assets	$813,875.2
Liabilities	
Military Retirement and Other Federal Employment Benefits	
Benefits Payable to Beneficiaries	$4,814.9
Actuarial Liability	$1,616,398.0
Total Military and Other Federal Employment Benefits	$1,621,212.9
Other Liabilities	$3.9
Total Liabilities	$1,621,216.8
Net Position	
Cumulative Results of Operations	-$807,341.6
Total Liabilities and Net Position	$813,875.2

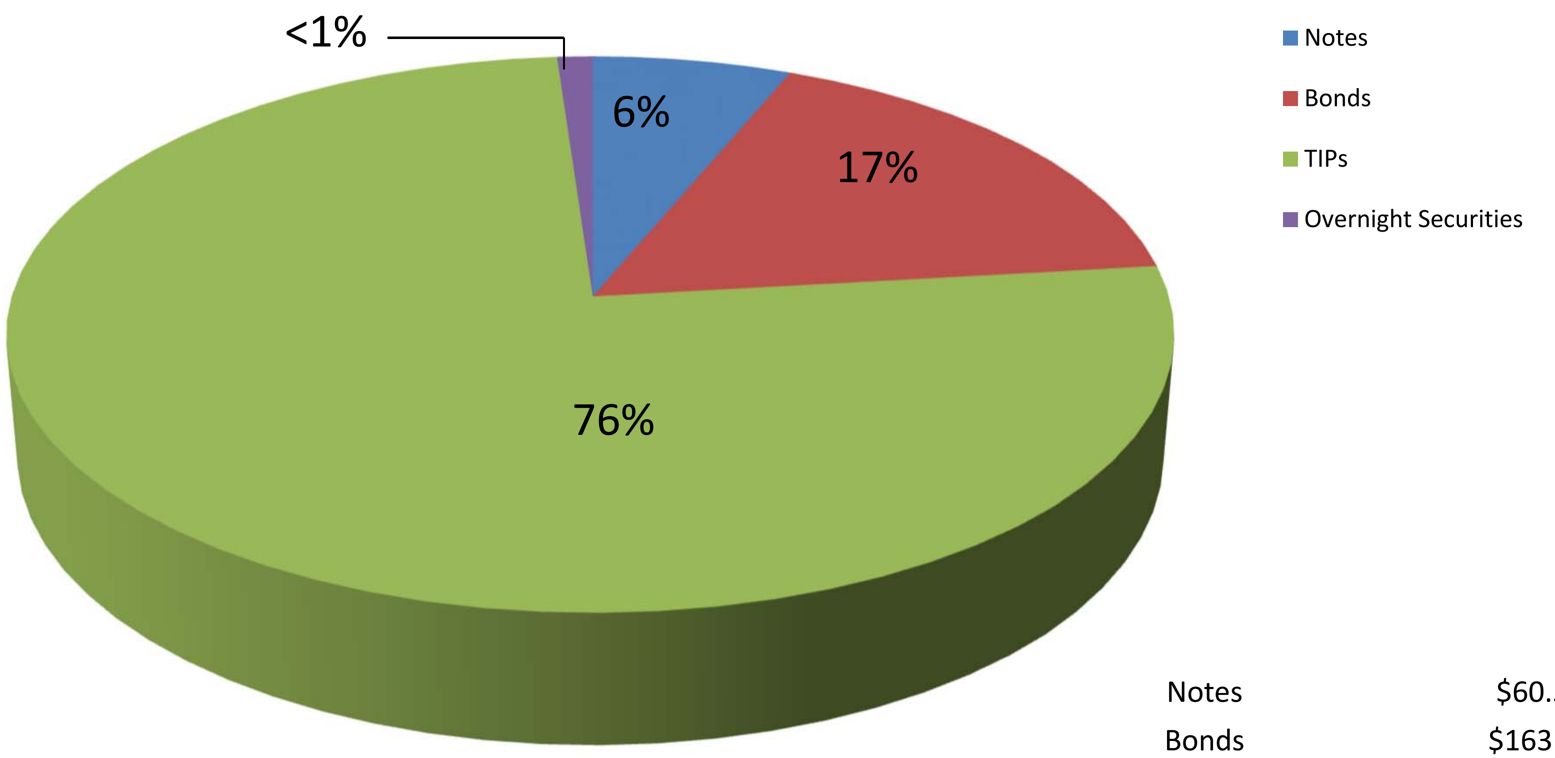
FINANCIAL DATA Updated

Effective Fund Yields

FY	Yield
2009	0.99%
2010	3.22%
2011	4.89%
2012	2.94%
2013	3.10%
2014	3.16%
2015	1.79%
2016	2.34%
2017	2.92%
2018	3.82%

FUND STATUS

Military Retirement Portfolio
As Of 5/31/2019



Notes	$60.5
Bonds	$163.5
TIPs	$731.1
Overnight Securities	$10.8
Total (in Billions)	$965.8

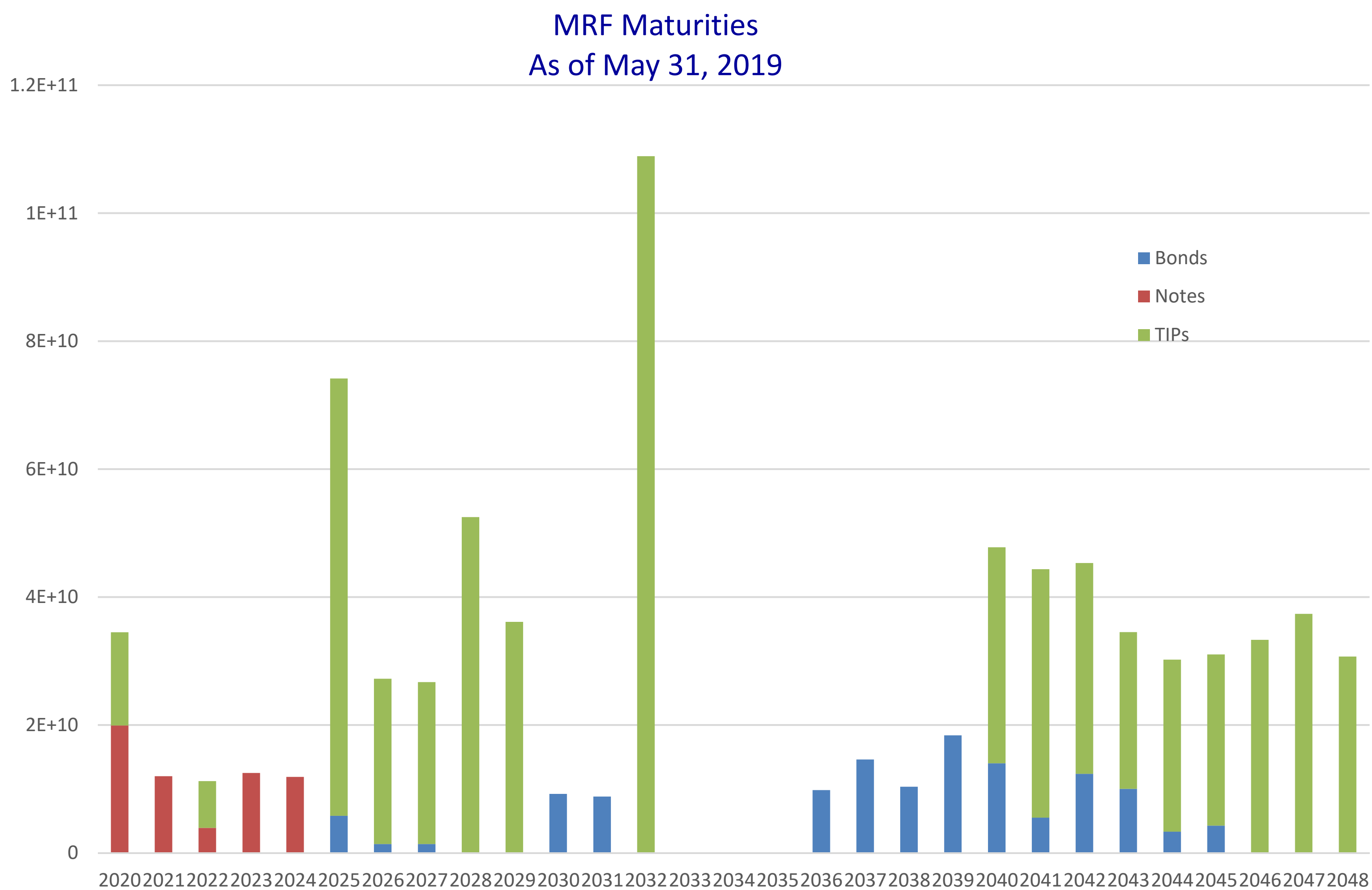
FUND STATUS

Security Description	Shares/Par	Inflation Compensation	Book Value	Market Value
MK BOND 2.500% 02/15/2045	4,280,660,325.79	-	4,032,999,285.32	4,227,152,071.72
MK BOND 2.750% 11/15/2042	6,681,701,480.89	-	6,580,066,037.41	6,932,265,286.42
MK BOND 3.000% 05/15/2042	6,695,039,147.53	-	6,910,477,388.87	7,257,840,875.87
MK BOND 3.125% 02/15/2042	2,864,461,876.61	-	3,047,262,128.46	3,169,706,095.34
MK BOND 3.125% 02/15/2043	3,349,775,799.13	-	3,549,490,912.93	3,699,408,648.16
MK BOND 3.125% 11/15/2041	2,818,271,057.13	-	2,981,675,462.69	3,121,235,195.77
MK BOND 3.500% 02/15/2039	4,074,740,484.43	-	4,037,229,596.21	4,782,726,643.60
MK BOND 3.500% 02/15/2039	1,964,293,563.92	-	2,115,039,839.12	2,305,589,570.65
MK BOND 3.625% 02/15/2044	3,321,324,845.08	-	3,837,405,272.99	3,976,248,587.97
MK BOND 4.250% 05/15/2039	6,479,267,826.79	-	7,670,123,314.17	8,382,552,750.91
MK BOND 4.250% 11/15/2040	5,520,767,853.28	-	6,862,339,296.07	7,171,822,489.40
MK BOND 4.375% 02/15/2038	3,527,258,676.62	-	3,951,676,151.14	4,609,686,183.01
MK BOND 4.375% 02/15/2038	2,431,376,651.41	-	2,935,086,570.99	3,177,505,361.31
MK BOND 4.375% 05/15/2040	4,793,071,508.45	-	6,050,494,922.98	6,317,867,382.08
MK BOND 4.375% 11/15/2039	6,831,664,626.58	-	8,235,748,211.74	8,992,178,564.74
MK BOND 4.500% 02/15/2036	3,456,291,530.68	-	3,928,418,392.01	4,509,380,356.43
MK BOND 4.500% 02/15/2036	1,728,612,904.62	-	2,108,210,568.89	2,255,299,649.00
MK BOND 4.500% 02/15/2036	4,641,849,171.44	-	5,936,635,810.44	6,056,162,590.86
MK BOND 4.500% 05/15/2038	4,396,913,844.83	-	5,347,779,937.78	5,839,651,200.16
MK BOND 4.500% 08/15/2039	5,861,210,424.29	-	7,234,726,094.41	7,832,042,429.46
MK BOND 4.625% 02/15/2040	2,399,775,551.83	-	3,152,413,443.10	3,260,695,031.05
MK BOND 4.750% 02/15/2037	3,341,676,172.96	-	3,915,369,813.93	4,521,705,571.54
MK BOND 4.750% 02/15/2037	6,356,218,301.34	-	8,005,767,509.30	8,600,757,889.00
MK BOND 5.000% 05/15/2037	4,912,921,714.87	-	6,311,774,345.29	6,847,384,640.10
MK BOND 5.375% 02/15/2031	3,124,643,449.42	-	3,800,043,919.80	4,150,893,532.34
MK BOND 5.375% 02/15/2031	1,231,637,247.00	-	1,566,051,701.23	1,636,153,105.31
MK BOND 5.375% 02/15/2031	4,455,340,658.01	-	5,875,167,054.96	5,918,641,605.38
MK BOND 6.000% 02/15/2026	1,400,000,000.00	-	1,595,314,046.45	1,745,625,000.00
MK BOND 6.250% 05/15/2030	2,837,480,964.59	-	3,630,509,026.26	3,962,719,509.61
MK BOND 6.250% 05/15/2030	2,231,109,380.65	-	2,971,369,677.48	3,115,883,694.41
MK BOND 6.250% 05/15/2030	4,156,665,631.27	-	5,710,916,081.68	5,805,043,345.67
MK BOND 6.625% 02/15/2027	1,400,000,000.00	-	1,675,204,470.63	1,850,625,000.00
MK BOND 6.875% 08/15/2025	3,800,000,000.00	-	4,688,016,250.93	4,868,750,000.00
MK BOND 7.625% 02/15/2025	2,000,000,000.00	-	2,388,854,662.98	2,602,500,000.00
Bond Total	129,366,022,671.44	-	152,639,657,198.64	163,503,699,857.27
MK FRN +0.000% 01/31/20	19,928,657,501.64	-	19,970,638,934.33	19,922,523,460.86
MK NOTE 1.125% 06/30/2021	11,991,405,616.22	-	12,035,991,352.76	11,796,545,274.96
MK NOTE 1.625% 08/15/2022	3,925,267,912.20	-	3,980,614,674.82	3,890,921,817.97
MK NOTE 2.000% 02/15/2023	12,496,163,515.85	-	12,847,642,838.64	12,531,308,975.74
MK NOTE 2.750% 02/15/2024	11,884,976,088.44	-	12,677,565,761.89	12,315,806,471.65
Note Total	60,226,470,634.35		61,512,453,562.44	60,457,106,001.18

FUND STATUS cont.

Security Description	Shares/Par	Inflation Compensation	Book Value	Market Value
MK TIPS 0.125% 07/15/2022	6,605,000,000.00	694,846,000.00	7,464,638,072.77	7,267,909,173.75
MK TIPS 0.625% 02/15/2043	13,215,300,000.00	1,393,553,385.00	12,593,713,480.78	14,248,197,317.06
MK TIPS 0.625% 02/15/2043	3,925,577,899.00	413,952,189.45	3,835,629,277.77	4,232,397,939.39
MK TIPS 0.625% 02/15/2043	5,016,107,699.00	528,948,556.86	5,229,837,116.06	5,408,162,679.54
MK TIPS 0.750% 02/15/2042	7,000,000,000.00	873,460,000.00	8,386,919,231.70	7,939,892,318.75
MK TIPS 0.750% 02/15/2042	6,653,500,000.00	830,223,730.00	8,042,471,435.70	7,546,867,648.97
MK TIPS 0.750% 02/15/2042	12,440,130,000.00	1,552,279,421.40	12,467,435,344.72	14,110,470,375.89
MK TIPS 0.750% 02/15/2042	3,184,699,999.00	397,386,865.88	3,267,017,304.90	3,612,310,722.80
MK TIPS 0.750% 02/15/2045	4,392,705,000.00	348,341,506.50	4,289,959,318.71	4,729,193,890.23
MK TIPS 0.750% 02/15/2045	10,333,208,927.00	819,423,467.91	11,568,667,581.06	11,124,750,813.92
MK TIPS 0.750% 02/15/2045	10,065,225,860.00	798,172,410.70	10,438,323,921.22	10,836,239,775.02
MK TIPS 0.875% 02/15/2047	30,472,654,500.00	1,611,089,243.42	31,747,553,819.22	33,036,229,885.80
MK TIPS 0.875% 02/15/2047	5,019,069,598.11	265,358,209.65	5,057,169,357.80	5,441,309,258.31
MK TIPS 1.000% 02/15/2046	16,754,934,301.00	1,217,078,427.62	19,819,460,928.16	19,016,635,968.48
MK TIPS 1.000% 02/15/2046	9,522,023,685.00	691,679,800.48	10,384,747,553.95	10,807,375,000.57
MK TIPS 1.000% 02/15/2046	4,770,337,356.32	346,517,305.56	5,053,309,745.02	5,414,271,839.11
MK TIPS 1.000% 02/15/2048	29,787,977,975.60	913,299,404.73	30,319,226,387.45	32,629,701,365.78
MK TIPS 1.375% 01/15/2020	12,400,000,000.00	2,173,844,000.00	14,766,370,532.19	14,601,169,957.50
MK TIPS 1.375% 02/15/2044	7,532,881,000.00	681,876,388.12	8,837,588,304.34	9,390,494,539.29
MK TIPS 1.375% 02/15/2044	3,683,519,999.00	333,432,230.31	4,140,982,605.80	4,591,878,517.13
MK TIPS 1.375% 02/15/2044	4,849,176,130.00	438,947,423.29	6,203,725,453.64	6,044,986,236.85
MK TIPS 1.375% 02/15/2044	8,606,285,300.00	779,040,945.36	10,313,259,797.50	10,728,601,064.22
MK TIPS 1.750% 01/15/2028	7,000,000,000.00	1,492,260,000.00	9,820,394,288.66	9,466,216,068.75
MK TIPS 2.000% 01/15/2026	5,000,000,000.00	1,402,650,000.00	6,268,576,404.37	7,092,935,703.13
MK TIPS 2.000% 01/15/2026	11,500,000,000.00	3,226,095,000.00	14,867,982,702.57	16,313,752,117.19
MK TIPS 2.000% 01/15/2026	3,667,675,000.00	1,028,892,867.75	5,095,067,948.03	5,202,916,590.99
MK TIPS 2.125% 02/15/2040	7,000,000,000.00	1,231,230,000.00	10,903,474,830.15	10,559,124,734.38
MK TIPS 2.125% 02/15/2040	8,598,790,000.00	1,512,441,173.10	11,538,991,563.14	12,970,813,739.24
MK TIPS 2.125% 02/15/2040	2,454,299,999.00	431,686,826.82	3,365,207,289.52	3,702,179,975.00
MK TIPS 2.125% 02/15/2040	10,638,721,639.98	1,871,244,749.26	15,076,641,601.26	16,047,941,258.69
MK TIPS 2.125% 02/15/2041	7,000,000,000.00	1,124,060,000.00	10,852,399,230.88	10,502,886,318.75
MK TIPS 2.125% 02/15/2041	8,696,150,000.00	1,396,427,767.00	11,548,750,613.41	13,047,810,694.40
MK TIPS 2.125% 02/15/2041	7,049,006,999.00	1,131,929,543.90	10,191,799,813.33	10,576,417,024.37
MK TIPS 2.125% 02/15/2041	10,707,120,020.97	1,719,349,332.97	15,077,103,198.15	16,065,094,911.64
MK TIPS 2.375% 01/15/2025	5,000,000,000.00	1,741,650,000.00	6,755,263,386.78	7,497,978,859.38
MK TIPS 2.375% 01/15/2025	11,500,000,000.00	4,005,795,000.00	15,944,092,443.48	17,245,351,376.56
MK TIPS 2.375% 01/15/2025	34,200,000,000.00	11,912,886,000.00	49,029,276,274.31	51,286,175,398.13
MK TIPS 2.375% 01/15/2027	5,000,000,000.00	1,301,450,000.00	6,303,649,224.39	7,246,667,500.00
MK TIPS 2.375% 01/15/2027	11,500,000,000.00	2,993,335,000.00	14,974,253,971.62	16,667,335,250.00
MK TIPS 2.375% 01/15/2027	3,571,880,000.00	929,724,645.20	5,031,847,355.79	5,176,845,341.98
MK TIPS 2.500% 01/15/2029	7,000,000,000.00	1,286,390,000.00	10,259,176,600.19	9,915,183,534.38
MK TIPS 3.375% 04/15/2032	25,000,000,000.00	10,796,500,000.00	40,742,634,750.25	48,772,731,250.00
MK TIPS 3.375% 04/15/2032	9,000,000,000.00	3,886,740,000.00	14,945,988,118.00	17,558,183,250.00
MK TIPS 3.375% 04/15/2032	500,000,000.00	215,930,000.00	821,924,538.46	975,454,625.00
MK TIPS 3.375% 04/15/2032	16,953,000,000.00	7,321,322,580.00	27,276,584,974.74	33,073,764,515.25
MK TIPS 3.375% 04/15/2032	10,870,509,552.50	4,694,538,255.34	16,946,238,692.96	21,207,377,638.19
MK TIPS 3.375% 04/15/2032	2,227,697,000.00	962,053,226.42	3,478,423,688.09	4,346,034,683.50
MK TIPS 3.375% 04/15/2032	11,500,000,000.00	4,966,390,000.00	18,372,037,022.85	22,435,456,375.00
MK TIPS 3.625% 04/15/2028	24,000,000,000.00	13,713,360,000.00	41,171,016,480.44	48,225,959,100.00
MK TIPS 3.625% 04/15/2028	4,000,000,000.00	2,285,560,000.00	6,768,750,543.76	8,037,659,850.00
MK TIPS 3.875% 04/15/2029	10,500,000,000.00	5,733,210,000.00	18,443,206,614.92	21,630,752,325.00
MK TIPS 3.875% 04/15/2029	4,000,000,000.00	2,184,080,000.00	6,818,245,292.06	8,240,286,600.00
MK TIPS 3.875% 04/15/2029	3,500,000,000.00	1,911,070,000.00	6,178,744,193.01	7,210,250,775.00
TIPS Total	505,365,165,440.48	118,513,002,880.00	669,095,750,220.03	731,056,583,672.26
ONE DAY 2.370% 06/03/2019	10,773,428,236.25	-	10,773,428,236.25	10,773,428,236.25
Total Portfolio	705,731,086,982.52	118,513,002,880.00	894,021,289,217.36	965,790,817,766.96

FUND STATUS



20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
34.5	12	11.20	12.50	11.90	74.20	27.20	26.7	52.50	36.1	9.2	8.8	108.9	0	0

35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	9.8	14.6	10.4	18.4	47.8	44.3	45.3	34.5	30.2	31	33.3	37.4	30.7

Voluntary Separation Incentive Fund Board of Actuaries Meeting

Defense Finance and Accounting Service

Coralita Jones/Lori Haines
Trust Funds Accounting and Reporting Division
Defense Finance and Accounting Service
July 12, 2019

AGENDA

- Overview
- Financial Data
- Fund Status

OVERVIEW

- Short Term Liquidity
  - ✓ No new investing
    - ✓ $32.4M in overnights (31 May)
    - ✓ $2.2M in cash (31 May)
  - ✓ Outflows on track to surpass inflows
    - ✓ FY 2019 program expense $29.1M
    - ✓ FY 2019 program revenue $31.1M
    - ✓ FY 2019 interest revenue $1.9M

- Long Term Liquidity
  - ✓ $85.8M long-term par
  - ✓ No new program entrants since 2001

FINANCIAL DATA

Summary Financial Analysis

Year Ended September 30

(In Millions)

	FY 2018	FY 2017	% Change
Service Contributions	$36.8M	$42.4M	-13%
Interest Income	$2.9M	$2.8M	4%
Total Revenue	$39.7M	$45.2M	-12%
Benefit Payments	$62.1M	$68.9M	-10%
Total Expense	$62.3M	$68.5M	-9%

Summary Financial Analysis

Year Ended September 30

(In Millions)

Interest Income

	FY 2018	FY 2017	$Change
Interest Revenue--Par	$3.4	$2.9	$.05
Interest Revenue--Inflation	$0.0	$0.0	$0.0
Interest Revenue--Discount	$0.1	$0.2	$-0.1
Interest Revenue--Premium	-$0.6	-$0.6	$0.0
	$2.9	$2.5	$0.4

Voluntary Separation Incentive
For the Year Ending September 30, 2018

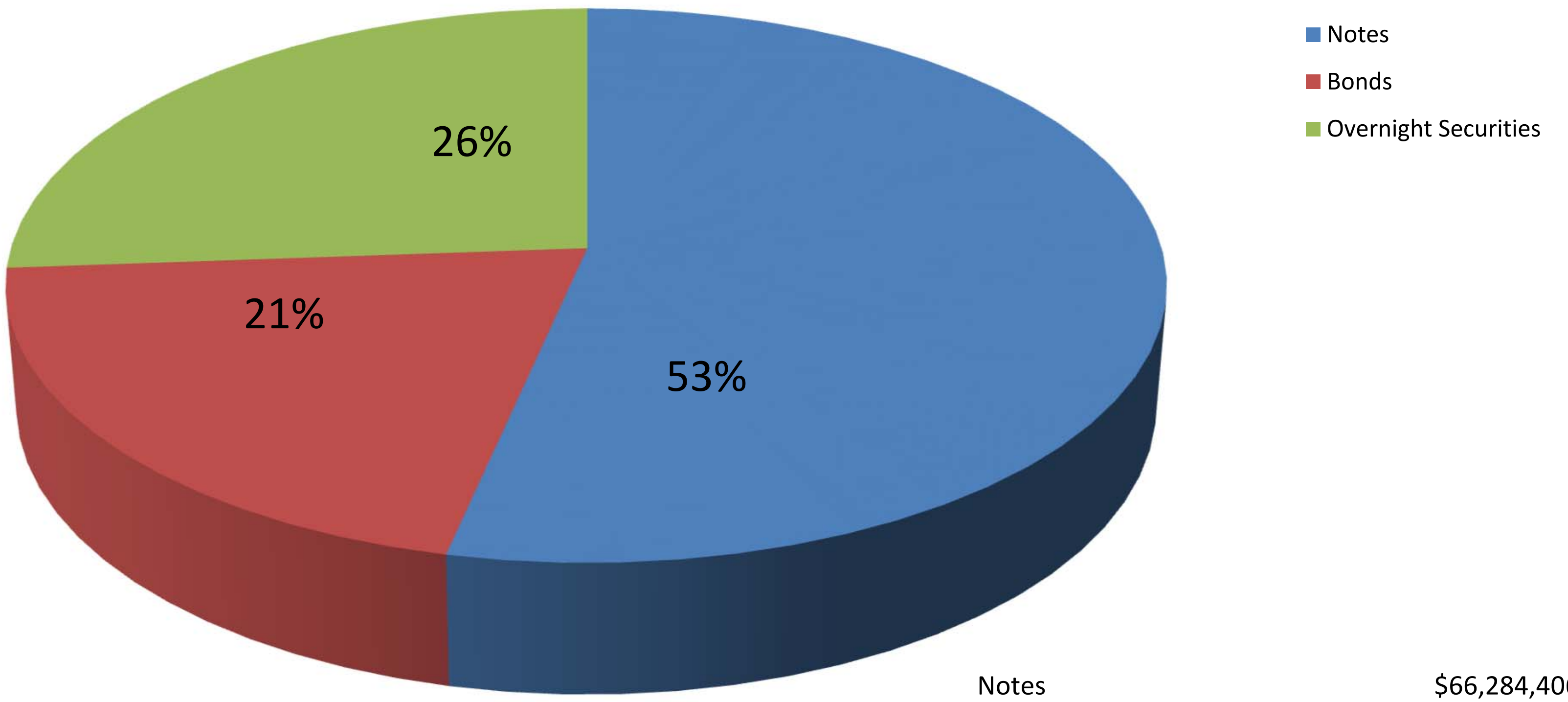
	(in millions)
Assets	
Fund Balance with Treasury	$0.4
Investments	
Overnight	$7.9
Long term	
Par	$104.2
Premium outstanding	$4.5
Discount outstanding	-$0.4
Interest receivable	$0.8
Total Long Term Investments	$109.1
Total Investments	$117.0
Total Assets	$117.4
Liabilities	
Military Retirement and Other Federal Employment Benefits	
Due and Payable	$3.2
Actuarial Liability	$270.9
Total Military and Other Federal Employment Benefits	$274.1
Total Liabilities	$274.1
Net Position	
Cumulative Results of Operations	-$156.7
Total Liabilities and Net Position	$117.4

FINANCIAL DATA

Effective Fund Yields

FY	Yield
2009	4.04%
2010	3.95%
2011	3.81%
2012	3.19%
2013	2.60%
2014	1.43%
2015	1.41%
2016	1.50%
2017	1.75%
2018	2.15%

Voluntary Separation Portfolio
As Of 5/31/2019

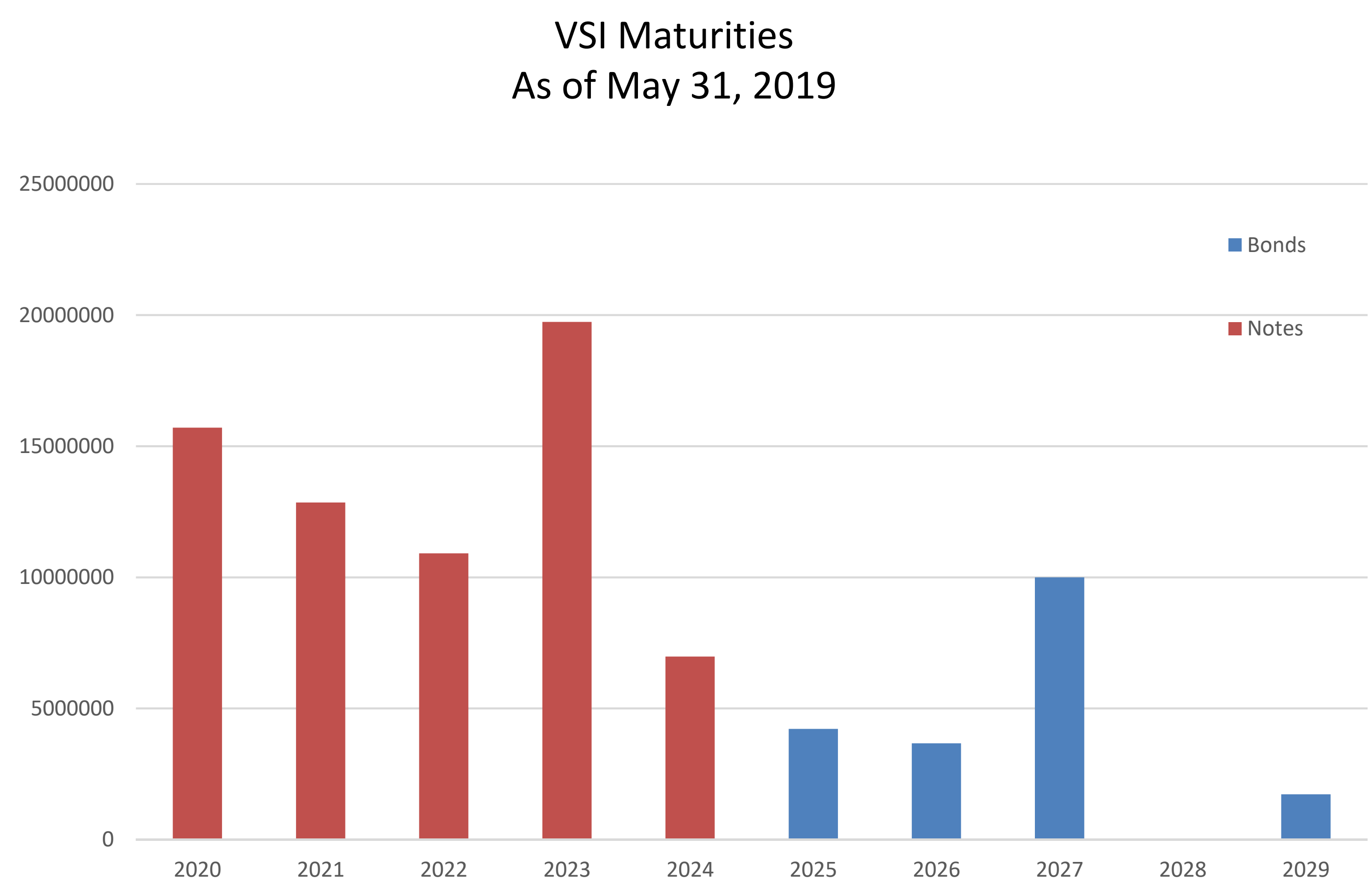


Notes	$66,284,406.13
Bonds	$25,383,023.97
Overnight Securities	$32,435,274.55
Total	$124,102,704.65

FUND STATUS

Security Description	Shares/Par	Book Value	Market Value
MK BOND 7.500% 11/15/2024	$ 4,218,497.61	$ 5,335,840.41	$ 5,412,859.75
MK BOND 6.000% 02/15/2026	$ 3,667,977.19	$ 4,519,294.91	$ 4,573,509.06
MK BOND 6.625% 02/15/2027	$ 10,000,000.00	$ 11,868,863.79	$ 13,218,750.00
MK BOND 5.250% 11/15/2028	$ 1,721,664.16	$ 2,086,923.33	$ 2,177,905.16
Total BOND	**$ 19,608,138.96**	**$ 23,810,922.44**	$ 25,383,023.97
MK NOTE 2.375% 12/31/2020	$ 12,849,306.46	$ 13,053,905.19	$ 12,917,568.40
MK NOTE 2.000% 11/15/2021	$ 10,913,353.98	$ 10,890,456.99	$ 10,933,816.52
MK NOTE 1.625% 11/15/2022	$ 19,737,380.52	$ 19,445,942.62	$ 19,546,174.65
MK NOTE 2.000% 07/31/2020	$ 15,703,765.57	$ 15,829,651.50	$ 15,669,413.58
MK NOTE 2.750% 11/15/2023	$ 6,977,578.71	$ 7,100,224.95	$ 7,217,432.98
Total NOTE	**$ 66,181,385.24**	**$ 66,302,181.25**	**$ 66,284,406.13**
ONE DAY 2.370% 06/03/2019	$ 32,435,274.55	$ 32,435,274.55	$ 32,435,274.55
Total	**$118,224,798.75**	**$122,566,378.24**	**$ 124,102,704.65**

FUND STATUS



2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
15.7	12.9	10.9	19.7	7.0	4.2	3.7	10.0	0	1.7	85.8

STARTING POPULATION AS OF SEPTEMBER 30

	2017	2018
Total Active Duty Personnel + Full-Time Reservists	1,368,833	1,382,518
Total Annualized Basic Pay	$57.81 billion	$59.79 billion
Non-BRS (estimated, see Note below)	*506,505*	*610,455*
Total Annualized Basic Pay	*$30.26 billion*	*$35.87 billion*
BRS (estimated, see Note below)	*862,328*	*772,063*
Total Annualized Basic Pay	*$27.55 billion*	*$23.92 billion*
Total Selected Drilling Reservists	732,150	716,997
Total Annualized Basic Pay	*$7.87 billion*	*$7.92 billion*
Non-BRS (estimated, see Note below)	*529,981*	*552,968*
Total Annualized Basic Pay	*$6.25 billion*	*$6.64 billion*
BRS (estimated, see Note below)	*202,169*	*164,029*
Total Annualized Basic Pay	*$1.62 billion*	*$1.29 billion*
Total Non-Selected Reservists (with 20 years)	206,861	203,157
Total Annualized Basic Pay	-N/A-	-N/A-
Total Number of Nondisability Retirees	1,878,351	1,878,093
Total Annualized Retired Pay	$52.12 billion	$53.40 billion
Total Number of Disability Retirees	118,662	123,261
Total Annualized Retired Pay	$1.61 billion	$1.72 billion
Total Number of Surviving Families	283,262	279,912
Total Annualized Survivor Annuities	$3.68 billion	$3.69 billion
Total Number of Special Survivor Indemnity Allowance	66,703	65,460
Total Annualized	$248 million	$243 million

Notes: Personnel and pay splits between those expected to opt in to the Blended Retirement System (BRS) and those not expected to opt in, are based on assumptions, not actual data. Actual splits may prove different than these results and won't be known until data is available after the 2018 opt-in open season. The "BRS" figures above for 2018 include 9 months of actual data for service members who were auto-enrolled due to having been hired after the start of the Open Season (i.e., December 31, 2017). There is overlap between the Surviving Families and Special Survivor Indemnity Allowance counts; some people are included in both.

MILITARY RETIREMENT SYSTEM
ACTUARIAL STATUS INFORMATION

($ in billions)

	9/30/18	9/30/17	Difference	
1. Present Value of Future Benefits (PVFB)				
a. Retirees and Survivors	$994.1	$974.0	$20.1	2%
b. Reserves	$201.1	$200.3	$0.8	0%
c. Active Duty	$602.8	$573.8	$29.0	5%
TOTAL	$1,798.0	$1,748.1	$49.9	3%
2. Present Value of Future Normal Cost Contributions (PVFNC) [1]	$264.6	$246.1	$18.5	8%
3. Actuarial Accrued Liability (1 - 2)	$1,533.4	$1,502.0	$31.4	2%
4. Actuarial Value of Assets [2]	$813.9	$734.1	$79.8	11%
5. Unfunded Accrued Liability (3 - 4)	$719.6	$767.9	($48.3)	-6%
6. Valuation DoD Normal Cost Percentage (NCP)	FY 2019	FY 2018		
a. Full-time	31.4%	30.7%		0.7%
b. Part-time	24.7%	24.8%		-0.1%
7. Implemented DoD Normal Cost Percentage, Applied to Basic Pay in Fiscal Year [3]	FY 2020	FY 2019		
a. Full-time	31.0%	30.4%		0.6%
b. Part-time	24.4%	24.7%		-0.3%
8. Implemented Treasury Normal Cost Percentage, Applied to Basic Pay in Fiscal Year [4]	FY 2020	FY 2019		
a. Full-time	14.2%	13.6%		0.6%
b. Part-time	3.8%	3.6%		0.2%

[1] 9/30/18 PVFNC reflects a reduction of $753.681 million due to sequestration of the 10/1/2018 Treasury Concurrent Receipt normal cost contribution. The 9/30/17 PVFNC reflects a reduction of $667.945 million due to sequestration of the prior Treasury Concurrent Receipt normal cost contribution.

[2] The following is a reconciliation of assets during FY18 ($ in billions):

	PLUS				MINUS	
Beg. of Year	DoD Accrual	Contributions Treas. Accrual	Unfund. Liab.	Int. Income	Fund Disb.	End of Year
$734.1	$18.4	$6.8	$82.9	$30.5	$58.8	$813.9

[3] 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.
(Prior to reflecting NDAA 2018 provisions, FY 2019 DoD NCPs were 30.3% (full-time) and 24.6%, and FY 2019 Treasury NCPs were unchanged.)

[4] 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, 2018, Valuation of the Military Retirement System.

9/30/2018 CHANGE IN UNFUNDED LIABILITY

($ in billions)

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

1. 9/30/17 Unfunded Liability	$767.9		
2. 10/01/17 Amortization Payment on Unfunded Liability	$82.9		
3. Interest Assumption	1.0500		
4. Expected Unfunded Liability on 9/30/18 (1 - 2) X 3	$719.2		
5. Actual Unfunded Liability	$719.6		
6. Total Change in Unfunded Liability (5 - 4)	**$0.3**	0.0%	
A. Total Experience (gain) loss	**$4.0**	0.3%	
1. COLA, Salary, and Interest	$7.0	0.5%	
a. Interest [1]:	$9.5	0.6%	--> 1.2%
b. Salary [2]:	-$3.0	-0.2%	
c. COLA [3]:	$0.5	0.0%	
2. Noneconomic Experience:	-$3.1	-0.2%	
B. 10/1/17 unpaid contribution [4]:	**$0.8**	0.0%	
C. Total benefit change (gain) loss:	**$0.0**	0.0%	
D. Total assumption change (gain) loss	**-$4.4**	-0.3%	
1. New BRS Opt-In Rates [5]:	$8.2	0.5%	
2. Updated Survivor Rates:	-$16.9	-1.1%	
3. Updated Permanent Disability Retiree Rates:	$2.9	0.2%	
4. New Military Mortality Improvement Factors:	-$20.0	-1.3%	
5. New Male/Female Adjustment Factors:	$21.5	1.4%	

(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: 5.00% investment return; FY18 dollar-weighted fund yield: 3.8%
[2] Valuation assumption: 3.25% long-term salary; 1/1/19 across-the-board pay increase: 2.6%
[3] Valuation assumption: 2.75% long-term COLA; 1/1/19 COLA: 2.8%
[4] Loss due to $753.681 million sequestration (reduction) to the 10/1/2018 Treasury Concurrent Receipt normal cost contribution.
[5] Loss due to update to the opt-in rates for the Blended Retirement System (BRS) during 2018.

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, 2018, valuation of the Military Retirement System.

TOTAL TREASURY PAYMENT

($ in billions)

	October 1, 2019	October 1, 2018
1. Amortization Payment for:		
a. Initial Unfunded Liability	$98.057	$94.971
b. Benefits Changes	$8.858	$8.214
c. Actuarial Assumptions	$6.361	$6.383
d. Actuarial Experience	($22.194)	($22.273)
e. Prior year unpaid contribution [1]	$0.791	$0.701
Total amortization payment	**$91.873**	**$87.996**
2. Normal Cost payment [2]	**$9.305**	**$7.909**
3. Total Treasury payment	**$101.178**	**$95.905**

In reference to the October 1, 2019, amortization payments, the remaining amortization period for 1.a. is 7 years; 1.b. is 17 years; 1.c. is 28 years; 1.d. is 13 years; and 1.e. is 1 year.

[1] Prior year unpaid contribution of $791 million is due to 8.7% sequestration of the 10/1/2018 Treasury Concurrent Receipt normal cost contribution ($791 million is equal to $753.681 million plus one year of interest at the assumed rate of 5.00%). It is treated as an actuarial experience loss, and amortized over one year.

[2] Treasury contribution to pay for Concurrent Receipt benefits. The 10/1/2018 normal cost payment of $7.909 billion is net of the $753.681 million sequestration reduction. The 10/1/2019 normal cost payment of $9.305 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, 2019, payment are to be summarized in the DoD Office of the Actuary's September 30, 2018, Valuation of the Military Retirement System report. Support for the prior year's payment is summarized in the September 30, 2017, valuation report.

YIELD PROJECTION

AND

HISTORICAL ECONOMIC STATISTICS

MRF Fund Yield Projection
NEW INVESTMENT ASSUMPTIONS: SSA ASSUMPTIONS

FY	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
2019	1.87%	1.19%	3.05%	3.06%	3.06%
2020	2.23%	1.05%	3.28%	3.28%	3.45%
2021	2.62%	0.94%	3.56%	3.41%	3.65%
2022	2.60%	1.07%	3.67%	3.55%	3.92%
2023	2.60%	1.16%	3.76%	3.70%	4.22%
2024	2.60%	1.27%	3.87%	3.86%	4.52%
2025	2.60%	1.30%	3.90%	4.01%	4.75%
2026	2.60%	1.45%	4.05%	4.19%	4.87%
2027	2.60%	1.48%	4.08%	4.23%	4.97%
2028	2.60%	1.53%	4.13%	4.27%	5.07%
2029	2.60%	1.56%	4.16%	4.33%	5.10%
2030	2.60%	1.60%	4.20%	4.37%	5.10%
2031	2.60%	1.63%	4.23%	4.39%	5.10%
2032	2.60%	1.61%	4.21%	4.41%	5.10%
2033	2.60%	1.68%	4.28%	4.50%	5.10%
2034	2.60%	1.71%	4.31%	4.52%	5.10%
2035	2.60%	1.73%	4.33%	4.55%	5.10%
2036	2.60%	1.75%	4.35%	4.57%	5.10%
2037	2.60%	1.78%	4.38%	4.58%	5.10%
2038	2.60%	1.81%	4.41%	4.60%	5.10%
2039	2.60%	1.91%	4.51%	4.71%	5.10%
2040	2.60%	1.99%	4.59%	4.82%	5.10%
2041	2.60%	2.08%	4.68%	4.91%	5.10%
2042	2.60%	2.16%	4.76%	4.98%	5.10%
2043	2.60%	2.25%	4.85%	5.03%	5.10%
2044	2.60%	2.31%	4.91%	5.06%	5.10%
2045	2.60%	2.36%	4.96%	5.08%	5.10%
2046	2.60%	2.41%	5.01%	5.10%	5.10%
2047	2.60%	2.41%	5.01%	5.10%	5.10%
2048	2.60%	2.50%	5.10%	5.10%	5.10%
2049	2.60%	2.50%	5.10%	5.10%	5.10%
2050	2.60%	2.50%	5.10%	5.10%	5.10%
2051	2.60%	2.50%	5.10%	5.10%	5.10%
2052	2.60%	2.50%	5.10%	5.10%	5.10%
2053	2.60%	2.50%	5.10%	5.10%	5.10%
2054	2.60%	2.50%	5.10%	5.10%	5.10%
2055	2.60%	2.50%	5.10%	5.10%	5.10%
2056	2.60%	2.50%	5.10%	5.10%	5.10%
2057	2.60%	2.50%	5.10%	5.10%	5.10%
2058	2.60%	2.50%	5.10%	5.10%	5.10%
2059	2.60%	2.50%	5.10%	5.10%	5.10%
2060	2.60%	2.50%	5.10%	5.10%	5.10%
2061	2.60%	2.50%	5.10%	5.10%	5.10%
2062+	2.60%	2.50%	5.10%	5.10%	5.10%

	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
10 Yr Avg	2.49%	1.24%	3.73%	3.75%	4.25%
20 Yr Avg	2.55%	1.46%	4.01%	4.12%	4.67%
30 Yr Avg	2.56%	1.72%	4.29%	4.41%	4.82%
50 Yr Avg	2.58%	2.03%	4.61%	4.68%	4.93%
75 Yr Avg	2.59%	2.19%	4.77%	4.82%	4.99%
10 Yr Fund Wgt Avg	2.53%	1.29%	3.82%	3.86%	4.43%
20 Yr Fund Wgt Avg	2.57%	1.54%	4.11%	4.25%	4.84%
30 Yr Fund Wgt Avg	2.59%	1.86%	4.44%	4.58%	4.96%
50 Yr Fund Wgt Avg	2.59%	2.23%	4.83%	4.88%	5.04%
75 Yr Fund Wgt Avg	2.60%	2.39%	4.99%	5.01%	5.08%
Ultimate	2.60%	2.50%	5.10%	5.10%	5.10%

BoA Assumptions		
2.75%	2.25%	5.00%

Liab Mod Dur	NC FT BRS Mod Dur	NC PT BRS Mod Dur
20	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 = Fund Yield - Inflation (after 3 mths TIPS inflation lag). 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 20 yr bonds. ASSUMES OVERNIGHT RETURNS SAME AS LONG BONDS (new bond purchases are invested in 20-yr bonds with yields equal to SSA's new-purchase yield assumptions from the 2019 Trustees Report)

***There is a +0.1 percent change to both the FY 2021 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. These changes in the economic assumptions result in an estimated $58 million increase (or 0.3%) in the DoD's contribution to the Military Retirement Fund (MRF) in FY 2021. For reference purposes, the current interest/salary/COLA assumptions are 5%/3.25%/2.75%, and the alternative above is 4.75%/3.00%/2.50%.

--- Long term fund yield converges to 5.1%

--- 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 an expected average maturity of future investments of 20 years, and current and projected economic conditions.

MRF Fund Yield Projection
NEW INVESTMENT ASSUMPTIONS: BLUE CHIP

FY	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
2019	2.18%	0.90%	3.08%	2.86%	2.86%
2020	2.15%	1.07%	3.22%	2.93%	2.97%
2021	2.10%	1.14%	3.24%	3.03%	3.19%
2022	2.10%	1.18%	3.28%	3.12%	3.35%
2023	2.20%	1.17%	3.37%	3.21%	3.49%
2024	2.10%	1.30%	3.40%	3.29%	3.58%
2025	2.10%	1.28%	3.38%	3.35%	3.67%
2026	2.10%	1.34%	3.44%	3.43%	3.71%
2027	2.10%	1.35%	3.45%	3.44%	3.67%
2028	2.10%	1.36%	3.46%	3.46%	3.66%
2029	2.10%	1.35%	3.45%	3.48%	3.68%
2030	2.10%	1.37%	3.47%	3.49%	3.67%
2031	2.10%	1.38%	3.48%	3.50%	3.63%
2032	2.10%	1.35%	3.45%	3.50%	3.64%
2033	2.10%	1.33%	3.43%	3.53%	3.70%
2034	2.10%	1.34%	3.44%	3.54%	3.66%
2035	2.10%	1.35%	3.45%	3.54%	3.66%
2036	2.10%	1.36%	3.46%	3.55%	3.66%
2037	2.10%	1.37%	3.47%	3.56%	3.66%
2038	2.10%	1.38%	3.48%	3.56%	3.66%
2039	2.10%	1.42%	3.52%	3.61%	3.69%
2040	2.10%	1.45%	3.55%	3.65%	3.70%
2041	2.10%	1.47%	3.57%	3.68%	3.70%
2042	2.10%	1.49%	3.59%	3.70%	3.70%
2043	2.10%	1.53%	3.63%	3.71%	3.70%
2044	2.10%	1.55%	3.65%	3.72%	3.70%
2045	2.10%	1.56%	3.66%	3.72%	3.70%
2046	2.10%	1.57%	3.67%	3.72%	3.70%
2047	2.10%	1.56%	3.66%	3.72%	3.69%
2048	2.10%	1.62%	3.72%	3.72%	3.69%
2049	2.10%	1.62%	3.72%	3.72%	3.69%
2050	2.10%	1.62%	3.72%	3.72%	3.68%
2051	2.10%	1.62%	3.72%	3.72%	3.67%
2052	2.10%	1.62%	3.72%	3.72%	3.68%
2053	2.10%	1.62%	3.72%	3.72%	3.70%
2054	2.10%	1.62%	3.72%	3.72%	3.68%
2055	2.10%	1.62%	3.72%	3.72%	3.68%
2056	2.10%	1.62%	3.72%	3.72%	3.68%
2057	2.10%	1.62%	3.72%	3.72%	3.68%
2058	2.10%	1.62%	3.72%	3.72%	3.68%
2059	2.10%	1.62%	3.72%	3.72%	3.70%
2060	2.10%	1.62%	3.72%	3.72%	3.70%
2061	2.10%	1.62%	3.72%	3.72%	3.70%
2062+	2.10%	1.62%	3.72%	3.72%	3.70%

	Inflation	Real Fund Yield*	Nominal Fund Yield	New Invests** (Cumulative)	New Invests (Annual)
10 Yr Avg	2.12%	1.21%	3.33%	3.21%	3.41%
20 Yr Avg	2.11%	1.28%	3.39%	3.37%	3.54%
30 Yr Avg	2.11%	1.36%	3.47%	3.48%	3.59%
50 Yr Avg	2.10%	1.46%	3.57%	3.57%	3.63%
75 Yr Avg	2.10%	1.52%	3.62%	3.62%	3.65%
10 Yr Fund Wgt Avg	2.12%	1.24%	3.36%	3.27%	3.49%
20 Yr Fund Wgt Avg	2.11%	1.31%	3.42%	3.43%	3.59%
30 Yr Fund Wgt Avg	2.10%	1.41%	3.51%	3.55%	3.64%
50 Yr Fund Wgt Avg	2.10%	1.53%	3.63%	3.65%	3.67%
75 Yr Fund Wgt Avg	2.10%	1.58%	3.68%	3.69%	3.69%
Ultimate	2.10%	1.62%	3.72%	3.72%	3.70%
BoA Assumptions	2.75%	2.25%	5.00%		

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%
20	30	40	+0.1%	+0.1%

MRF Fund Yield Notes

* Real = Fund Yield - Inflation (after 3 mths TIPS inflation lag). 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 20 yr bonds. ASSUMES OVERNIGHT RETURNS SAME AS LONG BONDS (new bond purchases are invested in 20-yr bonds with yields equal to SSA's new-purchase yield assumptions from the 2019 Trustees Report)

***There is a +0.1 percent change to both the FY 2021 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. These changes in the economic assumptions result in an estimated $58 million increase (or 0.3%) in the DoD's contribution to the Military Retirement Fund (MRF) in FY 2021. For reference purposes, the current interest/salary/COLA assumptions are 5%/3.25%/2.75%, and the alternative above is 4.75%/3.00%/2.50%.

--- Long term fund yield converges to 3.72%

--- 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 an expected average maturity of future investments of 20 years, and current and projected economic conditions.

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 2018	OPM 2019	SSA OASDI Trustee's Report 2019			MRF Financial Statements 2019	CBO Inflation and 10 Yr Treas. Note 2019	Blue Chip Consensus Inflation and 10 Yr Treas. Note 2019
			Low Cost	Intermediate	High Cost			
Reference Date	7/1/2018	4/1/2019	4/25/2019	4/25/2019	4/25/2019	3/30/2019	1/1/2019	6/1/2019
Rate Projection Period	75-100 Yrs Forward	75-100 Yrs Forward	Inf: '21 to '93 Sal: '28 to '93 Int: '30 to '95	Inf: '21 to '93 Sal: '28 to '93 Int: '30 to '95	Inf: '21 to '93 Sal: '28 to '93 Int: '27 to '95	10 Yr Look Back	2024 to 2029	2026 to 2030
Inflation	2.75%	2.50%	3.20%	2.60%	2.00%	1.80%	2.30%	2.10%
Salary	3.25%	2.75%	5.04%	3.81%	2.60%	1.80%	---	---
Interest Rate	5.00%	4.25%	6.20%	5.10%	4.00%	3.40%	3.70%	3.40%

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 SFFAS 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 2018	OPM 2019	SSA OASDI Trustee's Report 2019		
			Low Cost	Intermediate	High Cost
Reference Date	**7/1/2018**	**4/1/2019**	**4/25/2019**	**4/25/2019**	**4/25/2019**
Rate Projection Period	**75-100 Yrs Forward**	**75-100 Yrs Forward**	**Inf: '21 to '93 Sal: '28 to '93 Int: '30 to '95**	**Inf: '21 to '93 Sal: '28 to '93 Int: '30 to '95**	**Inf: '21 to '93 Sal: '28 to '93 Int: '27 to '95**
Salary (Real)	0.50%	0.25%	1.84%	1.21%	0.60%
Interest Rate (Real)	2.25%	1.75%	3.00%	2.50%	2.00%

MRF Financial Statements 2019	CBO Inflation and 10 Yr Treas. Note 2019	Blue Chip Consensus Inflation and 10 Yr Treas. Note 2019
3/30/2019	**1/1/2019**	**6/1/2019**
10 Yr Look Back	**10 Yrs Forward**	**10 Yrs Forward**
0.00%	---	---
1.60%	1.40%	1.30%

Blue Chip L-T Index	Year				
	Jun 2019	**Jun 2018**	**June 2017**	**Dec 2016**	**Dec 2015**
Projection Period	**10 Yrs**	**10 Yrs**	**10 Yrs**	**10 Yrs**	**10 Yrs**
CPI	**2.10%**	**2.20%**	**2.20%**	**2.30%**	**2.20%**
30 Year Treasury	**3.80%**	**4.40%**	**4.50%**	**4.50%**	**4.80%**
Real Return	1.70%	2.20%	2.30%	2.20%	2.60%

How To Read The Triangular Tables

Descriptions:

1 **CPI Associated with Military Retired Pay Increases**: Consumer Price Index - Urban Wage Earners and Clerical Workers
---> CPI associated with Military Retirement

2 **Basic Pay**: Average Military Personnel Basic Pay Increase
---> Annual salary increase granted to Military personnel

3 **ECI**: Employment Cost Index - Wages and Salaries - Private Industry - Not Seasonally Adjusted (All Workers)
---> Index which is usually a leading indicator of the annual Basic Pay increase.

4 **Real Yield of TIPS New Purchases**: Average annual real yield of the new TIPS purchases at purchase
---> Shows yield at purchase, not a cumulative performance history.

5 **Military Retirement Fund Annual Yield**: Annual Effective Fund Yield of the Military Retirement Fund (MRF)
---> Effective annual yield of the Fund (Investment Income over Average Principal Invested)

Synopsis:

The accompanying charts and graphs in this spreadsheet allow the reader to find the **annual percent increase** for a specific index over a specific period of time. In order to read a chart, the reader will go to an index and find a starting year at the top of the chart and a concluding year on the side of the chart. For example, suppose the reader wanted to know the annual average CPI from 1955 to 2009. The reader would find '1955' at the top of the CPI chart and follow down to '2009' on the left to arrive at 3.87. That means the annual CPI increase over that 54-year period was 3.87%.
All triangular tables (excluding CPI) are given in real terms.

CPI Associated with Military Retired Pay Increases

1930 TO 1984: CPI-W SERIES: DEC. TO DEC. INCREASES OF U.S. City Average, All Items, Not Seasonally Adjusted
1985 - Present: ACTUAL COST-OF-LIVING ADJUSTMENTS GIVEN TO MILITARY RETIREES BEGINNING FISCAL YEAR 1985
(MRF COLAS ARE CALCULATED AS THE INCREASE FROM 3RD QUARTER TO 3RD QUARTER AND GIVEN AT BEGINNING OF FY)
ALL FIGURES ARE AVERAGE ANNUAL PERCENTAGE INCREASES.

FROM PERIOD CORRESPONDING TO END OF:

TO END OF:	1920	1930	1940	1950	1960	1970	1980	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1930																										
1940		-1.34																								
1950		2.22	5.91																							
1960		2.07	3.82	1.77																						
1970		2.28	3.52	2.35	2.92																					
1980		3.41	4.64	4.22	5.46	8.07																				
1990		3.49	4.48	4.13	4.93	5.95	3.87																			
2000		3.37	4.18	3.84	4.36	4.85	3.28	2.69																		
2001		3.36	4.16	3.82	4.32	4.77	3.24	2.68	2.60																	
2002		3.34	4.11	3.77	4.25	4.67	3.16	2.57	2.00	1.40																
2003		3.32	4.08	3.74	4.20	4.59	3.11	2.54	2.03	1.75	2.10															
2004		3.31	4.06	3.72	4.16	4.53	3.10	2.55	2.20	2.07	2.40	2.70														
2005		3.32	4.06	3.72	4.16	4.52	3.14	2.65	2.58	2.57	2.96	3.40	4.10													
2006		3.32	4.05	3.72	4.14	4.49	3.14	2.69	2.70	2.72	3.05	3.37	3.70	3.30												
2007		3.31	4.02	3.69	4.10	4.43	3.11	2.67	2.64	2.65	2.90	3.10	3.23	2.80	2.30											
2008		3.34	4.05	3.73	4.14	4.46	3.20	2.84	3.03	3.09	3.38	3.63	3.87	3.79	4.04	5.80										
2009		3.30	3.99	3.66	4.05	4.35	3.09	2.69	2.69	2.70	2.89	3.02	3.08	2.83	2.67	2.86	0.00									
2010		3.25	3.93	3.60	3.97	4.23	2.99	2.55	2.42	2.40	2.52	2.58	2.56	2.26	2.00	1.90	0.00	0.00								
2011		3.26	3.92	3.60	3.96	4.22	3.01	2.60	2.52	2.52	2.64	2.71	2.71	2.48	2.32	2.32	1.19	1.78	3.60							
2012		3.24	3.89	3.57	3.92	4.16	2.97	2.56	2.45	2.44	2.55	2.60	2.58	2.37	2.21	2.20	1.31	1.76	2.65	1.70						
2013		3.22	3.86	3.54	3.87	4.10	2.92	2.51	2.38	2.36	2.45	2.49	2.46	2.26	2.11	2.08	1.35	1.69	2.26	1.60	1.50					
2014		3.20	3.83	3.51	3.83	4.04	2.89	2.48	2.33	2.31	2.39	2.41	2.39	2.20	2.06	2.03	1.41	1.69	2.12	1.63	1.60	1.70				
2015		3.16	3.78	3.45	3.76	3.95	2.80	2.38	2.17	2.14	2.20	2.21	2.17	1.97	1.83	1.77	1.21	1.41	1.69	1.22	1.06	0.85	0.00			
2016		3.13	3.73	3.40	3.70	3.87	2.73	2.30	2.06	2.02	2.07	2.06	2.01	1.82	1.67	1.61	1.09	1.25	1.46	1.04	0.87	0.66	0.15	0.30		
2017		3.11	3.71	3.38	3.67	3.83	2.71	2.29	2.05	2.02	2.06	2.06	2.01	1.84	1.70	1.64	1.19	1.34	1.54	1.20	1.10	1.00	0.76	1.15	2.00	
2018		3.11	3.70	3.38	3.65	3.81	2.71	2.31	2.09	2.07	2.11	2.11	2.06	1.91	1.80	1.75	1.35	1.50	1.69	1.42	1.38	1.35	1.27	1.69	2.40	2.80

REAL INCREASES IN "BASIC PAY"

1950 TO PRESENT: AVERAGE REAL MILITARY PERSONNEL BASIC PAY ACROSS-THE-BOARD INCREASES, DECEMBER TO DECEMBER

ALL FIGURES ARE AVERAGE ANNUAL PERCENTAGE INCREASES.

FROM DECEMBER 31 OF:

TO 12/31 OF:	1940	1950	1960	1970	1980	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1950																								
1960		0.39																						
1970		1.79	3.21																					
1980		1.30	1.76	0.34																				
1990		1.14	1.40	0.51	0.67																			
2000		1.03	1.20	0.54	0.63	0.59																		
2001		1.05	1.21	0.58	0.69	0.72	1.95																	
2002		1.08	1.25	0.64	0.78	0.88	2.31	2.66																
2003		1.09	1.26	0.67	0.82	0.93	2.06	2.11	1.57															
2004		1.09	1.25	0.68	0.81	0.92	1.74	1.67	1.17	0.78														
2005		1.05	1.20	0.63	0.74	0.79	1.19	1.00	0.46	-0.09	-0.96													
2006		1.01	1.15	0.58	0.67	0.68	0.81	0.59	0.07	-0.42	-1.01	-1.07												
2007		1.01	1.15	0.60	0.69	0.70	0.86	0.68	0.29	-0.02	-0.29	0.05	1.17											
2008		0.96	1.08	0.53	0.60	0.56	0.53	0.33	-0.06	-0.38	-0.67	-0.57	-0.32	-1.80										
2009		1.00	1.13	0.61	0.70	0.71	0.84	0.70	0.43	0.24	0.13	0.41	0.90	0.77	3.40									
2010		1.01	1.14	0.63	0.72	0.75	0.90	0.78	0.55	0.40	0.34	0.61	1.03	0.98	2.40	1.40								
2011		0.96	1.08	0.56	0.63	0.62	0.64	0.51	0.27	0.11	0.01	0.18	0.43	0.24	0.93	-0.28	-1.93							
2012		0.95	1.05	0.55	0.61	0.59	0.58	0.46	0.24	0.10	0.01	0.15	0.36	0.19	0.70	-0.19	-0.97	0.00						
2013		0.92	1.03	0.52	0.58	0.54	0.50	0.38	0.18	0.04	-0.04	0.07	0.24	0.08	0.46	-0.26	-0.81	-0.25	-0.49					
2014		0.90	0.99	0.50	0.54	0.49	0.42	0.30	0.10	-0.03	-0.11	-0.01	0.12	-0.03	0.27	-0.35	-0.78	-0.39	-0.59	-0.69				
2015		0.90	1.00	0.51	0.56	0.52	0.47	0.37	0.20	0.08	0.02	0.12	0.25	0.14	0.41	-0.08	-0.37	0.03	0.04	0.30	1.30			
2016		0.92	1.01	0.54	0.60	0.57	0.56	0.46	0.31	0.21	0.17	0.27	0.40	0.32	0.59	0.19	-0.01	0.38	0.47	0.80	1.55	1.79		
2017		0.91	1.00	0.54	0.59	0.56	0.55	0.46	0.31	0.23	0.18	0.28	0.40	0.33	0.56	0.21	0.05	0.38	0.46	0.70	1.16	1.09	0.39	
2018		0.89	0.98	0.52	0.57	0.54	0.51	0.42	0.28	0.20	0.16	0.24	0.35	0.28	0.49	0.17	0.02	0.30	0.35	0.52	0.82	0.66	0.10	-0.19

REAL INCREASES IN ECI (WAGES AND SALARIES)

1980 TO PRESENT: AVERAGE REAL EMPLOYMENT COST INDEX INCREASES, DECEMBER TO DECEMBER
(Private Industry-All Workers, Wages and Salaries, Not Seasonally Adjusted)
ALL FIGURES ARE **AVERAGE ANNUAL PERCENTAGE INCREASES**.

FROM DECEMBER 31 OF: / TO 12/31 OF:	1970	1980	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1980																					
1990		0.79																			
2000		0.72	0.65																		
2001		0.74	0.69	1.06																	
2002		0.76	0.73	1.10	1.14																
2003		0.77	0.75	1.08	1.08	1.02															
2004		0.73	0.69	0.79	0.70	0.48	-0.07														
2005		0.64	0.54	0.31	0.12	-0.21	-0.83	-1.58													
2006		0.61	0.50	0.24	0.08	-0.18	-0.58	-0.84	-0.10												
2007		0.63	0.53	0.35	0.23	0.05	-0.20	-0.24	0.44	0.97											
2008		0.49	0.33	-0.08	-0.24	-0.47	-0.76	-0.94	-0.72	-1.03	-3.00										
2009		0.52	0.38	0.07	-0.05	-0.22	-0.43	-0.50	-0.23	-0.27	-0.88	1.28									
2010		0.56	0.45	0.24	0.15	0.03	-0.11	-0.12	0.18	0.25	0.01	1.54	1.81								
2011		0.48	0.33	0.04	-0.06	-0.19	-0.34	-0.38	-0.18	-0.19	-0.48	0.37	-0.08	-1.93							
2012		0.47	0.32	0.04	-0.05	-0.17	-0.30	-0.33	-0.15	-0.15	-0.38	0.29	-0.04	-0.95	0.04						
2013		0.47	0.33	0.08	0.00	-0.10	-0.21	-0.23	-0.06	-0.05	-0.22	0.34	0.11	-0.45	0.30	0.55					
2014		0.47	0.34	0.11	0.04	-0.05	-0.15	-0.16	0.00	0.01	-0.12	0.36	0.18	-0.22	0.36	0.51	0.48				
2015		0.52	0.41	0.25	0.19	0.11	0.04	0.05	0.21	0.25	0.16	0.61	0.50	0.25	0.80	1.05	1.30	2.14			
2016		0.56	0.47	0.36	0.31	0.25	0.19	0.21	0.38	0.42	0.36	0.79	0.72	0.54	1.04	1.30	1.55	2.08	2.03		
2017		0.56	0.48	0.38	0.34	0.28	0.23	0.25	0.41	0.45	0.40	0.78	0.72	0.57	0.99	1.18	1.34	1.63	1.38	0.74	
2018		0.56	0.48	0.38	0.34	0.28	0.24	0.26	0.40	0.44	0.39	0.74	0.68	0.54	0.90	1.04	1.14	1.31	1.03	0.53	0.33

REAL YIELD OF TIPS NEW PURCHASES

2002 - PRESENT: REAL INTEREST OF TREASURY INFLATION-PROTECTED SECURITIES (TIPS)
AVERAGE REAL INTEREST RATES OF NEW TIPS PURCHASES, END OF CALENDAR YEAR TO END OF CALENDAR YEAR
ALL FIGURES ARE **AVERAGE ANNUAL PERCENTAGE INCREASES**.

FROM PERIOD CORRESPONDING TO END OF:

TO END OF:	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
2002																	
2003		1.98															
2004		1.94	1.91														
2005		1.91	1.87	1.83													
2006		2.00	2.01	2.06	2.29												
2007		2.04	2.06	2.11	2.25	2.21											
2008		2.13	2.16	2.22	2.35	2.38	2.55										
2009		2.11	2.13	2.17	2.26	2.25	2.26	1.98									
2010		1.99	1.99	2.01	2.04	1.98	1.91	1.59	1.20								
2011		1.74	1.71	1.68	1.66	1.53	1.36	0.97	0.47	-0.26							
2012		1.59	1.55	1.50	1.46	1.32	1.14	0.79	0.40	0.00	0.26						
2013		1.55	1.51	1.47	1.42	1.30	1.15	0.87	0.60	0.40	0.72	1.20					
2014		1.51	1.47	1.42	1.38	1.27	1.13	0.90	0.68	0.55	0.82	1.11	1.03				
2015		1.49	1.45	1.41	1.36	1.26	1.14	0.94	0.77	0.69	0.93	1.15	1.13	1.23			
2016		1.42	1.38	1.34	1.29	1.19	1.08	0.90	0.75	0.67	0.86	1.01	0.95	0.91	0.58		
2017		1.39	1.35	1.31	1.26	1.17	1.07	0.90	0.77	0.71	0.87	0.99	0.94	0.91	0.75	0.93	
2018		1.37	1.33	1.29	1.25	1.16	1.07	0.92	0.80	0.75	0.90	1.00	0.97	0.95	0.86	0.99	1.06

MRF REAL ANNUAL YIELD

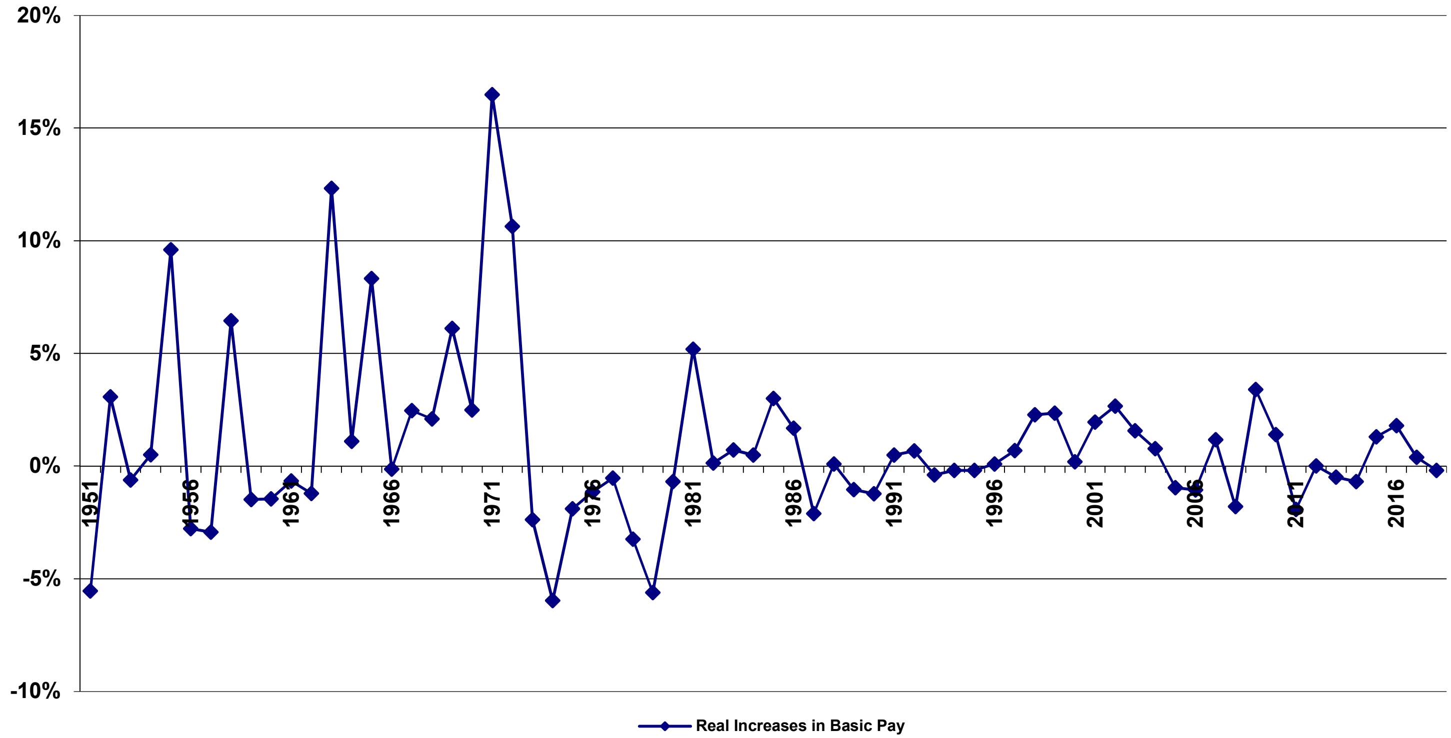
1990 TO PRESENT: AVERAGE REAL YIELD RATES, END OF FISCAL YEAR TO END OF FISCAL YEAR
ALL FIGURES ARE **AVERAGE ANNUAL PERCENTAGE INCREASES**.

FROM PERIOD CORRESPONDING TO END OF:

TO END OF:	1980	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1990																				
2000		5.88																		
2001		5.82	5.23																	
2002		5.81	5.45	5.68																
2003		5.62	4.74	4.50	3.34															
2004		5.40	4.21	3.88	2.99	2.64														
2005		5.13	3.64	3.25	2.45	2.01	1.39													
2006		4.96	3.46	3.11	2.48	2.19	1.97	2.55												
2007		4.81	3.30	2.98	2.45	2.23	2.09	2.45	2.34											
2008		4.56	2.93	2.61	2.11	1.86	1.67	1.76	1.37	0.40										
2009		4.37	2.71	2.40	1.95	1.71	1.53	1.57	1.24	0.70	0.99									
2010		4.31	2.76	2.49	2.10	1.93	1.81	1.90	1.73	1.53	2.10	3.22								
2011		4.16	2.63	2.37	2.01	1.84	1.73	1.79	1.63	1.46	1.81	2.23	1.25							
2012		4.03	2.51	2.26	1.93	1.77	1.67	1.71	1.57	1.41	1.66	1.89	1.23	1.22						
2013		3.92	2.44	2.21	1.90	1.75	1.66	1.69	1.57	1.44	1.65	1.81	1.35	1.40	1.58					
2014		3.81	2.36	2.15	1.86	1.72	1.63	1.66	1.55	1.44	1.61	1.74	1.37	1.41	1.51	1.43				
2015		3.73	2.33	2.12	1.85	1.73	1.65	1.67	1.58	1.48	1.64	1.75	1.45	1.50	1.60	1.61	1.79			
2016		3.67	2.31	2.12	1.87	1.75	1.68	1.71	1.62	1.54	1.69	1.79	1.55	1.61	1.71	1.75	1.91	2.03		
2017		3.56	2.22	2.04	1.80	1.69	1.62	1.64	1.56	1.48	1.60	1.68	1.46	1.49	1.55	1.54	1.57	1.47	0.91	
2018		3.47	2.16	1.98	1.75	1.65	1.58	1.59	1.51	1.43	1.54	1.60	1.40	1.42	1.45	1.43	1.43	1.31	0.95	0.99

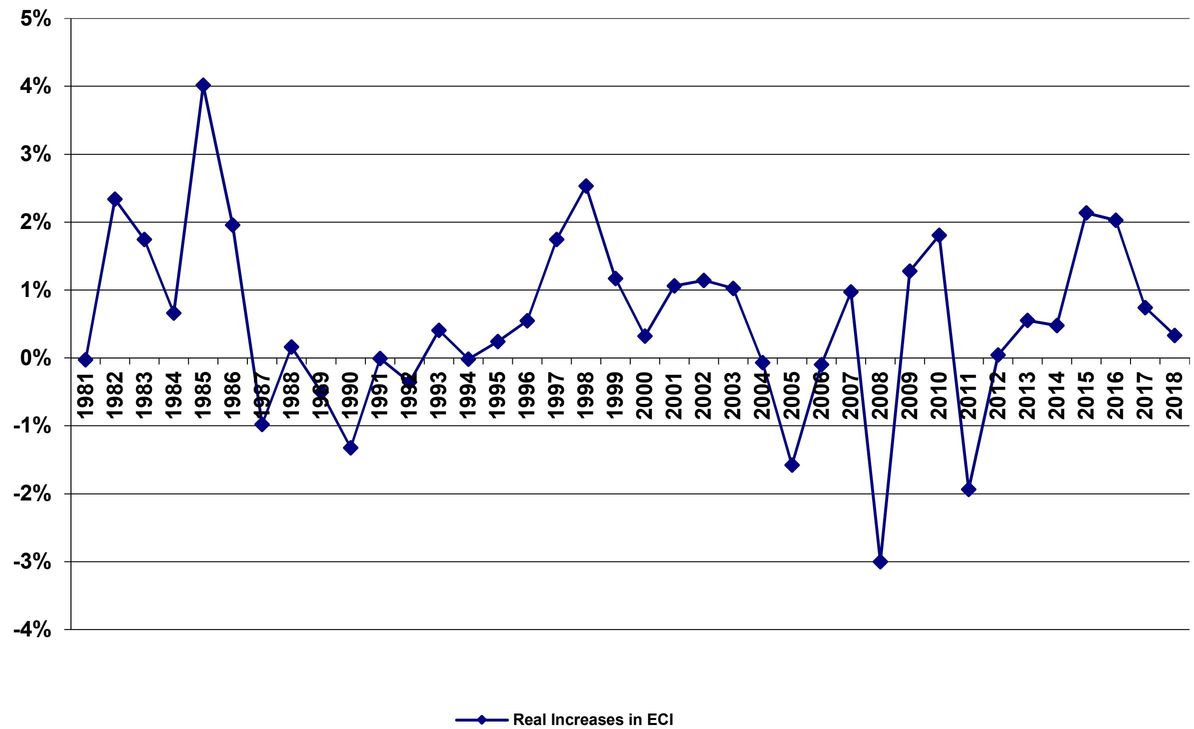
REAL INCREASES IN "BASIC PAY"

AVERAGE (1950-2018) = 0.89%



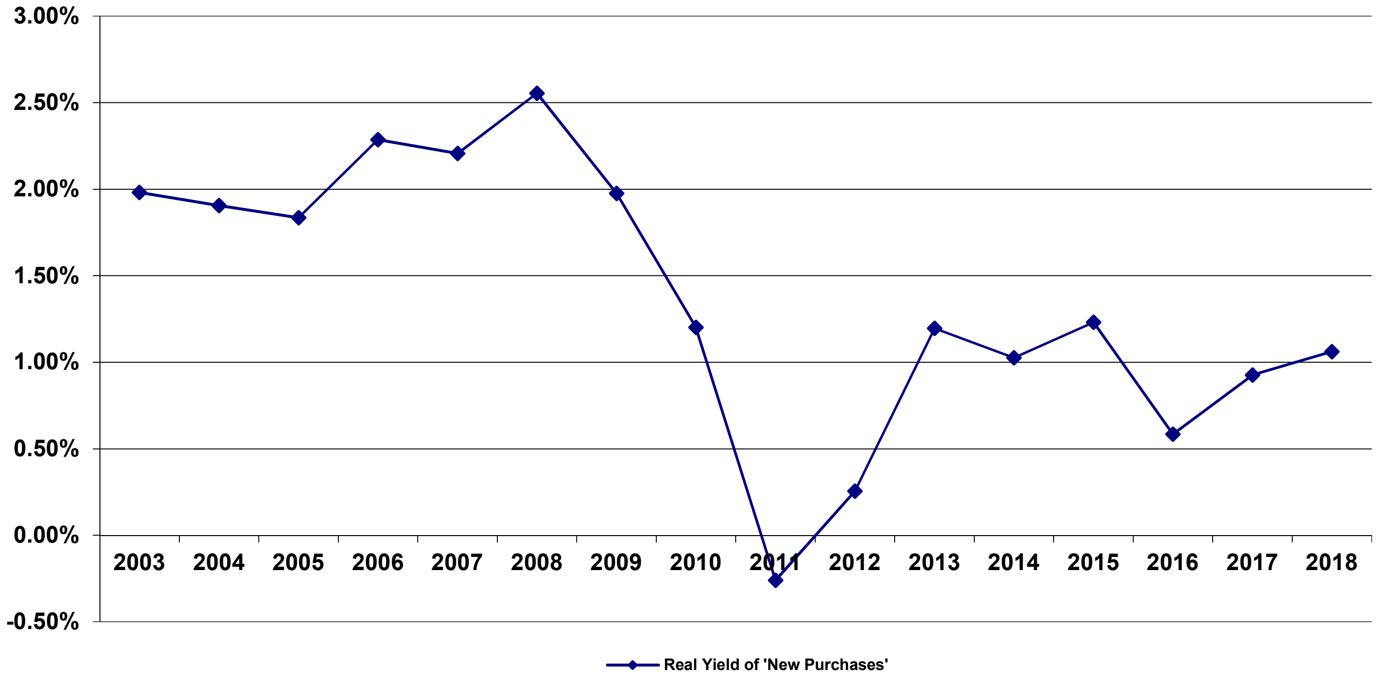
REAL INCREASES IN ECI

AVERAGE (1980-2018) = 0.56%



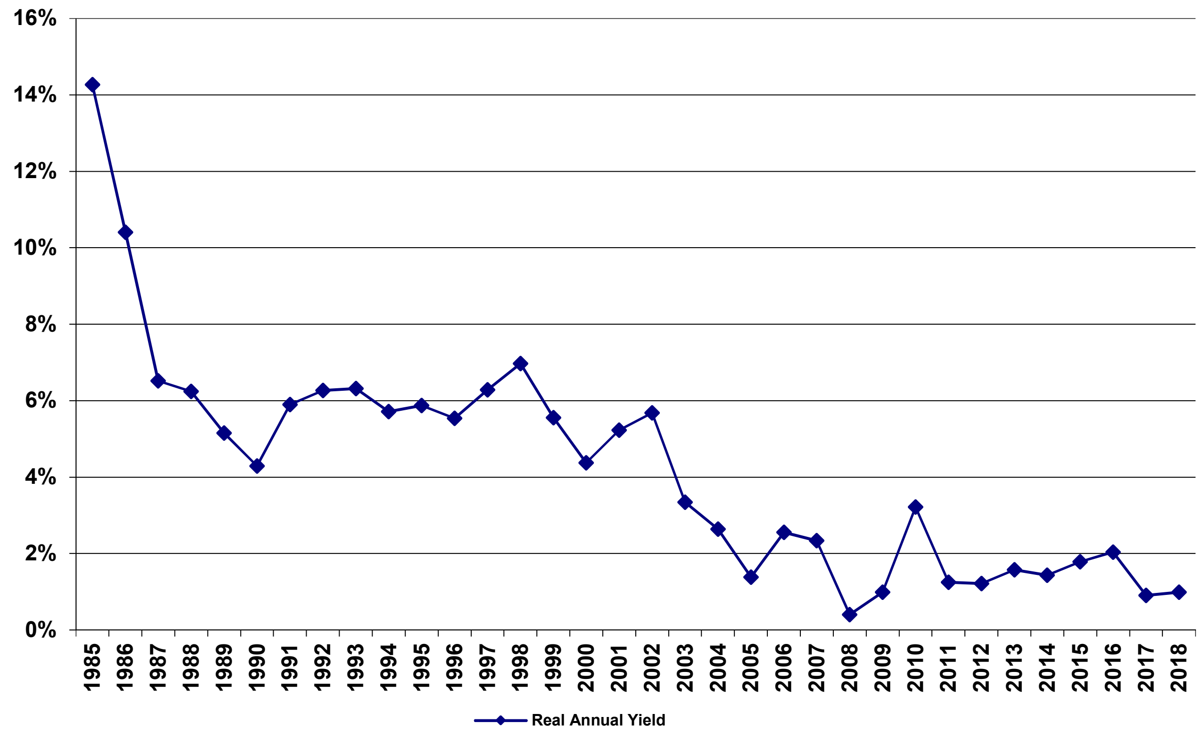
<u>REAL YIELD OF TIPS "NEW PURCHASES"</u>

AVERAGE (2002-2018) = 1.37%



MRF REAL ANNUAL YIELD

AVERAGE (1984-2018) = 4.21%



**PROPOSED NON-ECONOMIC CHANGES FOR
9/30/2019 MRF VALUATION AND
FY 2021 MRF NORMAL COST PERCENTAGES (NCPs)**

FY 2021 NCP SUMMARY

Below is a summary of the proposed changes and their impact on the FY 2021 Full- and Part-time NCPs.

	Full-time	**Part-time**
FY 2020 Budgeted DoD NCPs (Prior assumptions)	31.0%	24.4%
FY 2021 DoD NCPs from 9/30/2018 Valuation (Prior assumptions)	30.7%	24.2%
FY 2021 DoD NCPs from 9/30/2019 Valuation (Prior assumptions) *	30.8%	24.3%
i. Proposed Retiree Divorce Rates	0.0%	0.0%
ii. Actual BRS Data	+1.3%	+0.1%
FY 2021 DoD NCP from 9/30/2019 Valuation	**32.1%**	**24.4%**
Proposed Economic Assumptions: COLA 2.75% / SAL 3.25% / INT 4.75%	+2.5%	+2.3%
FY 2021 DoD NCP from 9/30/2019 Valuation **	**34.6%**	**26.7%**

* Reflects an additional year of mortality improvement in the NCPs (in advancing the valuation year from 2017 to 2018).

** The total NCP (DoD + Treasury) for FY 2021 based on proposed changes is 50.4% for full-time and 30.9% for part-time. Therefore the estimated FY 2021 Treasury NCP is 15.8% for full-time and 4.2% for part-time.

PROPOSED RETIREE DIVORCE RATES

SUMMARY IMPACT: This proposal results in no change (to the 3rd decimal place) to either the FY 2021 full- or part-time DoD NCPs, and increases the 9/30/2018 accrued liability by $1.1 billion (or 0.1%).

PROPOSAL: The current retiree divorce rates are based on FYs 2008-2009. We are proposing the rates to be based on FYs 2017-2018. There were 5,941 net retiree divorces used in the creation of the proposed retiree divorce rates. The numbers of retiree divorces indicate the divorce rates are fully credible (based on limited fluctuation credibility theory). The retiree divorce rates are based on all retirees who are married at the start of the year.

RATIONALE: The rates based on the newer period better captures recent data and result in a 30% drop in retiree divorces relative to those predicted by the current rates.

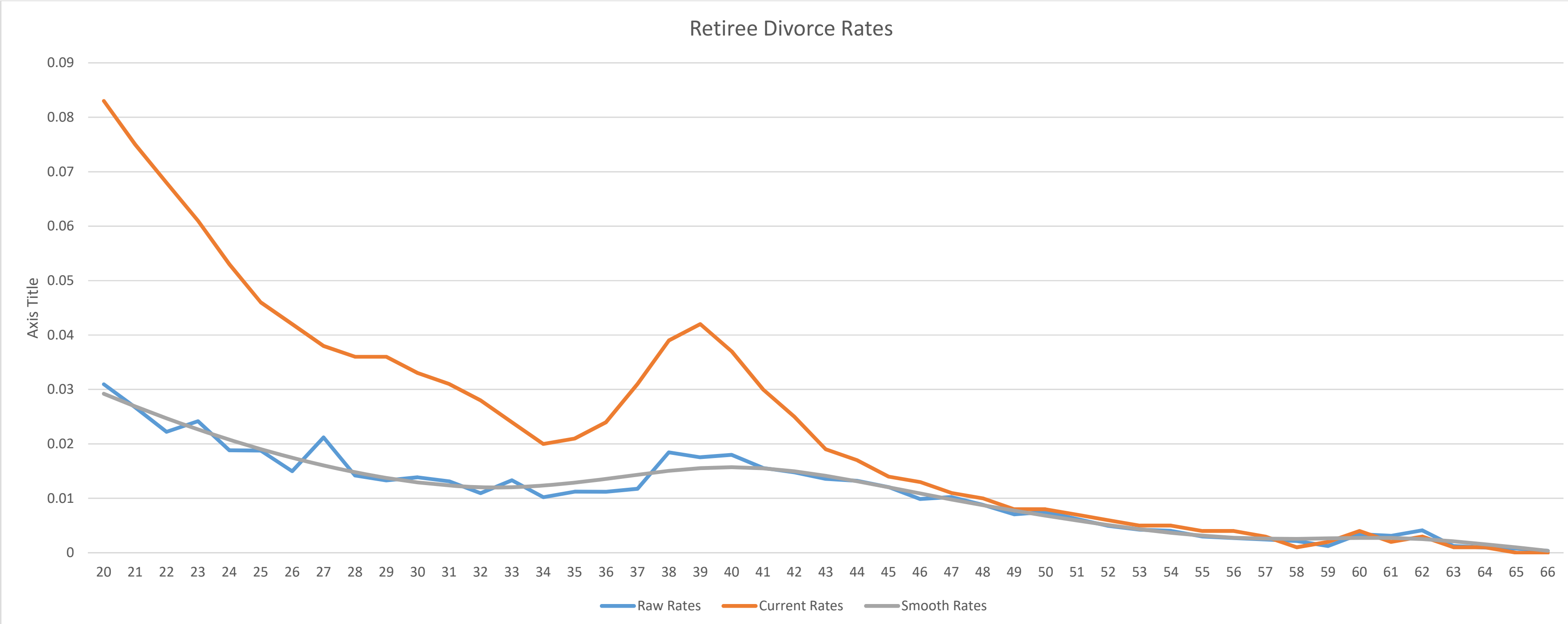
Current and proposed retiree divorce rates are shown in Appendix D.

ACTUAL BRS DATA

SUMMARY IMPACT: Actual BRS data reported from DFAS result in the following changes: +1.3% increase to the DoD Full-time NCP, and a +0.1% increase to the DoD Part-time NCP, and a $4B (or 0.3%) estimated increase to the 9/30/2018 accrued liability.

PROPOSAL: Based on current BRS Opt-In rate assumptions, 850,000 service members were projected to opt-in to BRS during calendar year 2018. Based on actual BRS data received from DFAS through end of May 2019, 390,000 opted in, plus 115,000 (as of 9/30/2018) who were auto-enrolled in BRS (hired after December 31, 2017). Assumptions for BRS opt-in elections are no longer needed. There will be a trickle of additional opt-in elections throughout the coming years due to reentrants, service academy graduates, and hardship extensions; these elections will be captured by actuarial experience changes in the census files as they emerge.

age	Current Retiree Divorce Rates	Proposed Retiree Divorce Rates
16	0.09000	0.04082
17	0.09000	0.03755
18	0.09000	0.03454
19	0.09000	0.03177
20	0.08300	0.02922
21	0.07500	0.02687
22	0.06800	0.02469
23	0.06100	0.02265
24	0.05300	0.02077
25	0.04600	0.01904
26	0.04200	0.01747
27	0.03800	0.01606
28	0.03600	0.01482
29	0.03600	0.01377
30	0.03300	0.01294
31	0.03100	0.01237
32	0.02800	0.01206
33	0.02400	0.01205
34	0.02000	0.01233
35	0.02100	0.01287
36	0.02400	0.01358
37	0.03100	0.01436
38	0.03900	0.01507
39	0.04200	0.01555
40	0.03700	0.01572
41	0.03000	0.01551
42	0.02500	0.01497
43	0.01900	0.01416
44	0.01700	0.01315
45	0.01400	0.01205
46	0.01300	0.01092
47	0.01100	0.00981
48	0.01000	0.00876
49	0.00800	0.00776
50	0.00800	0.00682
51	0.00700	0.00593
52	0.00600	0.00509
53	0.00500	0.00432
54	0.00500	0.00366
55	0.00400	0.00314
56	0.00400	0.00277
57	0.00300	0.00259
58	0.00100	0.00256
59	0.00200	0.00264
60	0.00400	0.00274
61	0.00200	0.00272
62	0.00300	0.00252
63	0.00100	0.00211
64	0.00100	0.00157
65	0.00000	0.00098
66	0.00000	0.00037


Retiree Divorce Rates
Axis Title
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66
Raw Rates
Current Rates
Smooth Rates

Presentation of **Updated Through July 2019 DoD Board of Actuaries Meeting**

CURRENT

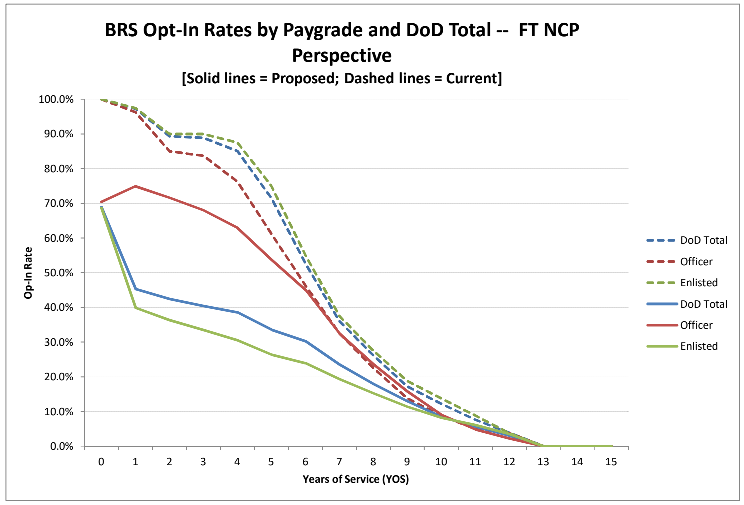
NCP Weighting Considerations (related to July 2018 Update)

FULL - TIME

YOS	DoD Total	Officer	Enlisted
0	100.0%	100.0%	100.0%
1	97.3%	96.3%	97.5%
2	89.3%	85.0%	90.0%
3	88.9%	83.8%	90.0%
4	85.1%	76.3%	87.5%
5	71.5%	61.3%	75.0%
6	52.6%	46.3%	55.0%
7	36.0%	32.5%	37.5%
8	26.1%	22.5%	27.5%
9	17.2%	13.8%	18.8%
10	12.2%	8.8%	13.8%
11	7.6%	5.0%	8.8%
12	3.8%	3.8%	3.8%
13	0.0%	0.0%	0.0%
14	0.0%	0.0%	0.0%
15	0.0%	0.0%	0.0%
16	0.0%	0.0%	0.0%
17	0.0%	0.0%	0.0%
18	0.0%	0.0%	0.0%
19	0.0%	0.0%	0.0%
20	0.0%	0.0%	0.0%
21	0.0%	0.0%	0.0%
22	0.0%	0.0%	0.0%
23	0.0%	0.0%	0.0%
24	0.0%	0.0%	0.0%
25	0.0%	0.0%	0.0%
26	0.0%	0.0%	0.0%
27	0.0%	0.0%	0.0%
28	0.0%	0.0%	0.0%
29	0.0%	0.0%	0.0%
30	0.0%	0.0%	0.0%

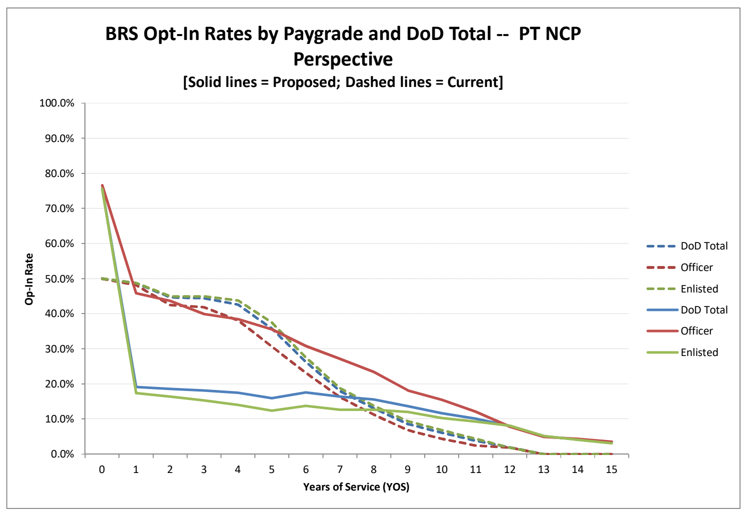
PART - TIME

YOS	DoD Total	Officer	Enlisted
0	50.0%	50.0%	50.0%
1	48.7%	48.1%	48.8%
2	44.7%	42.5%	45.0%
3	44.5%	41.9%	45.0%
4	42.6%	38.1%	43.8%
5	35.8%	30.6%	37.5%
6	26.3%	23.1%	27.5%
7	18.0%	16.3%	18.8%
8	13.1%	11.3%	13.8%
9	8.6%	6.9%	9.4%
10	6.1%	4.4%	6.9%
11	3.8%	2.5%	4.4%
12	1.9%	1.9%	1.9%
13	0.0%	0.0%	0.0%
14	0.0%	0.0%	0.0%
15	0.0%	0.0%	0.0%
16	0.0%	0.0%	0.0%
17	0.0%	0.0%	0.0%
18	0.0%	0.0%	0.0%
19	0.0%	0.0%	0.0%
20	0.0%	0.0%	0.0%
21	0.0%	0.0%	0.0%
22	0.0%	0.0%	0.0%
23	0.0%	0.0%	0.0%
24	0.0%	0.0%	0.0%
25	0.0%	0.0%	0.0%
26	0.0%	0.0%	0.0%
27	0.0%	0.0%	0.0%
28	0.0%	0.0%	0.0%
29	0.0%	0.0%	0.0%
30	0.0%	0.0%	0.0%



JULY 2019 --- UPDATE

NCP Weighting Considerations (related to July 2019 Update)



FULL - TIME

YOS	DoD Total	Officer	Enlisted
0	68.9%	70.5%	68.7%
1	45.3%	74.9%	39.9%
2	42.5%	71.6%	36.4%
3	40.4%	68.1%	33.5%
4	38.6%	62.9%	30.6%
5	33.6%	53.9%	26.4%
6	30.3%	45.0%	23.9%
7	23.5%	32.5%	19.3%
8	18.0%	23.6%	15.2%
9	12.9%	15.8%	11.4%
10	8.5%	9.0%	8.3%
11	5.6%	4.8%	6.1%
12	3.1%	2.3%	3.5%
13	0.0%	0.0%	0.0%
14	0.0%	0.0%	0.0%
15	0.0%	0.0%	0.0%
16	0.0%	0.0%	0.0%
17	0.0%	0.0%	0.0%
18	0.0%	0.0%	0.0%
19	0.0%	0.0%	0.0%
20	0.0%	0.0%	0.0%
21	0.0%	0.0%	0.0%
22	0.0%	0.0%	0.0%
23	0.0%	0.0%	0.0%
24	0.0%	0.0%	0.0%
25	0.0%	0.0%	0.0%
26	0.0%	0.0%	0.0%
27	0.0%	0.0%	0.0%
28	0.0%	0.0%	0.0%
29	0.0%	0.0%	0.0%
30	0.0%	0.0%	0.0%

PART - TIME

YOS	DoD Total	Officer	Enlisted
0	75.6%	76.6%	75.6%
1	19.2%	45.8%	17.4%
2	18.6%	43.7%	16.4%
3	18.1%	39.9%	15.3%
4	17.6%	38.5%	14.0%
5	15.9%	35.5%	12.4%
6	17.6%	30.8%	13.8%
7	16.4%	27.2%	12.7%
8	15.6%	23.5%	12.7%
9	13.7%	18.1%	12.1%
10	11.6%	15.5%	10.3%
11	10.1%	12.1%	9.3%
12	8.0%	7.9%	8.1%
13	5.1%	4.9%	5.2%
14	4.2%	4.4%	4.1%
15	3.3%	3.6%	3.1%
16	2.4%	2.2%	2.6%
17	2.4%	2.1%	2.6%
18	1.3%	0.9%	1.6%
19	1.3%	1.1%	1.5%
20	1.2%	1.1%	1.3%
21	1.2%	1.1%	1.2%
22	1.1%	1.1%	1.2%
23	0.8%	0.8%	0.7%
24	0.6%	0.3%	1.0%
25	0.6%	0.6%	0.7%
26	0.6%	0.5%	0.8%
27	0.5%	0.3%	0.8%
28	0.5%	0.5%	0.6%
29	0.7%	0.4%	1.0%
30	0.5%	0.5%	0.5%

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**
2019	2.18%	-0.07%	2.11%	2.36%
2020	2.15%	0.27%	2.42%	2.39%
2021	2.10%	0.27%	2.37%	2.41%
2022	2.10%	0.32%	2.42%	2.45%
2023	2.20%	-0.02%	2.18%	2.60%
2024	2.10%	1.09%	3.19%	2.89%
2025	2.10%	1.66%	3.76%	2.97%
2026	2.10%	1.87%	3.97%	3.02%
2027	2.10%	1.16%	3.26%	3.02%
2028	2.10%	1.02%	3.12%	3.04%
5 Yr Avg	2.15%	0.15%	2.30%	2.71%
5 Yr Fund Wgt Avg	2.15%	0.14%	2.29%	2.54%

FY	Inflation	Real*	Fund Yield	Blue Chip Return on New Invests**
2029	2.10%	0.55%	2.65%	3.05%
2030	2.10%	0.96%	3.06%	3.06%
2031	2.10%	0.96%	3.06%	3.06%
2032	2.10%	0.95%	3.05%	3.05%
2033	2.10%	0.95%	3.05%	3.05%
2034	2.10%	0.96%	3.06%	3.06%
2035	2.10%	0.95%	3.05%	3.05%
2036	2.10%	0.94%	3.04%	3.04%
2037	2.10%	0.93%	3.03%	3.03%
2038	2.10%	0.91%	3.01%	3.01%
2039	2.10%	0.90%	3.00%	3.00%

Current Interest Assumption
2.25%

Asset Duration	Liability Duration
3.3	3.7

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, 2018)

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	50	$6,346	$2,963	289	$6,207	104	$13,095	$4,332	295	$12,729
2	75	$6,740	$3,077	278	$6,409	132	$14,118	$4,434	347	$13,996
3	79	$7,041	$3,060	282	$6,844	65	$14,438	$4,532	221	$14,297
4	68	$7,557	$3,586	277	$7,221	76	$14,962	$5,432	223	$14,558
5	67	$7,899	$3,128	230	$7,513	48	$15,102	$4,809	150	$14,987
6	50	$8,323	$3,630	182	$7,942	58	$16,474	$6,525	135	$15,590
7	45	$8,809	$3,695	165	$8,142	38	$16,793	$5,011	114	$16,663
8	35	$8,908	$3,124	138	$8,835	28	$17,287	$5,271	101	$16,913
9	40	$9,669	$3,838	113	$9,487	34	$18,788	$5,311	55	$18,049
10	37	$9,957	$3,770	108	$9,538	26	$19,880	$4,334	62	$18,650
11	23	$10,416	$4,057	86	$9,593	12	$19,661	$5,965	38	$18,710
12	27	$10,523	$3,720	83	$9,685	8	$20,285	$9,966	43	$17,127
13	18	$11,463	$3,798	38	$10,158	6	$21,119	$6,252	25	$18,756
14	16	$11,821	$5,355	30	$11,830	10	$22,604	$8,560	19	$23,641
15	4	$12,406	$1,632	13	$12,248	6	$25,283	$7,476	11	$23,772
16	3	$12,601	$3,484	5	$12,497	2	$22,673	$7,908	6	$24,532
17	1	$22,746	$3,228	1	$22,808	1	$36,770	$1,632	0	$0
18	0	$0	$0	0	$0	2	$30,435	$1,632	3	$30,403
19	0	$0	$0	0	$0	2	$31,674	$15,024	0	$0
20	0	$0	$0	0	$0	2	$39,048	$10,212	0	$0
21	1	$24,676	$11,976	0	$0	1	$26,392	$8,568	0	$0
22	1	$27,252	$11,244	0	$0	1	$27,252	$14,184	0	$0
23	0	$0	$0	0	$0	0	$0	$0	0	$0
24	0	$0	$0	0	$0	0	$0	$0	0	$0
25	0	$0	$0	0	$0	0	$0	$0	0	$0
26	0	$0	$0	0	$0	0	$0	$0	0	$0
Total	640	$8,411	$3,462	2,318	$7,747	662	$15,861	$5,131	1,848	$15,148

NOTE: (i) Table includes 5,468 VSI annuitants who are receiving benefits (565 of whom are survivors).
(ii) Table excludes 876 eligible VSI takers who have a full VA offset.
(iii) A total of 12,086 annuitants have zero remaining payments scheduled.
(iv) A total of 18,430 service members elected VSI since program's inception.
(v) Final payment is often a partial (fractional) payment.

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

S:\TERA-VSI-SSB\2019 Val\Seriatum\FY\VSI table for 2019 Board Letter
Summary Table

VSI
CHANGE IN UNFUNDED LIABILITY (UFL)
($ in Millions)

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

Based on 2.25% interest, 2.2% COLA on VA Offsets and 1.0% Non-COLA increase on VA Offsets

1. 10/1/2017 Unfunded Liability	$184.2		
2. 1/1/2018 Amortization Payment on UFL	$36.8		
3. Interest Rate Assumption	1.0225		
4. Expected Unfunded Liability on 10/1/2018 (1 X 3) - (2 X 3 ^ 0.75)	$151.0		
5. Actual Unfunded Liability on 10/1/2018	$148.8		
6. Total (Gain)/Loss in Unfunded Liability (5 - 4)	**-$2.2**	-0.8%	
A. Total (Gain)/Loss Due to Assets	**$1.0**	0.4%	
1. Asset (Gain)/Loss-Yield[1]	$0.1	0.03%	--> 0.06%
2. Asset (Gain)/Loss-Benefit Payments[2]	$0.9	0.4%	
B. Total(Gain)/Loss Due to Liability	**-$3.2**	-1.2%	
1. Liability (Gain)/Loss-2019 COLA[3]	-$0.1	-0.06%	
2. Liability (Gain)/Loss-2018 VA Update[4]	-$2.5	-1.0%	
3. Liability (Gain)/Loss-Interest Rate	$0.0	0.0%	
4. Liability (Gain)/Loss-VA Incr. Assump.	$0.0	0.0%	
5. Liability (Gain)/Loss-Residual[5]	-$0.5	-0.2%	

(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: 2.2%

[2] Projected FY18 benefit payments: $61.4M; actual FY18 benefit payments: $62.3M

[3] Projected 2019 COLA (excluding the VA Increase Assumption): 2.2%; actual 2019 COLA: 2.8%

[4] Represents actual 2018 VA offsets being different than expected.

[5] Represents DFAS data changes and residual.

VSI AMORTIZATION

($ in Millions)

Based on 2.25% interest, 2.2% COLA on VA Offsets and 1.0% Non-COLA increase on VA Offsets

VSI Valuation Results as of 9/30/2018:

a. 9/30/2018 PVFB $263.0 PVFB Sensitivity at 25 basis points: 1.0%

b. 10/1/2018 Fund $114.2

c. 10/1/2018 UFL $148.8

Amortization Schedule - DECREASING Amortization Payments:

d. 1/1/2020 $25.9

e. 1/1/2021 - expiration 55.4% of FY Projected Benefit Payments

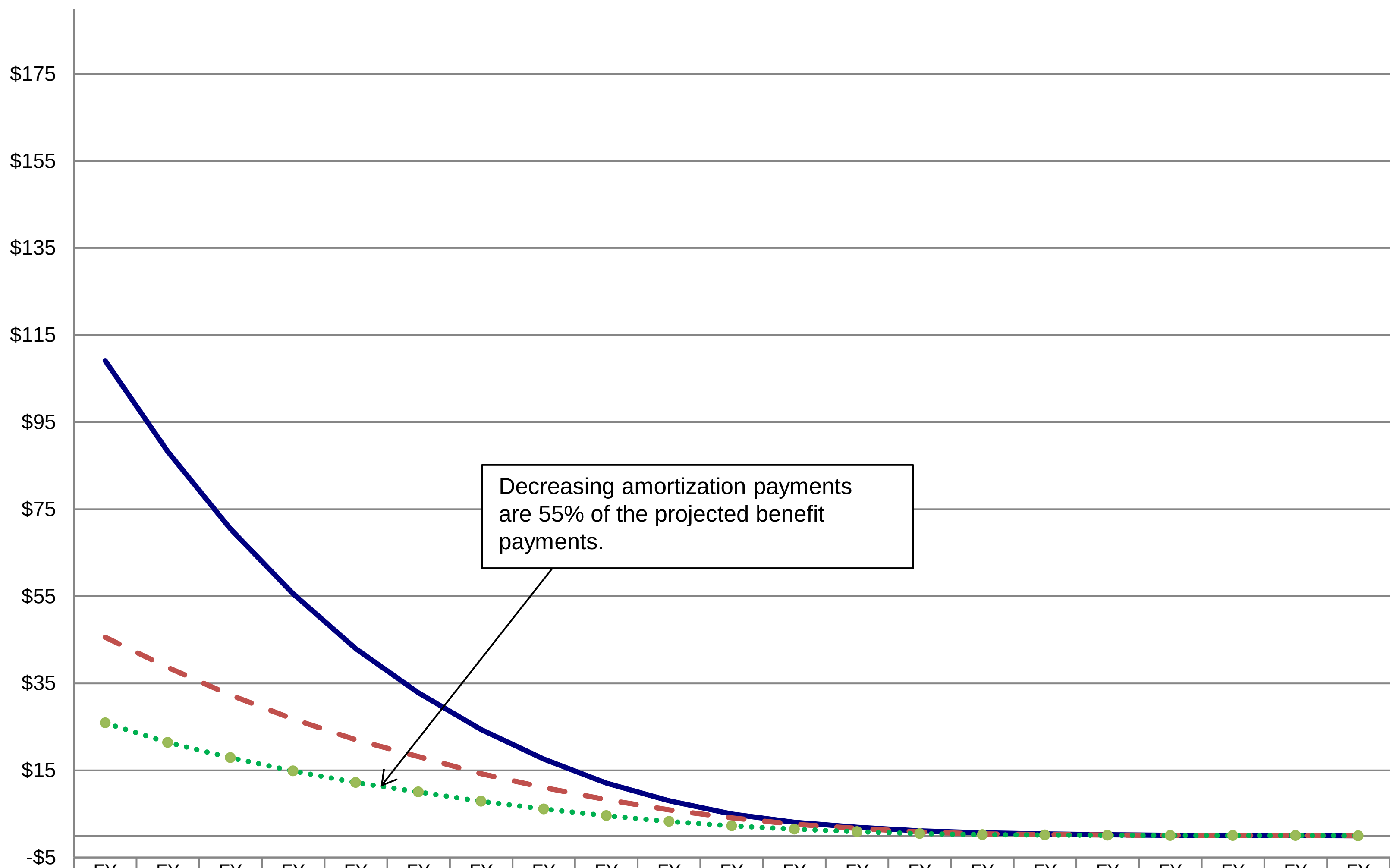
VSI Fund Projections:

	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 2019	$31.1	$132.7	$2.6	$53.4	$94.4
FY 2020	$25.9	$109.1	$2.1	$45.6	$76.9
FY 2021	**$21.4**	$88.2	$1.7	$38.7	$61.3
FY 2022	$17.9	$70.5	$1.4	$32.3	$48.3
FY 2023	$14.9	$55.6	$1.1	$26.8	$37.4
FY 2024	$12.2	$43.0	$0.8	$22.0	$28.4
FY 2025	$10.1	$32.8	$0.6	$18.2	$20.9
FY 2026	$7.9	$24.4	$0.5	$14.3	$15.0
FY 2027	$6.1	$17.6	$0.3	$11.1	$10.4
FY 2028	$4.6	$12.1	$0.2	$8.3	$6.9
FY 2029	$3.3	$8.0	$0.1	$6.0	$4.4
FY 2030	$2.3	$5.0	$0.1	$4.1	$2.7
FY 2031	$1.5	$3.1	$0.1	$2.7	$1.5
FY 2032	$0.93	$1.92	$0.03	$1.68	$0.81
FY 2033	$0.49	$1.11	$0.02	$0.88	$0.43
FY 2034	$0.24	$0.64	$0.01	$0.43	$0.25
FY 2035	$0.16	$0.43	$0.01	$0.30	$0.13
FY 2036	$0.10	$0.23	$0.004	$0.18	$0.05
FY 2037	$0.04	$0.10	$0.002	$0.08	$0.02
FY 2038	$0.021	$0.040	$0.001	$0.037	$0.003
FY 2039	$0.003	$0.006	$0.0001	**$0.006**	$0.000
FY 2040	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000

NOTE: VA compensation offsets VSI payments; VSI liability calculations reflect VA offsets
The last net VSI payment is projected to be in 2039.
55% is calculated by finding the percentage that draws fund to zero by the last benefit payment.

VSI CASH FLOW PROJECTIONS

($ in Millions)



	FY 2020	FY 2021	FY 2022	FY 2023	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 Fund Dollars	$109.1	$88.2	$70.5	$55.6	$43.0	$32.8	$24.4	$17.6	$12.1	$8.0	$5.0	$3.1	$1.92	$1.11	$0.64	$0.43	$0.23	$0.10	$0.040	$0.006	$0.000
Benefit Payments	$45.6	$38.7	$32.3	$26.8	$22.0	$18.2	$14.3	$11.1	$8.3	$6.0	$4.1	$2.7	$1.68	$0.88	$0.43	$0.30	$0.18	$0.08	$0.037	$0.006	$0.000
Contributions	$25.9	$21.4	$17.9	$14.9	$12.2	$10.1	$7.9	$6.1	$4.6	$3.3	$2.3	$1.5	$0.93	$0.49	$0.24	$0.16	$0.10	$0.04	$0.021	$0.003	$0.000

S:\TERA-VSI-SSB\2019 Val\vsi1809 at 2.25% DFAS (decreasing amort) JAN pmt
mtg Chart D

ATTACHMENT 4

Transcript of the
Board of Actuaries Meeting
(Education Benefits Fund)

UNITED STATES DEPARTMENT OF DEFENSE

DEFENSE HUMAN RESOURCE ACTIVITY

BOARD OF ACTUARIES MEETING

EDUCATION BENEFITS FUND

Alexandria, Virginia

Thursday, July 11, 2019

PARTICIPANTS:

JAMES F. VERLAUTZ
Chairman

RICHARD ALLEN
Actuary

MARCIA A. DUSH
Board Member

NICK GARCIA
Actuary

LORI HAINES
DFAS

KENNETH HARDY
National Guard Bureau

MASTER SERGEANT TANYA HARRIS
National Guard Bureau/A1Y

COLEEN HARTMAN
Comptroller

CORALITA JONES
DFAS

KEVIN LANNON
Advisor

PATRICIA LEOPARD
Advisor

THOMAS LIUZZO
Advisor

JOHN MOORE
Board Member

WILLIAM MOORHOUSE
Advisor

PARTICIPANTS (CONT'D):

INGER PETTYGROVE
Actuary

BRAD RYDER
Actuary

JOEL SITRIN
Actuary

PETE ZOURAS
Chief Actuary and Executive Secretary

* * * * *

P R O C E E D I N G S

(1:00 p.m.)

MR. VERLAUTZ: Apparently the witching hour has arrived, so I'll call this meeting of the Board of Actuaries to order to discuss the education fund for today. I want to welcome everybody that's here. Thank you for coming. In particular -- well, I guess I should say I'm Jim Verlautz, the chair of the board. With me is John Moore and Marcia Dush, and in a minute I'm going to ask Marcia to take over and run the meeting, but before I do that, I just wanted to announce for anybody who didn't know, and surely most people do, congratulate Pete on his new role and offer my condolences as well, (laughter) and with that, Marcia, the floor is yours.

MS. DUSH: All right. And I'm going to turn it over to Brad to start us off with a summary of the funds.

MR. RYDER: Sure. A lot of you are familiar with EBF, but I'll just give a high level of how the Department of Defense funds education benefits. We focus primarily on for education programs, Chapter 30, Chapter 1606, Chapter 1607, and Chapter 33, and I'll just kind of go through this. The first set under Chapter 30 is Cat III. It's a Chapter 30 basic benefit. It's a small group of the Chapter 30 basic benefits. The second set is the Chapter 30 kicker benefits, so it's a much larger group, much larger liability. And then Chapter 1606 we're worried about basic and kicker benefits and then REAP. I hope y'all know that is shutting down in five months, so hopefully five months from now they'll stop billing the fund for benefits payments, and that appears to be happening. We'll go over that.

The third program listed on this Benefits Funds Primer is Chapter 33 which isn't funded directly by the fund, but it does have an impact on our benefits. Larger benefits tend to be used more often. And the last section gives a very high level review of how we do things in terms of budgeting and funding. We publish all these rates two years in advance for budgeting, and lots of per-person rates, we pay one amount for each eligible for each program, and then if we haven't told you to pay enough, we ask you to make an annual amortization, and if you pay too much we give you a discount on your per-person cost. And that's the highlight.

MS. DUSH: Okay. I am assuming Lori is on speaker from DFAS. Is she going to be -- Lori, are you there?

MS. JONES: Hello, this is Coralita Jones. I'm the customer manager for DFAS, and we do have Lori Haines in (inaudible) to represent (inaudible).

MS. DUSCH: Would you go on and make your presentation on the fund?

MS. JONES: Yes. So the slides that you have in front of you and roughly we're going to start on the second page which we're going to cover the overview and then we're going to step into the fund and then next we talk about overall the portfolio and the health of education benefit. So we can move to Slide 3.

MS. DUSH: Okay.

MS. JONES: Slide 3, as you can see -- pardon me, one second. Give me one second. My computer just froze (laughter).

SPEAKER: Okay, well, (inaudible).

MS. JONES: Yeah, it always makes for a very interesting event. Okay. So the receipts enclosed, the -- (inaudible) and sells (inaudible) from the maturities which roughly comes to about 123.5 million, and it relates to the service contributions and interest. The projection of our receipts and outlays are provided by OSE or Cash Flow Management and Interest Income Projections, and they differ slightly from the projections provided by OACT.

And then comparison of the actual to the projected have been used to highlight the funds drawdown. Overall the funds we have left from (inaudible) is 50-50, but right now we're at a 45/55 ratio and we intend to rebalance that with a fiscal year 2019 investing. And just another note to highlight, OACT has been drawing down the funds since about 2012 and they have determined it is overfunded, so roughly we included that in the inflation and the maturity that we received, and so again as I stated, we intend to keep 49 percent which is where it's currently sitting now. We're at a 49 percent mention-off and 51 percent TIPs as of May 31st. As you move onto the next slide, which is Slide 12, (inaudible) we're reviewing our financial data. Our service contribution increased due to the Army amortization payments and the system issues getting fixed where the payments were marginally caught up. Our benefits payments was less due to the drawdown (bell rings) and -- is everyone still there?

GROUP: Yes.

MS. JONES: Okay, was due to the drawdown and the lesser of the participation rates. If you look at fiscal year 2018, the total expenses less than the payments were due to the reduction and (inaudible) we see more allowance, and that also was tied to the interest which is discussed on the next line.

MS. DUSH: Coralita, let me interrupt you here.

MS. JONES: Yes?

MS. DUSH: You've made reference to the change in the service constitution between 43 million and 167 million in fiscal year '18, and I'd like to just throw that to my two -- to the two actuaries from the staff, and does this correspond -- I think Coralita mentioned that some of this difference is attributable to services catching up on contributions; is this what we expected or is this due to higher contributions to the plan because of new participants? I'm just --

MR. RYDER: From my perspective, we were in a surplus position there for a while and it was their side, and so as the contributions are coming back in they are getting larger and to some degree the contributions have been larger, particularly for Army National Guard have been considered very larger --

MS. DUSH: I remembered. I just didn't know if it was this big a difference. Okay.

MS. HARTMAN: Well, they started to have rates again in '18, right?

MR. RYDER: Right. Right.

MS. HARTMAN: Yeah.

MR. RYDER: So they no longer got a full discount.

MS. HARTMAN: Right.

MS. DUSH: Okay. All right. Please go ahead, Coralita.

MS. JONES: Okay. Well, there was a (inaudible) interesting from and comparing it comparatively from fiscal year 2018 through fiscal year 2017, and when you're reviewing this chart overall, there's not a significant change in the overall interest earnings, but the par represents the semi- annual interest pre decreased in its maturity, but they're offset by the increase in the inflation on the IIPs (inaudible). And ultimately the inflation is the year-to-date change par, right, (inaudible) held in the portfolio. And then our discount premium is the year-to-date amount advertised.

MS. DUSH: All right.

MS. JONES: I'll move on to --

MS. DUSH: Yes.

MS. JONES: -- as I move on to Slide 6, which is the representation of the financial data, essentially we are looking at our financial statements. So in this picture that you currently see, the balance sheet is that of a picture of the fund at a particular time, so what we provided you was September 30 of 2018. And then if you review the total assets which includes Fund Balance with Treasury, Interest Receivable, and Accounts Receivable, and then our book value of (inaudible) investments of the Overnight, plus our Par, and Inflation purchased, plus Inflation earned, plus Premium Outstanding, Balanced Amortized Premium, plus Discount outstanding of the amortized discounts. And ultimately it will be total assets less accounts receivable less interest receivable, less cash, and then looking down at our bottom line, your Total Liabilities and Net Position, is the total that you see reflected, and, again, this was during (inaudible) of September 30th, 2018.

MS. DUSH: Okay.

MS. JONES: As we move along to Slide 7, this is the Effective Fund Yields, and this information is provided by the Office of the Actuary, and we just include that information so that you can see the (inaudible) new amount.

As we move on to Slide 8, looking at our Fund Status of the Education Benefit Portfolio, this is as of -- excuse me -- May 31st of 2019. This was what the increase the cash if an entire portfolio was liquidated at the end of May. This particular presentation that we're showing in here would not (inaudible) reconcile to the policy, which is if you refer back to Slide 6, because it's different time periods represented and different valuation methods that I used at that time. So this is at the point of time of May 31st where the balance sheet is a representation of what was done during year-end as of September 30th, 2018.

MS. DUSH: Okay.

MS. JONES: As we move on to Slide 9, from my understanding regarding last year, for this briefing we wanted to ensure that we included the book value as requested, so this is our current portfolio holding as of May 31st, and the rates shown are the coupon interest rates for each security as is listed, and then alternately we included the book value so that you can see comparatively the two. And it goes (inaudible) and shows our security description with the weight and then the actual date of maturity, the shares, the book value, and also the market value, and then when you review at the end to that actually shows our overnights that occurred as of May 31st.

As we move on to Slide 10, certainly but not -- last but certainly not least, this is our -- gives our Fund Status and it gives you in a bar-type presentation so that you are able to see that (inaudible) what our maturity values are looking like in a scale in the portfolio, so this is our par) inflation by the maturity year, fund security, and this illustration is just simply showing the maturity.

In this particular slide deck it does not include the overnight. It's just looking at it at a maturity standpoint, and most certainly you can relate that back to Slide 9, however 9 including the overnight balance that is located at the bottom. And this is actual inflation today, not necessarily the amount at the time of maturity. That concludes the facts portion of the briefing. Are there any questions?

MR. VERLAUTZ: So, I mean, the one I have, and I know we've talked about this before so you may be just reminding me, but we've got a pretty significant -- and you showed the percentage here, 45 percent of the securities are in TIPs --

MS. JONES: Overall?

MR. VERLAUTZ: -- what's the rationale for so much TIPs again on a -- and the maturity of the TIPs are short, so that's appropriate, but why are we doing TIPs rather than regular bonds? What's the thought process?

MR. RYDER: Coralita, I think I can answer that. I mean, from the liability perspective --

MS. JONES: Thanks, Brad.

MR. RYDER: Yeah. You know, since basic is -- it has a inflation component, and the 1606 kicker is just flat, so I think after looking at that, and we did kind of an analysis kind of looking forward maybe 60 to 70 percent would be inflation-linked in the future, and that's taking into account the fact that the (inaudible) decide the kickers aren't being used so much. So going forward, I think it's mostly going to be 1606 and how much of 1606 is inflation- linked.

Now, if the Board would like to focus on, you know, the difference between, you know, what's our goal with, you know, having inflation-linked benefits versus, you know, could we potentially accomplish our goals with non-inflation linked benefits, that's a different story, but I believe that was part of the original rationale.

MS. DUSH: And that decision is made by the investment committee?

MR. RYDER: If it's currently in the investment policy for the Investment Advisory Committee who makes recommendations to the Investment Board, but it can be changed.

MR. VERLAUTZ: So the total assets, I think, for 1606, for both basic and kicker is about 333 million.

MR. RYDER: Right.

MR. VERLAUTZ: So even though not all of that is cost of living index, we still have more TIPs than total liabilities for 1606.

MR. RYDER: I'm sorry? More TIPs than total liabilities?

MR. VERLAUTZ: Our TIPs total is 476 million.

MR. RYDER: Okay, you're looking at the total book value on page 9?

MR. VERLAUTZ: Yeah. Well, we can look at par --

(inaudible) --

MR. RYDER: Oh, okay.

MR. VERLAUTZ: -- for the market or whatever, but -- and I don't know what part, what share of the total liabilities because 1606 is cost-of-living linked versus not, but we're still greater than the total (inaudible).

MR. RYDER: Well, it sort of depends on how many kickers are offered, and I'm not just looking at just this year when I say 60 or 70 percent. I expect to be inflation-linked for 1606, but I don't think that answers your question because you're doing something before '76 which I'm not --

MR. VERLAUTZ: Well, I'm saying you've got $333-million dollars of liability in 1606.

MR. RYDER: Okay.

MR. VERLAUTZ: Some part of that --

MR. RYDER: (inaudible) well overfunding (inaudible).

MR. VERLAUTZ: -- is not inflation-linked, and I don't know what it is. Let's pretend for a minute that it's --

MR. RYDER: About a third is not inflation-linked.

MR. VERLAUTZ: You've got a third, fine. Okay. So we're at something like --

MS. DUSH: So 200 million.

MR. VERLAUTZ: -- 200 million is inflation-linked. So why would we have 476,000 of TIPs?

MR. RYDER: Oh, from -- well, 1607 and not to mention Gordon shutting down, so we still have a lot of assets in the fund, generally. We have higher-level assets in the fund. We used to be about $2 billion with the liability total when active duty kickers were functioning and --

MR. VERLAUTZ: And so I understand that.

MR. RYDER: Okay.

MR. VERLAUTZ: But that would lead me to say that we would be tending to decreasing the amount of TIPs than what we would have had, and yet what I see what we bought was primarily TIPs.

MR. RYDER: Primarily TIPs? And that might -- this is before Coralita, so that might just be targeting at 50-50 in the past and in the most recent year, so --

MS. DUSH: All right, so how do we have a discussion to inform the investment policy people that perhaps with the change in the direction of these funds and the benefits that they ought to reconsider how they're making investments?

MR. RYDER: Well, might reconsider as --

MR. VERLAUTZ: Yeah. Yeah. Might --

MS. DUSH: Might.

MR. VERLAUTZ: Yeah, much, much better. Much better. Much better.

MS. DUSH: Yeah, we don't have --

MR. RYDER: And I think, Coralita, that would be your question to answer. Coralita?

MS. JONES: Oh, our goal, we recently talked about this a little bit because we -- if this would possibly be a topic conversation, and so IIAB is actually coming out in August to prepare for the year-end briefing, so that will be a time of certainly where we will be able to bring it up and discuss it with them, and move forward on what decision needs to be made.

MS. DUSH: All right, will you need information from the Office of the Actuary?

MS. JONES: Yes. So more than likely during that timeframe, we will probably link in Brad with that call with us, if he's available, and most certainly we can talk offline, Brad. But I will also work with Lori and we'll find out what is needed and can set up something while they're out here because they'll be in Indianapolis for a week.

MR. RYDER: Okay, and I want to make sure I'm addressing the Board's concern. I can talk to them and tell them what my projections are, but did you also want to have a conversation with the Investment Advisory Committee, potentially?

MS. DUSH: I'm not sure that's necessary, but I think what we really want to do is make sure they understand how the liabilities are broken down by what is inflation-linked and what is not inflation-linked, and then which programs are actively being used so that -- and so if you have projections on that basis so that they can see kind of how things are trending.

MR. RYDER: And would the preference of the Board be to kind of match the inflation-linked liabilities to inflation-linked assets?

MR. VERLAUTZ: I don't think I'd go that far, but I would like the Investment Board to be informed --

MR. RYDER: Okay, just to (inaudible) --

MR. VERLAUTZ: -- and to rely on their expertise.

MS. DUSH: Yeah. I mean, they have to make the decision as to whether the premium they paid for a TIP is worth, you know, the return they're getting, and especially when we're talking very short duration liabilities and short duration assets.

MR. VERLAUTZ: Coralita, we had a relatively animated discussion on the efficiency of the TIPs market and whether you're actually paying a pretty huge premium for the right to inflation protection when you really don't even need it, or whether it really is TIPs or just a better buy, and, again, that's a little bit out of our expertise, but, you know, this whole question of why would we want to buy TIPs, and that we'll probably talk a little bit more about that tomorrow. But while we can -- just, I guess, state (inaudible) Brad, you were talking about we've got inflation-linked benefits.

MR. RYDER: Right.

MR. VERLAUTZ: So the question, and this is a rhetorical question, is, yes, TIPs might provide inflation protection, but if there is a premium associated with buying the TIPs, does the federal government really need inflation protection when in some senses they control it? So just from a theoretical perspective, is it worth spending money for that protection? And that's, again, rhetorical question.

MS. DUSH: And, Brad, I think, you know, like I say, as you get ready to give Coralita information, if you want to check back in with us, please do so. I mean, we can set up a call or we can review materials, whatever.

MR. RYDER: Okay.

MS. DUSH: All right.

MR. RYDER: I will communicate those things to the Board and then check back in with the three of you or --

MS. DUSH: Right.

MR. RYDER: -- two of -- yeah.

(laughter)

MS. DUSH: Jim, you're on through September is -- you're still on through September. All right. Thank you, Coralita. Are there any other questions for Coralita? All right. Then, Rich, you're up, and I would like you to present the information on -- I guess we'll first start off by talking about economic assumption, then it will be both you and Brad.

MR. ALLEN: Yes, I'm going to be referring to page 3 in the handout, and this is, it says, Bureau of Labor Statistics, the CPI-W

Index, which, by law, is used to come up with the Chapter 1606 basic benefit, and by law the benefit is calculated by taking the 12-month average beginning in July through June, comparing that the previous 12-month average of July through June, and then the (beeping) -- the average monthly increase between those two numbers is applied to what the most recent monthly basic benefit was. So this shows what those indexes are through May of 2019; I don't have the June 2019 number yet.

And where we don't have numbers, we use the Blue Chip Report to get a projected index, and so beginning with June 2019, the non-bold numbers are all Blue Chip projections and then simply what I've done on this page is take the 12-month average -- one year over the 12-month average the previous year, and you can see in the next to the last column the July through June CPI increases. The first two are -- well, the 2.3 is what actually happened last year. The 2.1 is what I'm projecting will happen this year with 11 of the 12 months known, and then beginning with the 2.6 and on down is Blue Chip projections against previous indices.

And then the far column is what the 1606 basic benefit is, or will be using these projections. What we need from the Board is just simply to approve using the Blue Chip as the method for projecting forward and it's the same methodology that we've used in the past.

MS. DUSCH: All right, can I take a motion to maintain the use of Blue Chip as the source of interest rate for projection purposes?

MR. ALLEN: So moved.

MR. VERLAUTZ: Second.

MS. DUSH: All in favor?

GROUP: Aye.

(Motion Passed 3 to 0 maintain Blue Chip for interest rate projections)

MS. DUSH: All right.

MR. VERLAUTZ: Okay, that --

MS. DUSH: Now --

MR. VERLAUTZ: -- you can relax, Rich, your tension's over now. (laughter)

MR. ALLEN: I'm just getting started.

MS. DUSH: All right, Brad?

MR. RYDER: Okay, moving on to the interest. (beeping) So the purpose of this page is just to see how things might playout between our current asset portfolio and then our longer-term assumptions, and we, currently for EBF, set those to Blue Chip and we have a hold to maturity policy. Half of them are in TIPs and half are in nominals, normal treasuries, as we just talked about. So just looking at the first column, that's our inflation inspected for the next 10 years or so. I'll skip to the Fund Yield. That's the expected fund yield including our current portfolio.

Moving to the next 10 years, and Real is just the difference between the two. And then new investments, if you want to see what a theoretical portfolio of new Blue Chip investments would return, that's in the far-right column starting at 2.35 percent. So one thing to note about this assumption is that, you know, it's not very -- it doesn't really affect the actuarial) results too much because we have such a short duration. Everything's used in, you know, the next few years. Well, I want to say that when we change the assumption, it doesn't affect our liabilities too much. I'll say it that way.

And, I guess, for 2018 we experienced about 3.35, so having a Current Interest Assumption of 3.25 would not have been so bad.

MS. DUSH: Any discussion about whether or not we should consider changing the 3.25?

MR. MOORE: I think, yeah, it's certainly recognizing it is that at our starting point with a limited sensitivity (inaudible) it means to hold, it makes more sense to leave the number alone.

MR. VERLAUTZ: It's easier to compare numbers from one year to the next if you don't mess with that, and if it's not important to mess with it.

MS. DUSH: Yeah, not at all sensitive -- liabilities are not at all sensitive short duration, (beeping) and certainly within the realm of fund earnings.

MR. VERLAUTZ: Yeah. So I'll move that we retain the interest assumption.

MR. MOORE: Second.

MS. DUSH: All in favor?

GROUP: Aye.

MS. DUSH: All right, let it be recorded that we have voted to maintain the 3 1/4 interest rate for the valuation.

(Motion passed 3 to 0 for 3 1/4 interest rate to be retained)

MR. RYDER: And then moving on to page 5, Cost of College. This is the final year we'll be reviewing this assumption because it's an assumption used for Chapter 1607, and in five months we will be done with Chapter 1607, so if you just want to look at recent histories in the cost of college US-wide that's in the column labeled "Actual Annual Increase". So lately they've been around 3 percent, but if you look at the past, you know, 40 years or so, it's been much higher in the past 40 years, so that's just one thing to keep in mind.

But, again, we have the actual nominal increase and then we have an inflation, so you can see kind of the real increase above inflation, and then also the history of the annual increase assumption. It was at 6 for a while and then we've moved down to 5, and like I said, with 1607, and only a few months left, this is a very immaterial assumption, I want to say. It doesn't change our liabilities at all very much,.11 percent, maybe.

MR. VERLAUTZ: But Brad, I would ask that next year you make that print smaller. (laughter)

MR. RYDER: Yeah. It's fine to (inaudible) apologize, but, yes, I'm sorry. I know we're all getting older. (laughter)

MR. VERLAUTZ: I hope not.

UNIDENTIFIES SPEAKER: Just before we go on this section, we'll be (inaudible). It's likely that somebody put us on hold who's currently on the line, or something like that, so we can either reconnect and have everybody call back in, or we can just live with it. I'd just ask.

MR. VERLAUTZ: Well, is there any -- yeah.

MS. DUSH: Is there anybody on the line right now?

(beeping)

MR. VERLAUTZ: Thank you.

MS. JONES: Hi, this is Coralita. I'm still on the line.

MR. VERLAUTZ: All right.

MS. JONES: I told Lori and Virginia who dropped off to go back to their desks, so now we -- I was questioning the nature that everything when we conclude be (inaudible) turned off, and they said they'd be able to shut everything down. I was thinking maybe that was us speaking.

MS. DUSH: All right. Well -- (inaudible) (beeping) -- I'm sorry. Who was that who spoke up?

MR. VERSLAUTZ: EMDC.

MS. DUSH: MD & DC.

SPEAKER: (inaudible) as well?

MS. DUSH: Would it --

MR. THOMPSON: This is Neil Thompson from DA). I'm on the line as well.

MS. DUSH: Okay.

MR. VERLAUTZ: We should have asked that.

MR. RYDER: We should tell them to restart it.

MR. VERLAUTZ: Yeah. (beeping)

MS. DUSH: Okay. We are having problems. We think somebody went on do not disturb and there continues to be a beeping sound on this end, so we need to disconnect, and can we politely ask you folks to please redial in and we'll restart in a couple of minutes. All right?

UNIDENTIFIES SPEAKER: Will do. Thank you.

MS. DUSH: Thank you. (beeping) Thank you very much, gentlemen.

MR. VERLAUTZ: I will -- since it's (inaudible) assumption, I will make a motion that we accept it and not spend any more time talking about it.

MS. DUSH: Sounds good.

MR. MOORE: Second.

MS. DUSH: All in favor?

GROUP: Aye.

MS. DUSH: So let it be recorded that we have accepted a motion to maintain the assumption of a 5 percent increase in the Cost of College.

(Motion passed 3 to 0 for 5 percent cost of college increase as accepted.)

MS. DUSH: All right. And so now, Brad, you get to continue on.

MR. RYDER: Okay. So looking at video page 7, I'm going to start from the bottom. Those are your final benefit payments going out in Chapter 1607. The ones that are highlighted the last six months, those are our estimates for what will happen for the rest of 1607. You can see they're smaller and very small (laughs). So only about 150,000 in the last (bell ringing) couple of months.

So sort of working backward, if you take those last 150,000 two amounts, you can see up in the middle section it's 300,000 total for the year, FY 2020, and then if you sum up the other amounts in the total column there, they sum up to 1.4 million for FY 2019, and then we just apply the interest on 300,000 to get back up to the first line of 296 for FY 2020 present value, and then you take both the 1377 and the 301, you bring them to present day and that's 1.640 million for beginning of FY 2019.

So, again, this is (inaudible) November 25th, 2019. There aren't really any big changes to the assumptions. I'm using a bit of monthly seasonality. I'm using a little bit of cost increase and that is about it. One of the components, Coast Guard Reserve, is actually already at 0.

MS. DUSH: Okay. All right. And then

on pages 8, 9, and 10, you can see how that will play out over the next few years.

MR. VERLAUTZ: But, Brad, just to go back for a second. When you said Coast Guard Reserve is 0, that's a projected (inaudible). It doesn't mean it's impossible that Coast Guard could --

MR. RYDER: Right. Yes, you could have somebody come back in --

MR. VERLAUTZ: You can -- yeah.

MR. RYDER: -- the last month pursue a license or something for a hundred dollars --

MR. VERLAUTZ: Yeah, or something we haven't submitted and it's the last month to submit it or something like that.

MR. RYDER: Yes.

MR. VERLAUTZ: Yeah.

MR. RYDER: And, yeah, even if they go beyond here, we have a way of accounting for it, so we should be fine.

MR. VERLAUTZ: Okay.

MR. RYDER: So then on page 8, if you

want to follow, the PVB is 1.641 from page 7, and then the Benefit Payments are expected to be 1.377 for FY 2019, and that brings you to an ending fund of.635 million. Is that a million? (inaudible) And then during the year, because we have a surplus of 1.808, we can transfer out 1.48 million to 1606 and use that to fund your 1606 benefits, but we are keeping a little bit of a margin. On that Funded Percentage line you can see a 20-percent margin.

MS. DUSH: All right, and just to talk about that, the fact of the matter is funds for 1607 and 1606 are not separately segregated, so what we're doing here is kind of a bookkeeping entry and considering the money transferring to 1606. So we're transferring money within each of the services based on the surplus, leaving a little bit of surplus here in case for some reason we get somebody who comes out of the woodwork, whatever, but --

MR. RYDER: Right.

MS. DUSH: -- but essentially I think we need to make a motion as to whether or not we continue this method of allocating assets, transferring assets for accounting purposes to 1606. So do we need to -- anything else before we make a motion on that?

MR. RYDER: Sure, I'll go ahead and make the motion and then --

MR. VERLAUTZ: I'll (inaudible), but I have a question.

MS. DUSH: All right.

MR. MOORE: Second.

MR. VERLAUTZ: So just to make sure I understand the law here. There can be no payment request submitted after November, or there can be no expenses occurred after November, or how exactly does that work?

MR. RYDER: I do not know.

MR. VERLAUTZ: Well, that sounds like an honest answer. (laughter) So my concern, what I kind of alluded to last time, is there is often a buildup by many people in terms of things they haven't gotten done yet that they should have gotten done and that might include people who should have filed for reimbursement or should have submitted something and haven't yet, so I'm wondering if there might be a bump in -- and, again, there's no way to know that, I understand. But there could be a bump in the last few months that varies from the progression we've seen.

MR. RYDER: I agree. I agree. It could -- there is a potential for that.

MR. VERLAUTZ: So, and that's part of why we have the 120 percent. That, I mean, we've got a cushion that handles some of that. So I'm okay, but --

MS. DUSH: Don't be surprised if you see --

MR. VERLAUTZ: Yeah. Yeah.

MS. DUSH: -- we may have to transfer some money back next year.

MR. VERLAUTZ: If we do, yeah. Yeah.

MR. RYDER: And that'll stay in the services like we described previously; you know, Army Reserve will only be paying for Army

Reserves.

MR. VERLAUTZ: Of course. Of course. Yeah. Yeah. So it's not an issue, but just the awareness.

MS. DUSH: All right. All in favor?

GROUP: Aye.

MS. DUSH: Let it be recorded that we've had a motion and it has passed to maintain the process of allocating surplus funds from 1607 to the respective services allocated assets for 1606, if I've said that correctly.

(Motion passed 3 to 0 to maintain the process of allocating funds from 1607 to 1606.)

MS. DUSH: All right. So now take us through 1606.

MR. RYDER: Sure. So on 1606, so that what happened during FY 2018, we had 611 million to start --

MR. VERLAUTZ: We're on page 12, right?

MR. RYDER: Excuse me. Yes, we're on page 12. I skipped ahead a few pages. We have the starting fund of 611 million. As I suggested previously, we're in a surplus position from 1607 shutting down, and also have another 7 million on the asset transfer line coming in from 1607. So we're going to have 126 million -- or we had, excuse me, 126 million come in in receipts and about the same go out in benefit payments; that's a good sign of 131.4 million going out to the members. And we received 20 million in interest, so for FY 2018 we ended at 634.

MS. DUSH: And, I mean, just I know we'll go and see what the October 1, 2018 liability, Present Value of Benefits, but this is essentially that liability that we were talking about that is partially related to CPI. So as of October 1, 2017, you were saying about 2/3rds of this 378 million is inflation related?

MR. RYDER: Yes.

MS. DUSH: Okay, did --

MR. RYDER: And I see that each year. I see the benefits being used basically to incur about 2/3rd basis, and as well as contributions.

Now if the services were to offer more kickers, that would potentially change, so that --

MS. DUSH: Those kickers are not inflation related.

MR. RYDER: Kickers are not inflation related. So if --

MS. DUSH: And these kickers are still being offered.

MR. RYDER: These kickers are still being offered. Army National Guard in particular has expanded their program this year.

MS. DUSH: Okay.

MR. RYDER: Moving on to page 13. Like to take one? So here you can see kind of a breakdown of who's eligible to use the program for Chapter 1606, and in the first section you have Chapter 1606 eligibles who are not eligible to use the larger benefit, Chapter 33. In the second section you have 1606 eligibles who are eligible to use the larger benefit, so we expect that most of them will use the larger benefit over in the other program, so not in our fund. And then if you want to see the total eligibles, that's down at the bottom. So we've gone from 462 to 444.

And for our purposes in terms of what goes in and out of a fund, we're really worried about that first set. That's what really drives our liabilities, and my kind of takeaway from that, is there have been some reductions in that first set for Reserve, but some increases for a Guard.

MS. DUSH: So this is where we're seeing that increase in Army National Guard?

MR. RYDER: Yes. Yes, we are seeing an increase in who we expect in Army National Guard to use the basic eligible, and actually on the following page, if you'll allow me, if you look at the final line of total eligible for a kicker benefit, Army National Guard has actually increased from 42,000 to 45,730 in terms of who is eligible for a kicker benefit. So those two things are both sort of driving increases coming from Army National Guard.

MS. DUSH: Okay.

MR. RYDER: And then I guess looking at the rest of what's going on with kicker usage, like I said before, kicker usage is discretionary. It depends entirely on the component, just a flat dollar benefit above your basic benefit amount. So you can see something's going on with the changes in the kickers being offered. Like I said, Army National Guard in terms of total eligible, they went from 7,000 total eligibles for the 350 kicker to about 10,000 total eligibles, so there's definitely been an increase there, some variance in some of the other components. So that's kind of my takeaway from that.

MS. DUSH: Okay.

MR. RYDER: So the next step would be the Gain/Loss, and page 15, 16, and 17 are all part of the Gain/Loss. So I'm going to focus on page 16 which is the liability and page 17 which is the asset side of things. So here, I have some boxes and I kind of have to give a little bit of the history in terms of what's been going on with some of the components. Actually most of the components are having some data troubles in terms of tracking the number of eligibles, and from what I understand, part of that extends from the fact that we were in a huge surplus position, so when there are zero dollars to pay per person per new eligible, there becomes less of a reason to track exactly who's entering; I understand that.

But now that we have those per capita contributions coming back in, we need to get better about tracking those, and get better about managing the data around those eligibles. Otherwise we'll be chasing you down for contributions that you're missing and that will kind of affect the budget. And also on Army National Guard I have to focus on just as an example of what happens when we do actually get data come in. You can see we have a loss of 30.9 million, but we've been expecting that we're missing data, so we don't automatically, you know, pay the whole 30.9 million. We decrease kind of what the liability is.

Down in the second box, we decreased it

by 29 percent which, for the most part, that number is offsetting the data finally coming in. So this Gain/Loss on page 16 is how that affects the liability as actual data comes in. If you skip ahead to page 24, you can see what that does to your per-person cost when your data comes back in if we've been expecting that you're missing data, so their per-person cost went from 2,753 to 1,895. So you can see quite a huge decrease when we actually get the data in.

MS. DUSH: And that's because you find out what the total payments are, but you think they're attributable to a smaller group of people, and therefore the per-person cost looks high.

MR. RYDER: Right.

MS. DUSH: But then when all of a sudden you get a bigger group, you know that that fixed dollar amount isn't really attributable to a much bigger group of people, the per-person cost should have been less, and that's what's reflected on a go-forward basis.

MR. RYDER: Right.

MS. DUSH: So the fact is, is that if we get complete data, essentially the service benefits by seeing a lower per capita cost for the benefit.

MR. RYDER: Yeah, if we're in missing data and they give us the data that we're missing, they'll get a lower per-person cost because you have more people we have to distribute it. You'll also avoid -- if you get the data correct, you also avoid kind of the variance in that cost, too. And, you know, you're not going to jump up 2,000 and 3,000 back to 2,000. You're just going to stay at the 2,000 that should have been there all along.

MS. DUSH: All right, thank you, Brad. Keep going.

MR. RYDER: So, and something similar is happening on Coast Guard Reserve where despite what we're seeing in, you know, some very strong changes, some variability in Coast Guard Reserve, we are also making sure that we don't charge too much or put too much of a liability on the books for Coast Guard Reserves. There you can see in the shore up line, we decreased by 25.1 percent.

MS. DUSH: And what's the issue with Coast Guard data?

MR. RYDER: We've had some variance there. We went from about 1,800 people to 1,400 people this year, and we expected that to happen, and you can see that because we almost nailed the expected liability. At the bottom, it's 0.0. It's only up by negative 3.7 percent. So we nailed what we expected it to be, but with Coast Guard Reserve, like four or five years ago, they were using half-a-million a year and now they're down to only 150,000 or so in benefit payments, so if I get the right data, I can kind of remove some of the variance in the rates internal, but I'd like to see how that plays out because we have had a lot of variance in Coast Guard Reserve, but I'm not sure how well that correlates with the data we had previously coming down (phone ringing) to where we are now with the data.

MS. DUSH: Okay. All right, (phone

ringing) thank you.

SPEAKER: Pick up (inaudible). I better hang up, yeah. (phone hangs up)

SPEAKER: Telemarketer here anyway.

MR. VERLAUTZ: Yeah. (laughter)

MR. RYDER: So I can, I guess, move onto the asset side of things. And there you can see $20.9-million gain in Army National Guard contributions, and that's mostly being driven by Army National Guard's larger kicker offerings this year. We expected about $6,000 in kickers to be -- or 6,000 kickers to be offered, and they actually offered 7,000 kickers for FY 2018, so most of that is actual kickers being offered, and then I'll just mention the Air --

MS. DUSH: And extra kickers at that high price.

MR. RYDER: Extra kickers, and also I know that Army National Guard is currently offering the 350 kicker. I'm not sure exactly when they switched over.

MS. HARTMAN: In 2018 it was both? Did

you do both?

MR. HINTON: We did both at the beginning of the year and started off in the 350. It was January's --

SPEAKER: Split it about halfway through the year.

MS. HARTMAN: Mm-hmm.

SPEAKER: (inaudible)

SPEAKER: I'm sorry. I didn't hear that. Could someone summarize?

MR. HINTON: We started offering just the 350 kicker in January. Prior to that, we offered both.

SPEAKER: Okay.

MR. HINTON: This is 2018.

SPEAKER: (inaudible) and then we added the 350 by that point, yeah, so. And now we're just doing (inaudible).

MS. DUSH: Okay.

MR. RYDER: And I also have Air National Guard; just wanted to say that we didn't get the contributions we expected from Air National Guard, but we did have a conversation with them, and in terms of what they missed on the annual amortization payment last year, we wanted to make sure that happened, and just -- they got back to us within a couple of days and they did make it, the annual amortization payment, and for Air National Guard you can see that on page 20 you got credit for that on the amortization payment's line for the 1.7 million you made happen. And that I'm hoping we'll get to the bottom of any data issues you might have in terms of tracking your eligibles to make sure that your contributions are correct.

MS. DUSH: Okay.

MR. RYDER: Moving on to page 18. So this is kind of an annual problem in terms of understanding how many new entrants come in. It's important for us because they have that two-year budgeting delay, so we have to forecast the next couple of years, and then we get to a surplus position, and if you're in a surplus position, we take that and spread it out for your new entrants.

The boxes here are concerning and some

of that might be the data issues we're experiencing, so just to focus on Army National Guard, to go from 16,000 people in the data and then the following year have 20,000 and then the year after that have 25,000 isn't really ideal. What we kind of want to see happen there is to have 25,000 in the first year and then 20,000 after some people leave and then 15,000 after some more people leave in the third year.

So it kind of makes estimating the bottom number a little bit more difficult, so what we've been doing is for most of the components we have been estimating the maximum of the last three years. So if you look at Army Reserve, we're estimating 18,579. That's actually coming from the actual DFAS contributions from the previous year. For Navy Reserve 5107, that's actually coming from -- going all the way back up to the maximum in the second year of 2016.

I did have a conversation with Army National Guard to try to get to the bottom of, you know, how many new entrants I should expect, and just so that you know, that 30,000, for me, is projected on kind of the contributions to date projected to the end of the year. So this is what I'm expecting for Army National Guard to contribute in terms of basic eligibles. I know your targeted recruitment is a little bit higher, but thus far through the year, just based on performance of the year that's what I'm expecting, but if you look at what's going on -- I kind of have to reset Army National Guard on the kickers on page 19. Because we've gone through so many changes with what's being offered, you're now offering just the 350 like you said previously. I'm just going to go with your budget of 9,000, 6,000, and 4,000 until that resets.

MS. DUSH: So just to -- I would just like to clarify. So if you look on page 18 under Army National Guard, and if we look under 2016, so the first time you got data after fiscal year 2016 which would have been October 1, 2017 --

MR. RYDER: Right.

MS. DUSH: -- you got -- you thought

there were 15,979 people who had been offered a basic benefit in that prior year --

MR. RYDER: Right.

MS. DUSH: -- well fiscal year '16, so on backdated everything here. Then the next year you got data, and instead of 15,979, they said, oh, 19,748 people had been offered a benefit, and in fact more than that have been offered a benefit because some of them would have left.

MR. RYDER: Would have left, right.

MS. DUSH: And so, you know, it should have been more like something over 20,000, and then the third year, you said you've got data that said, "Oh, there are 24,000-plus people who had been offered a benefit two years, three years ago and they're still in the data." So it's conflicting because you would expect, as the years go by, the number of people who have been offered a benefit in a particular year would go down, and here you've got it increasing.

MR. RYDER: Right. I would expect it to go down as people terminate.

MS. DUSH: Right. Okay, so that just makes it clearer as to what -- you know, there's definitely a data issue here.

MR. HARDY: It's like, keep in mind, and I wonder if this is because we do split options. So folks, when they first join in that year one, we've got 20 percent at least of new entrants that are split option, so they're not going to become eligible for another 6 to 18 months. So our number will always grow.

MR. SITRIN: Could I ask what split option is? I'm sorry.

MR. HARDY: Well, they join, but they actually don't become qualified for probably another 18 months.

MR. SITRIN: If they're not qualified why are they shown as a -- shouldn't they only be shown when they actually apply?

MR. HARDY: They'll keep adding each year. So they join one year and don't show eligible until later.

MR. HINTON: When you say that they

should get eligible the next year, the year they actually will not be able to join that that was --

MR. SITRIN: Right, but --

MR. HARDY: But you're going back, I'm saying in checking that year, they'll always be adding.

MR. RYDER: Well, how long have you had this split option?

MR. HARDY: Always.

MR. RYDER: Okay. Well, I can tell you in past years this number has gone down quite consistently.

MR. VERLAUTZ: Yeah, well, let's make sure we're saying the same thing. I'm hearing two different things. Brad, I think these numbers, the 2016 is the year they became eligible, not the year they were --

MS. DUSH: Hired.

MR. VERLATUZ: -- hired; is that fair?

MR. RYDER: Yeah. I'm looking at something called a Notice of Basic Eligibility. So when they get that notice of a basic eligibility, that's kind of what I center all of my data around.

MR. VERLAUTZ: Right.

MR. RYDER: So if they have the Notice of Basic Eligibility in 2016, but I don't know how we can then go through in the next year, in 2017, get more people eligible.

MR. VERLAUTZ: Yeah.

MS. DUSH: Unless they're being recorded wrong.

MR. RYDER: I mean --

MS. DUSH: So, yeah, I mean, could they be -- when they become eligible 18 months later, would the date of basic eligibility have been backdated to the previous year?

MR. SITRIN: No.

MR. VERLAUTZ: Yeah, that (inaudible) make any sense --

MS. DUSH: Okay, so then I don't think that's the problem.

MR. RYDER: So when they get that Notice of Eligibility it should be they're fully eligible. There shouldn't be a delay before we get them in the data.

MS. DUSH: All right. Yeah, I think this -- first of all, the Army National Guard is not the only service with this problem --

MR. SITRIN: Right.

MS. DUSH: -- if you look across, there are other services that have this issue. So I think this is an area that we just still need to keep -- that the Office of the Actuary still needs to keep pushing on to find out what's going on.

MR. VERLAUTZ: Yeah.

MS. DUSH: All right? Keep going, Brad.

MR. MOORE: I'm sorry, a quick question.

MS. DUSH: Yeah.

MR. MOORE: For the Board, on 18 and 19 there are methodologies in play with judgment in exercise. Do we find that we don't need a motion?

MR. VERLAUTZ: No, I think maybe we do, but let's let Brad continue (inaudible) --

MS. DUSH: Yeah.

MR. MOORE: Thank you.

MR. RYDER: So did you want me to go into detail on that or move on to page 20?

MR. VERLAUTZ: Oh, if we're going (inaudible), you're done with 19. Then maybe we should have the --

MS. DUSH: Well --

MR. RYDER: I mean, I'll just say that before you to get started just that it's clear what we're talking about, that, like I said, for a lot of these components for the basic and the eligible and the kicker new entrants, I'm just taking the max of the three years, but it did actually have a -- you know, at the Board's request, I had a conversation with some of the components and that led to a slightly different assumption for Army National Guard, a little bit more based on what's going on with your budget.

MR. VERLAUTZ: Right. Which is a --

MS. DUSH: Change in --

MR. VERLAUTZ: -- logical minor change in methodology, but it's still a change that we probably have to say, "Yeah, you're fine."

MR. RYDER: Right.

MR. VERLAUTZ: So, you know, I move to support the change to using that approach for Army National Guard this year.

MR. MOORE: I will second the motion with the clarification of my view of the order of faith. We're continuing our basic methodology as usual. There's a little of exercise of -- or judgment with respect to Army National Guard for those issues that overrides the usual approach.

MR. VERLAUTZ: Right.

MR. MOORE: And with that if you -- if that's good, I second the motion.

MS. DUSH: All in favor?

GROUP: Aye. Agree.

MS. DUSH: All right, let it be recorded that we support the change to use actuarial judgment in accordance with the information provided by Army National Guard to support their new entrant forecast.

(Motion passed to use actuarial judgment for Army National Guard to

support their new entrant forecast
3 to 0.)

MR. RYDER: Then you can see in page 20 we're showing the fund at 634 million; we're still in a very large surplus position. We have 300 million of surplus. You'll get a credit for that later. I'll show you how that works. Air National Guard made their amortization payment. We have a very small amount, 1.5 million, coming in from 1607, and then we're expecting 154.5 million coming into receipts, and a lot of that is Army National Guard with their new offerings of kickers, 93 million of that, and benefit payments going out of 120 million or so, and, again, you have 20 million in interest. So you're going to end the fund actually up a little bit, 634 to 692.

And similar offerings in FY 2020, a little bit down for Army National Guard as they reduce the kicker offering, I guess that's what's in their budget. And we only go up about 30 million, from 690 million to 718 million. And it's that 718 million in the surplus position of

321.5 million, and here's where we give you credit for that 321.5 million. On page 22, you can see, probably about the third line up from the top, we have a surplus. We have a surplus of 321,474,347. We amortize that over five years, again to reduce some of the variance in the budget. So, for example, for Army National Guard, they had a surplus of 176 million and then we're going to adjust your costs by a fraction of that; we're going to adjust the cost by about 38 million for FY 20/21.

MS. DUSH: Assuming they have 30,000 new entrants, it would come in at that 38 million.

MR. RYDER: Right. So --

MS. DUSH: We'll see that in the next page.

MR. RYDER: So I'm on page 23. You can see you're expecting 56,285 million in contributions to come in, all that is equal. But we're going to reduce it, like I said, by 38 million, so you have about 67 percent of your contributions being offset. And so what we do is we take that 38 million, we spread it among 30,000, and then you get 1,269 in discount off of your contribution amount per person.

MS. DUSH: Toward the basic benefit.

MR. RYDER: For the basic benefit.

MS. DUSH: It's not for the kickers. This is for the basic benefit.

MR. RYDER: That's right. So everybody's in surplus position, and so everybody gets a little bit of a discount. Moving to page 24, you can see how that really affects their cost. Everybody gets a little bit of a discount. Air Force Reserve, Coast Guard Reserve are actually fully discounted. For the basic benefit, they don't have to contribute anything, and the rest of the components are at least partially offset, and you can see with that Army National Guard basic really coming down. You're getting a bigger offset because you're in a bigger surplus position and your costs are coming down like I said previously, so your per-person costs are going from 1,800 to 600 per person in FY 20/21.

MS. DUSH: So is this a situation where in prior years more of the services had a zero per capita amount the were fully offset and that could have triggered some of the data problems because there was no contribution coming in for people who were newly eligible for a basic benefit?

MR. RYDER: That's right. That's my understanding.

MS. DUSH: So hopefully, now that there have been per capita (ringing) amounts for everybody but Air Force Reserve basic and Coast Guard Reserve basic, we'll hopefully see improving data on the rest of the services.

MR. RYDER: Right. I mean, what I'm hoping is that when we get the data corrections in, we'll be able to reduce these per-person costs and then data will be better going forward as these, you know, per-person amounts come back online, so that there will be less variance in the budget.

MS. DUSH: Okay. All right.

MR. RYDER: And then the kickers. You

can see the per-person cost for the kickers in page 25, 26, 27; not too much variance there again because we don't distribute the surplus to the kickers, and they're entirely discretionary, but I'll just note again for Army National Guard, and that because we had that data coming in, we can reduce your per capitas on your kickers as well.

MS. DUSH: Because the benefit -- the payments that went out are really attributable to a bigger pool of people than we had at first thought.

MR. RYDER: That's right. So it's as per person. And then if you want a history of what your per capita contributions were, that's on page 28 and 29.

MS. DUSH: All right. Are there any questions about the benefits for Reserve and Guard? Any comments, thoughts? I don't think we need any more motions on this.

MR. RYDER: No.

MS. DUSH: All right. So I think this takes us back to Rich to talk about benefits provided to active members or to --

MR. ALLEN: Yeah, active duty. Right.

MS. DUSH: -- active duty numbers.

MR. ALLEN: Okay. Yeah, and I'll begin on page 31, but first, I'm just going to say that in all the work I've done for this year, there is no methodology changes from what I did last year, just a lot of the numbers will change, and I'll try to demonstrate what's been happening recently with the active duty program. First I'm going to start on page 31, and this just kind of gives an analysis of the data that I have and also how the Chapter 30 kicker is being used with the basics.

First I'll talk about that, how the Chapter 30 kicker is used. There's two basic benefits right now. There's the Chapter 30 basic benefit which has been in existence for as long as the program has been there, and the Chapter 33 basic which came in with the MGI bill in about 2009. The 33 basic is significantly larger, but anybody who came in prior to that and was offered a Chapter 30 kicker is allowed to use their benefit with either basic. In recent years, much more of that, the Chapter 30 kicker, is used with the Chapter 33 basic, and that's important as I talk about the data which I'm going to do now. And if you look at the next to the last column on the right, and I'm going to work my way from the bottom up.

In 2014 and 2015, this is showing how much information I was receiving from DMDC for Chapter 30 kicker, and back then it was about 11 and 15 percent because I was only receiving information of people using the 30 kicker with the 30 basic. Then in FY 2016, I began to receive information, the 30 kicker with both basic plans. So in 2016, the amount of money in the DMDC files relative to what DFAS was reporting was 96 percent, significantly better than the previous years.

In 2017, it dipped a little bit to 90 percent and in 2018, 88 percent, and you can see what it is by service, Army, Navy, Marine Corps, each at least 77 percent, but not getting much

Coast Guard data, only 9 percent. What I've had to do for Coast Guard assumptions and analysis is kind of use the other services just because theirs were lacking the information there.

Okay, and I'll go to the next page where I'll show what the FY 2018 activity was, and it's the Chapter -- this is all Chapter 30 kicker, but used with the Chapter 30 basic, there were 2,200 members who used the benefit, used with the Chapter 33 basic, there were over 26,000 members, the overwhelming majority, and that because there's a transferability component with this program, some members have been able to transfer the benefit to either their spouse or child at a little over 500 of each. So you can see in '18, 87 percent of the benefit was used with the Chapter 30 basic and by the member.

MS. DUSH: Rich, just before we go on, so I want to be clear about this. So these are kickers -- you know, we're not funding the basic benefit. These are the kickers, and the kickers because the new -- the 33 benefit is so large; I

mean, is much larger than what had been offered
under 30 --
MR. ALLEN: Correct.
MS. DUSH: -- the services have not been
offering kickers at all in recent years?
MR. ALLEN: That is correct, and I'll
show that in a later page, but it looks like the
last time kickers were offered by any of the
services was 2012.
MS. DUSH: So all of the people who are
represented on this page, 32 have to do with
active duty people who came into service several
years ago --
MR. ALLEN: Right. Right.
MS. DUSH: -- or before?
MR. ALLEN: Right. So the --
MS. DUSH: Okay.
MR. ALLEN: -- the most recent person
would have entered in 2012.
MS. DUSH: Okay.
MR. ALLEN: So as a result -- and I was
going to get to that, but --

MS. DUSH: Yeah.

MR. ALLEN: -- that means we're seeing a shrinking population and a downtrend of benefits being used. But we still have the potential for transferred benefits, meaning that that even if we don't have any new entrants coming in, we may have benefit use for a long time.

MS. DUSH: Right. And so there could be a long tail on the payout of benefits here.

MR. ALLEN: Correct. And, again, here, I'm going to -- the bottom half of this page I'm going to compare the usage as reported by DMDC and the usage as reported by DFAS, and before I go, I'll just say, DFAS provides dollars spent but doesn't give us individual data. They do give it to us by service, but not by individual member or -- and DMDC gives us much more detailed information, so we need to use the DMDC file information to really do our work.

MS. DUSH: Mm-hmm.

MR. ALLEN: And then what I'll do is I'll use that file information and bump it up to what the DFAS dollar figures are.

MS. DUSH: Because you feel that the DFAS dollar figures are the most credible.

MR. ALLEN: Right --

MS. DUSH: And it --

MR. ALLEN: -- and that's according to DFAS, literally, what money was paid out.

MS. DUSH: Right. But you get more detail on the DMDC, but it appears like we're missing data or it's just not coded properly.

MR. ALLEN: Right. Missing data or it's coming in late or possibly not coded directly.

MS. DUSH: Okay.

MR. ALLEN: And I'll just do the comparison here. The first thing is benefit use with 30 or with 33, and the two proportions are fairly close. Whether the benefit was used by the member or the dependent, according to DMDC, 96 1/2 percent used by the member. According to DFAS only 82 percent. So both have a large majority going to the member, but a little bit of a discrepancy. And where there's a significant discrepancy is each reporting for dependent use whether it went to the spouse or the child. Per DMDC, it's close to 50/50, but according to DFAS, it's a different split. It's 82 to 18 percent.

And I should mention that the DFAS number is basic benefit usage not kicker benefit usage because that's all I could acquire, and I'm kind of going on the assumption that the kicker would be close to the basic when I show these numbers. So there's a discrepancy there, and, you know, I've just had to deal with that.

Okay, we'll move on to page 33, and I touched on this before. Here's where I show the per capita contributions paid into the fund by each of the services, so as you can see beginning with 2013 for all the services, it's $0 meaning no new entrants have come in since that time. In the case of the Army, the last significant amount of contributions occurred in 2010. The Navy had already been phasing out the program even before the post-9/11 came in. As you see, their last big contribution was 2002. The Marines, while smaller, corresponds more to the Army and the Coast Guard, they had missed payments even -- so those are all zeros.

But you can see that as far as new entrants are concerned, nothing has happened, you know, since 2012. And I will say, there's no law that says they can't offer the benefit. They've just chosen as a policy not to. At any time, they could restart if for some reason they decided there was benefits.

MS. DUSH: And have you had any discussions with any the services about their intent to restart or --

MR. ALLEN: I have not.

MS. DUSH: Okay.

MR. ALLEN: And I --

MR. SITRIN: Rich, one question: So we've traditionally not allowed zero per capitas on this, right? In other words, had we allowed that in the past, there could have been new entrants and still have zero contributions, but --

MR. ALLEN: Right. We've never had a

per capita amount of zero.

MR. SITRIN: Okay.

MR. ALLEN: You know, I'd have to look up, see what the lowest amount was, but --

MR. SITRIN: Yeah.

MR. ALLEN: -- it was always something.

MR. SITRIN: Okay.

MR. VERLAUTZ: And just one clarification: These numbers are what was actually added, not necessarily what should have been added?

MR. ALLEN: That is correct which is why the Coast Guards are zeros (inaudible) --

MR. VERLAUTZ: Where I -- where I was going, yeah.

MR. ALLEN: Right. The next page is the benefits paid each year, and in this program I typically would see benefits follow contributions roughly 4 to 8 years after the contributions were made, or at least before transferability became an issue. Because members would join, be contracted to serve a number of years and four was the most common contract, and then for those who were going to use the benefit, leave the service four years, or very shortly thereafter, and then begin to attend college and collect on the benefit for another four years.

So you'll see -- so typically, there's a four-year lag from contributions to benefits which is why, for example, in the Army's case it peaks in 2015. That's about five years after the last significant amount of contributions, and is now trending down, and the other services would kind of follow that same trend down four years after their last significant payment.

MS. DUSH: But because of transferability, benefits could be pushed out many years --

MR. ALLEN: Right.

MS. DUSH: -- into the future.

MR. ALLEN: And we may get a trend in the other direction as, let's say, children of members begin to start using the benefit. But I expect if there's no change in the new entrant policy, which again is not necessarily guaranteed, we'll start seeing these numbers slowly decline, and eventually the program just sort of naturally fade out.

Page 35 shows how our model has done projecting what has been actual spending. In the fiscal year 2015, the model under projected what actually happened, and in each year as I get a new set of data, I will adjust the usage rates, so when there's an under projection, I'll typically raise the assumed rates going forward in the next model. So from 2015 they were raised and then maybe raised too much because it over projected in 2016, and the models kind of consistently over projected for each of the last several years, which means in this year the model will project lower usage than what it had at this time last year which will lower the projected liability at the end of the year.

Page 36 shows counts of people that are in the program. At the end of 2017, there were 183,000 eligible members. At the end of 2018, it's about 163,00, so there are 20,000 less. That's either because some members have lost their eligibility because they've used all 36 months of the benefit, or in some cases you'll lose eligibility 15 years after you last served, so some of them hit that 15-year point. This page also demonstrates that the Army is the largest user of the program with 106,000 members which is significantly more than the other services.

MS. DUSH: Well, the Army's the biggest group of eligible -- well --

MR. ALLEN: Right.

MS. DUSH: -- yeah, because they've offered the kicker.

MR. ALLEN: They've offered the --

MS. DUSH: Yeah.

MR. ALLEN: -- offered of the kicker to significantly more people over the years.

MS. DUSH: Yeah.

MR. ALLEN: The next set shows the number who've been approved to transfer benefits, and the rules on transferring the benefit, a member must serve six years and at that point has to apply to be able to transfer the benefit. It doesn't just simply happen automatically. And in that applying, they agree to serve for four more years. So in other words, a member must serve 10 years to be allowed to transfer the benefit to a spouse or child.

As of 2018, there were 1,700 who had applied and had been approved to transfer to a spouse, 1,100 to a child, and as the footnote says, there's an additional 1,100 who applied for transferability and have seen that dependent already use the 36 months. Comparing how many are on active duty versus inactive, 129,000 of the 163,000 that have separated which about 79 percent. Looking at the number who have used the benefit, at least one month's worth, 117,000 have not used any of the benefit, so which is about 72 percent, meaning there's, again, still a lot of potential usage even if we don't have new entrants coming in.

I don't know, I think I was asked about, you know, what is the potential impact of transferability, and I'll just kind of focus on the total column on the far right. Of the 163,000 from the previous page, 3,900 have approved to transfer the benefit been approved. Of those, about 2,800 still have some eligibility remaining. As far as eligible to transfer the benefit but has not done so as of yet, meaning those who are still in active service because you can only apply while you're active, there's 22,000. There's an additional 8,000 who could become eligible because they've served less than 10 years but are still on active duty.

So adding all those column up, you get eligible members with potential transferability is 33,000 out of the 163,000 and that's 20 percent. So 20 percent of the members could eventually have a dependent use the benefit, and as we said, you know, that could be, you know, way out in the future. Okay?

Moving on to page 38, and this is an analysis of what happened in fiscal year 2018, and again I'll focus just on the far right column, the total. The fund started with 466 million. The liability of that was 610 million, or a fund to ratio of 76 percent; 41 million was paid in amortization payments which were set at a earlier Board meeting, and since the payments are supposed to be made at the very beginning of the fiscal year, it's as if the funds started the year with 508 million, the start plus the amortization payment.

Throughout the year, as mentioned, no per capita contributions. Benefits paid during the year were 86 million. The fund earned about 16 million in interest and ended the year at 437 million, or 30 million less than what it started with. And, again, that's a trend I'm expecting to see of benefits exceeding the other income, and therefore the fund decreasing in size.

Projected analysis of 2019 which is a combination of some actual information through the end of May of this year and then a projection for the remainder of 2019. And, again, it's the same story, more money being paid out in benefits than is coming in. So the fund starts at 438 million and ends at 394 million, or in other words a $44-million decrease in the amount of the fund from start to end.

MS. DUSH: But it's important to note, at October 1, 2018, we still were showing in unfunded liability in this plan, but a much less of an unfunded liability than we'd shown a year before, so we've had gains, we had an amortization payment all knocking down that unfunded --

MR. ALLEN: Right.

MS. DUSH: -- liability.

MR. ALLEN: And I'll add to that point by if we look at that fund to ratio by service, two of the services are over a hundred percent, which means they're in a surplus position, and that's primarily because the projected usage rate. I've lowered that after having over projected the last few years, and those services, Army and Coast Guard, even though they were below a hundred as of last year -- they were kind of close to a hundred and now they've gone over to put themselves in a surplus position.

MS. DUSH: Okay.

MR. ALLEN: That story is kind of highlighted more on page 40, which is the Gain/Loss analysis, and I'll focus here on the Army. The second number in the Army column, projected present value of benefits, this was like a number that was calculated a year ago, was 385 million. It turned out after adjusting the usage rates, that became 344 million, so the liability from a projected one year earlier to a new projection decreased by about 40 million which has kind of led to the surplus. That's shown most in the row usage rate assumption changes, especially for the Army where that's decreased by 62 million, you know, or 16 percent decrease. And, again, that's what's kind of led to it being in a deficit position to being in a surplus position.

As I said, the Navy and the Marine Corps less of a story and they're still in a deficit position, and the Coast Guard much smaller numbers but follows the same trend as the Army. Okay. Anything else you that you see on this page or --

MS. DUSH: No.

MR. ALLEN: So this gets to something, and here's where, you know, the Board needs to kind of decide what's going to happen. When I talk about the amortization payments, at the end of September 2018, and especially I'll focus on the Army, again, there is more money in the fund than what was the present value of benefits, so as a result an amortization payment was set. That payment is the one you see where it says in the second set of numbers, Scheduled Amortization, on October 1, 2019, of about 5.9 million. After redoing the rates and the liability, we get into a position at the end of -- or projected what will be in the fund at the end of September 2020, there will be about 283 million with a liability of 259 million, so that's why there's an amortization payment on October 1st, 2020, of 0, and there's a surplus of 24 million.

If we were expecting new entrants and

had normal cost contributions, we would attempt to offset, as Brad discussed, with the Reserves, but we don't expect any new entrants, so there's no opportunity to offset that.

MS. DUSH: So let me just go back. So in the top set of numbers, the $841,000 that was paid on October 1, 2018, that was determined in as 9/30/16 valuation. So it was determined two years prior when there was still an unfunded in this program. And then --

MR. ALLEN: Correct.

MS. DUSH: -- the 5.9 million which is due to be contributed on October 1, 2019, was determined at September 30, 2017, correct?

MR. ALLEN: The valuation, right.

MS. DUSH: Yeah. And, again, there must have been still an unfunded, then we can go back and look at the numbers, but the question then, I guess, we would have to say is, if we're showing a growing surplus here, does it still make sense to make the 5.9 contribution? And I think what I'd like to hear is some thoughts about -- well, and let me preface this by saying it's not a huge surplus, and you can see the volatility in the way these numbers swing. So the question is, even if we're showing a surplus here, next year it could change.

MR. ALLEN: Sure.

MS. DUSH: But the question is, does it make sense to still make the 5.9 million contribution?

MR. VERLAUTZ: Your (inaudible).

MS. DUSH: Oh, I'm sorry. Oh, I'm sorry.

MR. VERLAUTZ: Okay, you wanted to hear from Kevin or --

MS. DUSH: Yeah.

MR. LANNON: Again, looking at the change from year to year that's occurred and say Army and even looking now at maybe here that the amount of the unfunded liability has already significantly declined over the last two years as well, and the overall funded position and decline in usage, there's certainly significant other bills that could be paid with this largess of $5-million for the Navy (laughs) in the '20/'21 budget. And, again, don't know that given the fluctuations that are occurring, if it, you know, makes sense to put more money in at this point and time, so I think I would say, if it doesn't have an actuarily significant change to the fund for this one particular amortization schedule and payment, I would recommend skipping it.

MR. MOORE: I'll be honest, I think I heard a confusion on the issues. I think the question Marcia raised was with respect to Army's October 1, '19, amount. I think you were referring to the Navy's 10/1/20 amount --

MR. LANNON: Ah, you're right.

MR. MOORE: -- is that correct?

MR. LANNON: You're right.

MR. MOORE: So, and I --

MS. DUSH: Yeah.

MR. MOORE: -- think the Navy's number continues to --

MR. LANNON: Continues.

MR. MOORE: -- unfunded and follows the methodology, I think.

MR. LANNON: Mm-hmm.

MR. MOORE: Marcia just raised the issue of the reality with the Army --

MR. LANNON: For the Army.

MR. MOORE: We're making a $5-million -- there's a scheduled contribution in a couple of months of --

MR. LANNON: Right.

MR. MOORE: -- that amount for '19 even though we're in surplus. You know, I think our initial thinking would be a small enough follow -- you know, just follow things as planned, but I think it's just been raised. It's still not October 1st. That might be the one number on here that we would --

MR. LANNON: Okay. Yeah. Yeah.

MR. MOORE: -- be open to consider, and that's what we have in sight at this point with October 1 coming, is it worth changing course for any (inaudible)?

MS. DUSH: And, yeah. And I think our concern was this was -- we wanted to point this out, but this is a small number. It could be something that could be reversed, but it's a small number, and we do have concerns that there is such extreme volatility in the measure of the liabilities. I think that as actuaries we might prefer to keep it in --

MR. MOORE: Mm-hmm.

MS. DUSH: -- unless there was a real, you know, push to take it out.

MR. LANNON: I don't know that there's a -- you know, that essentially this $6-million is going to, you know, hurt anyone --

MR. VERLAUTZ: Change anything, yeah.

MR. LANNON: -- out of a $45-billion account. So, no, I don't know that there is any great push for that, but, again, if the liability continues to decline.

MS. DUSH: Yeah.

MR. VERLAUTZ: Same. And I would reverse it and say if the situation were different and we saw that the unfunded liability had grown, you know, how would you feel about us telling you, "Whoops, we want you to double that payment (inaudible)?" Again, it's still not a huge number, but I think the policy has kind of been once you make the decision, unless it's terribly problematic, you don't change it, as to benefit changes. That's kind of be where I come down on it, but --

MR. MOORE: I think we raised it. I don't think there's a motion issue because we're just following course.

MR. VERLAUTZ: Okay.

MR. ALLEN: I'll suggest.

MR. DUSH: All right.

MR. ALLEN: Okay. So and I'll just state what the amortization payment is for October 2020 for the other services. The Navy is projected to still have a declining surplus, but still a surplus, leading to a payment of 5.2 million. The Marine Corps' surplus has almost been eliminated, but there still is some leading to a payment of about 140,000, and these payments are all based on an amortization schedule of five years with an interest rate of 1/4 which was discussed earlier in the meeting. And then the next few pages, I show by service projections for each services piece of the fund for the next years. So, again, starting with the Army which, you know, is the most, I guess, changing, the amortization payments in 2019 was only.8 million. The 5.9 which we just talked about the beginning of 2020 would be 5.9, and then as of now, I don't know more amortization payments, but again, the volatility, the ups and downs, that could change. And then the last two columns shows the end of the year liability and the end of the year unfunded liability. The liability continues to decrease or projected to decrease, I should say. The unfunded liability not changing much at all, and if anything, the surplus is increasing, but although very little.

And that's with no amortization payments in the future, projected no new entrants in the future, and just simply paying the benefits as they're used, and the fund earning some interest from what's in there. Again, with transferability and potential usage by members' children, you know, things could change. Obviously we'll monitor to what happens and, you know, we may see changes in usage or changes in liability.

MS. DUSH: Yeah, it could be that usage has gone down because of the anticipation of transferability.

MR. ALLEN: That's a possibility. The next page is the 10-year projection for the Navy, and here, because they're in a unfunded position, I am projecting amortization payments each of the next 10 years, although each year will be a little less than the year before, and the amount of money in the fund and the liability expected to decrease over time as money is paid out and no new entrants come in.

The following pages, the trend for the Marine Corps, the same trend as what is seen for the Navy, although just smaller because there are fewer Marine Corps participants. The amortization payments of 4.7 become 3.6 and then drop to around a hundred thousand, you know, or even under a hundred thousand as time goes on. Okay, and then the final one of these is for the Coast Guard, and these numbers are in thousands whereas the other pages were in millions, and, again, it's a small piece of the program, and you can see how much money is in it, you know, at the end of the year or the liability at the end of the year is around a million. Okay?

The next page, I show the fiscal year 2020 and 2021 normal costs. The 2020 normal costs were generated a year ago and presented at last year's meeting. I don't expect them to change. The 2021, again, just using the new usage rates. We haven't had any new entrants for a number of years. We always put these numbers in the letter that goes to the Secretary of Defense and the Comptroller had been given some consideration to not including them is because they don't seem to be used. I'll continue to generate them just in case the program does restart, and I show them here although I may not -- I mean, I guess depending on what you want, may not continue to show them in the formal Board meeting.

MS. DUSH: And we haven't seen new entrants since 2012, was it, or 2013?

MR. ALLEN: Correct. 2012 was the last time any of these numbers would have been used.

MS. DUSH: I would suggest that we don't need to see these, but they'd be available should a service want to consider restarting the program. Unless you get pushback from the services, I would say we don't need to discuss these. I don't know; is there any thought about that?

MR. ZOURAS: I don't know that we need to have a discussion on them, certainly, but as long as they're available, I think that's the important piece.

MS. DUSH: Okay.

MR. ALLEN: Okay.

MR. MOORE: I had a comment on that. I mean, at this point we actually don't have -- is this a correct statement? We don't actually have usage data for new entrants from the last eight years because there haven't been any. So even by the usage data or the usage assumptions that you are using for these are actually based on a relatively distant cohort now.

MS. DUSH: Yeah.

MR. MOORE: And --

MR. ALLEN: Correct.

MR. MOORE: -- to the extent we actually offered these again, those may or may not be the right usage assumptions to use. You'd want to pause and actually ask yourself is there some reason we would expect prospectively different usage than what this older data is telling us.

MR. VERLAUTZ: And I agree with that, although if the answer was, "Yes, we would expect different usage data, where would we get it?"

MR. MOORE: Well, no, but, well, you'd ask them why?

MS. DUSH: Yeah, you'd --

MR. MOORE: But if you can tell me why

there's a difference, we could at least make the (inaudible) judgment.

MR. ALLEN: At the very beginning, I'd have to use a eight-year-old or a later -- earlier data, and then if we did start seeing new entrants then incorporate that into the calculations.

MR. MOORE: So I would say that not only do we stop producing these, I think that to the extent we needed to start producing them again, we actually know to take a pause and --

MS. DUSH: Think it through.

MR. MOORE: -- consciously approve or review the assumptions that are -- I think that's the bottom-line. The Board would need to reapprove whatever assumptions we're using to drive it for that specific purpose.

MR. ALLEN: Okay, good to know.

MR. VERLAUTZ: So, Rich, I have a kind of a broader question on this: Do you have the data, too, and if so, have you looked at, sort of on a person-by-person basis, how much of the benefit they take in the first year they can and then in the second year, the third year, and what's the distribution by year of benefit usage?

MR. ALLEN: Yeah, that goes into these calculations, and as I kind of said earlier, the majority is used, and again, this is the pre-transferability. If there is such a thing as a typical case, it would be, a member enters the service, signs a four-year contract; those that don't go on to make a career in the military leave the service after four or soon thereafter, and then within a year or two start attending college, and use it for some of the next four years. So to answer your question, maybe the most prolific year would be about 4, 5, or 6 years after entry.

MR. VERLAUTZ: And so I -- and I'm not asking you to tell me the answer now because you're not going to have it at your fingertips, but it might be interesting to see, if doable, a chart that said, "Okay, of the hundred-thousand available, whatever, this person used 10 percent the first year, after 15, 25, 00, 10 percent and then stopped using, or just something like that rather than trying to come up with a average here, does that make any sense?

MR. ALLEN: Yeah, and in a way that's the model I developed does kind of do that.

MR. VERLAUTZ: Okay. So it would be interesting maybe -- I don't know; it would be up --

MS. DUSH: Yeah.

MR. VERLAUTZ: -- to you guys if you wanted to see year-by-year how is that money flowing out, and then I might modify that. I might look at that for people with transferability and people without transferability --

MR. ALLEN: Right.

MR. VERLAUTZ: -- to see if that's looking for different --

MR. ALLEN: That might be at this moment hard because the transferability is so new that --

MR. VERLAUTZ: Yeah, you could only look at how much they had spent, I guess, without transferability. I didn't say that very well. The amount that's transferred in most cases hasn't been spent yet.

MR. ALLEN: Right.

MR. VERLAUTZ: So you probably can't look at that, but you could look to see if it's, you know, diminished spending. And let me ask a question because maybe I'm confused. Do you have to transfer all of it or can you transfer part?

MR. ALLEN: You can transfer part.

MR. VERLAUTZ: Yeah, okay. So for those that have transferred part rather than all, it might be interesting to see what their spending pattern is like, if that's different than what it used to be when you couldn't transfer any.

MR. ALLEN: Right. I mean, the only problem -- it's a great idea. We've only seen 4,000 out of the 160,000 --

MR. VERLAUTZ: Yeah, I understand.

MS. DUSH: Yeah.

MR. VERLAUTZ: I understand. And, yes, you might have to get more data or --

MR. ALLEN: Mm-hmm.

MR. VERLAUTZ: Yeah.

MR. ALLEN: And even when John asked about, you know, maybe redoing the rates, if we did get some new entrants, we're probably not going to see much benefit usage in the first few years until we kind of get like four years into that cohort of, you know, a restart.

MR. VERLAUTZ: My thought on this is if there's some way I could use it to get a good feel of what this tail liability looks like. Assuming nobody else ever uses this, we've still got some tail liability that's going to go out for a lot of years, and then, you know, we don't have a good model because we haven't had transferability, but whatever data we can come up with that shows the pattern by year might help in developing a tail estimate. It's just a thought.

MR. ALLEN: No, that's -- it is something that has to be done.

MR. VERLAUTZ: Okay. All right, I'll shut up.

(laughter)

MR. MOORE: I think -- Marcia?

MS. DUSH: Yeah?

MR. MOORE: Given our standard practice to make motions on assumptions, I'm going to go ahead and make a motion to document our decision to stop producing these monthly kicker amounts, and basically withdraw an approval of prior assumptions just to again document our decision because in a sense we are making -- by stopping this, arguably we're making a change in our methodology that might be worthy of a motion.

MR. VERLAUTZ: So I halfway agree. The decision on whether to produce those or not is not the Board's. We have proved methods and assumptions. So the decision on whether to withdraw agreement on assumptions is fine, but we can't make a motion to say, "Don't produce these."

MR. MOORE: I will make a motion to withdraw any approval we have of underlying usage assumptions that would go into the development of these kicker benefits.

MR. ALLEN: Can I ask a question?

(laughter)

MR. VERLAUTZ: Yeah.

MR. ALLEN: Since I'm required to produce a normal -- any event that --

MS. DUSH: Yeah.

MR. ALLEN: -- next year they do offer it to some people, what is the cost going to be?

MR. MOORE: We would need to do an interim -- we would need to convene the Board. I would suggest we would at that time need to convene the Board to provide an interim approval of the assumptions you would use.

MR. ALLEN: Then, I guess, how would they be different than what I've just done?

MR. VERLAUTZ: Yeah, yeah. That's hard. Again, I'm going to push back a little. I understand your point. We have them for this year. We have them for 2021, but what we don't have is for 2022. I think Rich's question is right if only from a, "Okay, if we get a request we have to respond quickly. How do we do that? How do we get the assumptions set?" I think this is a discussion that needs to happen, and maybe next year when we're not calculating them that we can thoroughly discuss it and make that motion. At this point it won't matter because we've already got everything we need up to 2021.

MR. MOORE: Then modifying my motion for 2022, you would say is premature? Modifying my motion to say '22, it will still leave the motion premature?

MR. VERLAUTZ: Yes, I think some discussion would be good before we try to do that, and there's no rush on it.

MS. DUSH: So there should be an agenda item for next year's Board meeting that essentially discusses how normal costs would be developed for 1606 -- or for Chapter 30 kicker benefits should they be utilized in the future.

MR. MOORE: I think it would be confirmation in next year's Board meeting that we are no longer --

MR. VERLAUTZ: Yeah.

MR. MOORE: -- producing these, or we've no longer giving approval to any underlying assumptions (inaudible).

MR. VERLAUTZ: Yeah, but I don't know that we'd want to --

MR. MOORE: Other than my memory issues of trying to remember to do this next year, I have no objection to -- I don't mind withdrawing my motion.

MS. DUSH: I think our secretary has recorded this request.

MR. MOORE: Then I withdraw my motion. (laughter)

MR. VERLAUTZ: Yeah. But my oppose -- I don't think we want to wait until next year and I don't know that everybody wants to listen to the back-and-forth technical actuarial discussion on it. This might be something we should just chat about to make sure we understand the needs and can brainstorm a little bit even if we don't make any final decisions before then.

MR. ALLEN: Okay. Done with this discussion, ready to move on?

MR. VERLAUTZ: Ready to move on.

MR. ALLEN: Okay, and then the final page would be the CAT III payment. First, this program is very small. These numbers won't be turned out in)thousands or millions. These are the actual numbers. And this is a unique program the way it's funded in that it's funded after the benefit has been used, so and I'll kind of take you down through the far-right column and then you can look at the individual services if you'd like.

At the end of September 30, 2018, this particular piece of the fund had a negative balance because benefits were paid. The balance at that time was negative 87,000. At last year's Board meeting, I was projecting that the fund would be negative 91,084 which is why that was what was paid into the fund missed by $4,700, so the fund started this year with $4,700. Benefit payments through May of this year so far 56,000, projecting a full years' worth of benefits to be 76,000. Interest of about $1000 leading to a projected fund balance at the end of '19 of negative 73,000.

The reason that amount due is a little bit different is because the Coast Guard is actually going to be in a positive, so we're not going to bill them for the money, but the amount due for each of the services is listed on that bottom line, 57,000 for Army, 6,500 Navy, 4,900 Marine, and 6,000 Air Force. And, again, this is the methodology we've used for the last, you know, number of years.

MS. DUSH: And that this method is required by law as I understand it.

MR. ALLEN: The method isn't required, but the --

MS. DUSH: The pay as you go.

MR. ALLEN: -- pay as you go is required.

MS. DUSH: Yeah.

MR. VERLAUTZ: And so technically this is called funding in arrears and I've always thought it somewhat ironic that a bunch of actuaries are asked to approve a method that's not an actuarial method, but whatever. (laughs)

MS. DUSH: Do we need a motion on this?

MR. VERLAUTZ: No.

MS. DUSH: No. All right. Any other business regarding the educational fund?

MR. MOORE: I have a couple of issues.

MS. DUSH: Okay.

MR. MOORE: If I may, in the DFAS presentation there was -- on page 6, there's just a statement of the plan's liabilities of 922 million. Just confirming, that number must have come from OACT.

MS. DUSH: The financial statement number?

MR. MOORE: Yes. And I didn't try to tie it out, but would it tie out to the pieces shown on this presentation?

MR. RYDER: There might be some small missing programs which haven't been used in any number of years.

MR. MOORE: Okay --

MR. RYDER: -- but -- and for the --

MS. DUSH: Or a different interest rate

used for financial statement purposes?

MR. SITRIN: Oh, you mean that liability notice?

MS. DUSH: Yeah.

MR. SITRIN: Okay, wait a second.

MR. RYDER: Yeah, there is a --

MR. SITRIN: Yeah, that's -- and then that's a further question.

MR. RYDER: No. No, read that. That is immaterial to education, so we use the same.

MS. DUSH: Okay.

MR. RYDER: Actually they have an asset value for those small-like national call to service funds, but that we don't even track the liability. I don't -- I think that should be our fourth -- four programs, yeah.

MR. SITRIN: Well, one reason that this would be slightly different than this was the timing of when this had to be produced. This had to be produced before we had the 2018 census, so we had to do a roll forward, the number that got reported on our financial statements. And here, this is using the actual 2018 financial statement, so.

MS. DUSH: Oh, okay.

MR. MOORE: So I have a suggested chart. I don't know whether it falls into the OACTS presentation or the DFAS presentation maybe as a function of some of those issues just raised. I actually think it'd be helpful to see this 922 broken down two ways; one by plan in here, but I think getting back to this earlier conversation about inflation-tied, I think it'd be helpful to see the liability then broken down on the Y-axis by inflation sensitive or not. So that the benefit of that chart would do two things. One, it would help connect these two presentations. It would also give us a more systematic way of highlighting the difference in how much asset liability matching going on is between the asset breakdown and the liability breakdown. So I think just making that a standard one-page chart in one of these two presentations would be beneficial in an ongoing basis.

MS. DUSH: Yeah, I was thinking, as we were going through this, that it would be nice to have a one-pager that did some of the liabilities for all four programs, the assets for all four programs and, you know, maybe subset it by service. Because I think there is perhaps an issue that we should watch, you know, kind of referenced it a little bit earlier, but to the extent that we have emerging surpluses and plans that are not being used or that we have plans that are continuing to be used.

I mean, I think it's important for us to see where the money is, where the surpluses where, where the deficiencies are, and again, you know, it's our understanding that you can't move money between Reserve and Active Duty programs, but, you know, again. that might be something that should be considered down the line. At what level, I don't know, but, you know, to know that there's an ability to move surpluses around. If you can't get your hands on the money until the last dollar is paid, there still might be a reason to move money around.

MR. MOORE: And maybe what we start for this year is, there's already a question on the table about what's the inflation sensitivity. Let's just test out a format in answering that existing question and then figure out how it plays into next year's and future year's Board materials. My guess is it's something that would be in the OACT material. It's just that it will be of value to the DFAS conversation which tends to go first in this meeting, but that's a problem that's easily overcome. Okay?

I have a second issue, but I could pause on that if there's anything more related.

MR. VERLAUTZ: I would only say that I just real quickly added up the assets for each of the funds, and I got 1104 compared to 1086.

MR. MOORE: Okay. Did you do the liabilities?

(laughter)

MR. VERLAUTZ: Have calculator will travel but not that fast.

MR. MOORE: You know, just the second issue, again, both these are kind of cross-plan issues. We covered in pieces the issues around data. I just think it's worthy. Our letters in our report are our letters; the OACTS' reports comment on that our reports are produced with a certain lack of confidence in our data and therefore some lack of reliability in downstream implications in more year-to-year volatility.

I think it's worth in this meeting just formally acknowledging that; that we will continue -- the Board will continue, presumably, to issue its letter with the caveats that the data is not -- we have to produce numbers, but as we're going to state in the letter, it's not sufficiently credible. It subjects -- it just means the numbers are not -- that our numbers therefore become not as reliable and become more subject to volatility from year to year. I just think that's worth getting on the record within this meeting.

MS. DUSH: Yes, and I think especially with the actuarial standards of practice number 51 where we talk about risks, as that becomes effective for the work we do on this plan, I think we have to address, you know, the data issues explicitly when talking about what disclosures we need to make under ASOP 51.

MR. MOORE: And at the center, I want to make sure that I think the OACTS staff does a tremendous job of compensating for the shortcoming in the data by comparing sources, making adjustments to try to do the best you can tie out with what out is there, so I think at the end of the day we're still able to produce numbers, but there's just a certain amount of reliability that is not where it could be if the data were better.

MR. VERLAUTZ: And for the benefit of our scribe, ASOP 51 is Actuarial Standards of Practice Number 51.

MS. DUSH: Yeah. Right.

MR. VERLAUTZ: Which relates to discussion of risk.

MR. MOORE: Those are my issues.

MR. DUSH: All right. Any other

discussion? Jim, I'll return it to you.

MR. VERLAUTZ: Oh. Okay. Well, thank you all for being here as always, and assume we'll see most of you tomorrow at the same time, same place, same back station of things, and all of that. Thank you all for being here, and I'll declare us adjourned.

(Whereupon, at 3:01 p.m., the PROCEEDINGS were adjourned.)

* * * * *

CERTIFICATE OF NOTARY PUBLIC

COMMONWEALTH OF VIRGINIA

I, Mark Mahoney, notary public in and for the Commonwealth of Virginia, do hereby certify that the forgoing PROCEEDING was duly recorded and thereafter reduced to print under my direction; that the witnesses were sworn to tell the truth under penalty of perjury; that said transcript is a true record of the testimony given by witnesses; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this proceeding was called; and, furthermore, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Mark Mahoney

Notary Public, in and for the Commonwealth of Virginia

My Commission Expires: August 31, 2021

Notary Public Number 122985

ATTACHMENT 4 (CONTINUED)

Transcript of the Board of Actuaries Meeting (Military Retirement Fund and VSI Fund)

UNITED STATES DEPARTMENT OF DEFENSE

DEFENSE HUMAN RESOURCE ACTIVITY

BOARD OF ACTUARIES MEETING

MILITARY RETIREMENT FUND/ VOLUNTARY SEPARATION INCENTIVE FUND

Alexandria, Virginia

Friday, July 12, 2019

PARTICIPANTS:

JAMES F. VERLAUTZ
Chairman

RICHARD ALLEN
Actuary

WILLIAM BOOTH
Director, DHRA

ANDY CORSO
Assistant Director of Military Compensation

MARCIA A. DUSH
Board Member

NICK GARCIA
Actuary

LORI HAINES
DFAS

CORALITA JONES
DFAS

KEVIN LANNON
Advisor

THOMAS LIUZZO
Advisor

JOHN MOORE
Board Member

WILLIAM MOORHOUSE
Advisor

PETE ROSSI
Actuary

BRAD RYDER
Actuary

PARTICIPANTS (CONT'D):

JOEL SITRIN
Actuary

EDITH SMITH
Military Survivor

RICHARD VIRGILE
Chief Actuary, U.S. Coast Guard

COLONEL BRAD WHITNEY
Office of Personnel Readiness

PETE ZOURAS
Executive Secretary

* * * * *

P R O C E E D I N G S

(10:02 a.m.)

MR. VERLAUTZ: So, it now being after the appointed start time, we'll call this meeting to order. This is a meeting of the Board of Actuaries, and the subject matter is the Military Retirement System, or fund. I'm Jim Verlautz, Chair of the Board. With me is John Moore and Marcia Dush, and I'm going to ask people that's -- who's on the phone, can you please identify yourself?

MS. SMITH: Edith Smith.

MR. VERLAUTZ: Mm-hmm.

MR. ZOURAS: Could I make an announcement? In the room, is Mr. Booth, the HRA Director, and he'd like to make a presentation, if that's okay?

MR. VERLAUTZ: Okay.

MR. ZOURAS: Okay?

MR. BOOTH: Okay, and they gave me notes, and they know I won't use them, okay, but they're great notes. How do I say this? You're departing as Chair, all right? Mr. Sitrin, I'll refer to him as our Chief Actuary A veritas, now, along with our new Chief Actuary and Deputy, wanted to make sure that we recognized your great service. Man, they gave me all this stuff about all your accomplishments. It's a page and a half full. I understand about that much, but I figured this out, folks, you're an Actuary's Actuary, and through all these years of service, 15 years of service, on this committee, nine years as Chairman, you have helped us to keep the rein tight, as we manage these very important funds, such as Military Retirement Fund, such as Education Fund, et cetera.

In fact, we were one of the first entries in the department, with your help, that got a clean opinion, and that is a huge accomplishment, as the Department of Defense tries to move towards getting a clean opinion, everywhere else. We're a long way from that, but what I wanted to say on behalf of, maybe, performing the duties of P&R, Mr. Stewart, on behalf of Mr. Esper Cartney, performing the duties, or actually he's acting Sec/Def, his thanks.

We wanted to give you, as recognition of these great years of service, a -- I just want to read the citation, and I won't read it well. Obviously, has your name, Mr. Verlautz, is recognized for exceptional Public Service, as Chairman of The Department of Defense for Actuaries, Office of Actuaries, Division of Recourses Activities, from July 2004 to July of '19.

During his 15 years of outstanding service, you've played a invaluable role in maintaining Actuary Soundness of The Military Retirement Fund, but as you carry Education Benefits Fund, The Voluntary Separations Incentive Fund. So, he took it, himself, to closely examine critical opponents of The Department's Actuarial Process, to ensure compliance with evolving and increasingly confects professional standards, and he challenges the department to consistently provide strong justification for some method, and assumptions in order to drive superior results, and I'm going to stop there, and just say, and you did that, and we achieved superior results.

His efforts contribute to the unqualified -- all of the opinion of the Military Retirement Improvement, and all of readiness efforts. He briefly discharged his duties to protect the public interest, providing an unfailing source of Wise Counsel. He had demonstrated concern for the welfare of military members and their families. Recipient has accomplishment with a great credit to himself and the Department of Defense, and as a guy who happens to be a retiree myself, thank you for making sure we keep The Military Retirement Fund viable.

This is -- this is just something for your -- remember all your years of service here, and we are generally thankful.

MR. VERLAUTZ: I am sort of at a loss for words. I'm grateful and honored to receive this, and I guess, as much, it's my last meeting, and I'll just say I am grateful for the opportunity to have been able to serve the country, and honored to have the opportunity to work with a wonderful group of people on behalf of a wonderful, wonderful Military Force. So, thank you to all of you as well.

MR. BOOTH: I'll thank you, Sir, and I'll get out of here, and let you get this meeting done because maybe keep us sound, right through the last meeting. Thank you, Sir.

MR. VERLAUTZ: Thank you. I just can't believe it. That's a hard act to follow. So, other than Edith, is there anybody on the phone? Do we have DFAS? Do we have -- you don't know?

MS. FORTUNE: You have Virginia Fortune on the phone, and I'm passing the number onto Coralita and Laurie. They have -- wasn't able to get in. They didn't have the updated Audio Conference Code.

MR. VERLAUTZ: Okay. All right. So, again, welcome everybody. Thank you for attending. The first item on the agenda, The Legislative and Policy Update. Mr. Corso briefed The Board yesterday because he was leaving today for Reserve Service. So, his presentation is in the package. There's a few pages, and I'll give you a few minutes, or a minute to take a look at it. If you have any questions, please feel free to ask, and it won't be me, but Pete Rossi, or somebody, will be able to answer those.

MR. ROSSI: We hope.

MR. VERLAUTZ: Actually, ask really tough ones, and see what he does with it.

MR. LIUZZO: Luckily, I know a guy who sits right next Andy, who should be able to help out, probably better than me.

MS. DUSH: I guess the only question that I have, on page 6, is there's a report on BRS Implementation, due to Congress, in May 2020. Who is preparing that report?

MR. LIUZZO: That would be Our Office, MPP Compensation Director --

MS. DUSH: Okay.

MR. LIUZZO: -- in Coordination with all the services, comptroller (inaudible) all the members of the band, you know?

MS. DUSH: Okay.

MR. VERLAUTZ: Any other questions you want to ask, or we'll move on.

MR. LIUZZO: I'm good.

MR. VERLAUTZ: Seeing none. Oh yeah, I want to screen the presentation from DFAS, and, so, if -- I don't know it was Coralitia, whoever is going to lead us through that, that would be great.

MS. JONES: Good morning.

MR. VERLAUTZ: Morning.

MS. JONES: Well, we're going to begin with DFI.

MR. ROSSI: It's not included in the packet (inaudible) on the -- a separate slide deck.

MR. VERLAUTZ: Yeah.

MS. JONES: This project presentation is much like it was yesterday, and Mark will be following in the same (inaudible) format, so, (inaudible) will be going over the overview on Financial Data, and also the Fund Status. Moving to slide 3, our outflow will exceed inflows (inaudible) and will sync annually in January, on these two, to pay earlier, more so in October, but, as you can see, I'm looking at the outflow of our programing. It extends to 29.1 million, Program Revenue 31.1 million, and Interest Revenue is at 1.9.

The Long-Term Liquidity is 85.5 million for Long Term Par, and the gradual drop down on the Filing Fund is expected, that's entrants' payment period (inaudible) and I believe, roughly, that's typically about 20 years, and there have not been any new entrants since 2001. I really wanted to drive forward with you, on the Financial Data. The Contributions and Benefit Payments, both are decreasing, as expected (inaudible)

As you can see, regarding Fiscal Year '17 and '18, the interest is stable, with slight decreases when we are comparing them by Fiscal

Year (inaudible) which we're representing our Interest Income. There are no TIPs. So, therefore, there is no inflation, and, as you can see, there were (inaudible)

Moving right along to slide 6, this is our Financial Data and, as stated yesterday, this is at a point in time, which is regarding September 30, 2018. The total assets include Fund Balance of Treasury, Interest Receivable, and Accounts Receivable. Now, what I would like to note here is, that the Receivables are small enough that they are lost and (inaudible), but approximately they were (inaudible) one thousand for year ending September 2018, and we're -- in reviewing our book values of investments, it's Overnight plus Par, plus inflation purchased, plus Inflation Earned, per Premium Outstanding, the Unamateurized Premium, plus Discount outstanding, which is also the Unamateurized Discount.

You know, I'm trying to believe there will be Total Assets, less Accounts Receivable, less Interest Receivable, less Cash, which we are looking at the Financial Data in the presentation, roughly the 117.4, which is our Total Liabilities and Net Position.

Moving on to slide -- I'm sorry, was there a question?

MR. VERLAUTZ: No, that's fine. Keep going, please.

MS. JONES: Okay. Moving on to slide 5, that is our Effective Fund Yield, and we just wanted to provide that presentation as a comparative from 2009 to 2018, and that information via -- it received by the Office of the Actuary.

Slide 8, that is our market value at the end of May 2019. This will be the increase to cash, if the entire Portfolio was liquidated. Now, what I would like to note is this will not reconcile to the Balance Sheet, again, because it's a representation of different time periods, and different evaluation methods that are used. So, in slide 6, that's representing year end balances, and slide 8 is a representation of the

End of Month Fiscal Year '19. Our Fund status for our Portfolios, represented on slide 9, is the rates shown, are the coupon interest rates for each (inaudible) that's listed, and, as requested, we completed the Book Value on here, as well, so that you can see the Book Value and the Market Value, and last, but not least, slide 10, which is on Maturity, and this is Par by Maturity Year for the Precarity that are held in our Portfolio, and it illustrates the Maturity of Time Leave, and it does not include the Overnight Investments, like the previous slide. So, in slide 9, as you can see, that detail conveyed that 2.37 percent, as of 6-3, because, looking at the calendar, that was the next from May 31, and, so, that is not included in slide 10. That Overnight Investment is not included because, of course, it's an Overnight Maturity.

That will conclude our VSS -- excuse me, our VSI Slide Deck. Are there any questions?

MR. VERLAUTZ: It's not a question, but I would just note for the benefit of everyone, that the amount shown on page -- is it 6? 117.4 minus 3.2 is 114.2, which is also the amount the Office of Actuary is using as the asset. So, that does tie. Mm-hmm. Okay.

MR. VIRGILE: It'll be short.

MR. VERLAUTZ: Hmm.

MR. VIRGILE: Okay.

MR. VERLAUTZ: Yeah, go ahead.

MR. VIRGILE: I just want to question slide 5, why the inflation (inaudible) doubled between '17 and '18, but also (inaudible)?

MS. JONES: If someone is asking a question, I can't hear it. If they could please speak up?

MR. VIRGILE: Oh, okay. Yeah, the question is on slide 5. The increase in Interest Revenue and Inflation doubled from 6.3 billion to 16 billion, and (inaudible)

MR. VERLAUTZ: Rick. Rick. We've been talking about VSI. You're looking at the --

MR. VIRGILE: Oh, I'm sorry.

MR. VERLAUTZ: -- for Military

Retirement. Can you -- can you hold that please?

MR. VIRGILE: I'm sorry. I don't think I have that chart, but maybe I do. All right.

MS. LUDWIG: Yeah, you should have all of it.

MR. VERLAUTZ: Does anybody have any questions on the VSI Information we've just received? Moving on. Do you want to go on to the retirement?

MS. JONES: Yes. So, we're going on to Military Retirement. So, we're just going to go on to slide 3, at that stage, and it's the same layout as before. So, for 2019, the investment was $94 billion, which uncovers that -- so these represent $95.7 billion, in Treasury Contribution, and, as you can see, the inflows exceeded the outflow. Then, you have 45 billion for payment, 125.3 for receipts, and then 11.1 billion in overnights and cash.

Our Blended Retirement applies to our Uniform Services, and those future projection assumptions were receipted after, to accommodate estimated impact on outliers, due to Blended Retirement and Lump Sum payouts. So, there are no facts matching into it as a debt, but the Future Investment Projections are expected into the -- being conservative, and of course it depends on the Inflation Return Programing contribution levels and interest revenue.

In looking at our long term, we expect from 2020, at the end of month, in May, we expect it to have 96.0 billion with an average 20-year term, over all, and for projections of '21 to '24, we intend to have 446 billion. Now, the conversion sets ratio is roughly about 24 to 76, and that's rounded to the whole percentage, the same as last year. However, they still provide -- you have to shift it 75 to 90, and we will continue to rebalance that mature investing.

Moving on to slide 4. Looking at our contributions in the (inaudible) they're relatively stable, between the two years, with the except -- with the interest change of 44 percent, and, naturally, the increase is expected as the portfolio continues to grow. Slide 5, the inflation increase is the cash income at maturity, and it's related to the increase in TIPs held in the portfolio, as well as higher inflation.

The discount premium is the year to date amount amateurized, and we really don't see a huge fluctuation with the new investments, since there's already this large amount existing in the fund, and it is amateurized over the life of the security as well, but as you go down looking through the interest income, you just see the slight changes, more so with the inflation. (inaudible) is that everything does relatively stay the same, with slight increases.

MR. VERLAUTZ: So, Rich, do you have a question you want to ask at this point, or --

MR. VIRGILE: This question on slide 5 was the -- sorry -- on five, on slide 5, was why the large increase in Interest Revenue for Inflation between 2017 and 2018?

MS. JONES: So, there are more things this year coupled with inflation earning rate.

MR. MOWERY: Inflation was higher this year. So, maybe the percentage change wouldn't matter as much. For example, you had, no inflation in one year, and then, fantastic inflation in the next year. You have a very big percentage change increase in what you returned on inflation, but 75 to 90 percent of this portfolio is actually in Inflation Protected Securities.

So, and you can kind of do that on the return. Last year, it was 2.92, and this year, for 2018, it's 3.82.

MR. VERLAUTZ: Mm-hmm.

MR. MOWERY: So, I mean, 3.82 is really hard to get, in the current market rates. So, with those inflation protected securities, we're really outperforming what's available on current market.

MR. VERLAUTZ: Thanks, Brent.

MS. DUSH: Thank you.

MS. JONES: Did I answer your question?

MR. VERLAUTZ: Yep.

MR. VIRGILE: Is that it? Yes.

MS. JONES: Okay, perfect. So, now we're moving to slide 6, the year (inaudible) balance sheet, at that particular point in time, at the other -- as of September 2018. (inaudible) that includes the cash, Fund Balance of Treasury, Interest Receivable, and Accounts Receivable, and you have your Book Value of investments. It's overnight, plus par, plus inflation purchase, plus inflation earned, plus premium outstanding, the unamateurized premium, plus discount for outstanding, the amateurized discount, and, you know, as stated in the previous slide that -- it would be advised -- there will be the total asset plus accounts receivable, plus interest receivable layout cash. (inaudible) 813.875, as reflected the loan, and we wanted to bring it out regarding -- in the millions, so that it would show, and that also that it will tie back properly, regarding our financial statements.

Now, what I would like to highlight, for this particular slide, during September, on outlays verses expenses, were approximately $4 billion, and that was a result of an excellent payroll. So, during this time period, we have payables, and, so, that's why you will see that increase.

Moving on to slide 7, again, those are the Effective Fund Yields, and those are provided by the Actuaries, and, again, it's just to show the Fund Yields from '09 thru Fiscal Year, 2018.

Slide 8, is our (inaudible) Market Value at the end of May. So, again, this would be the increase to cash, if the entire portfolio is liquidated, and, as I referenced before, this will not reconcile to the balance sheet because we're looking at two different time periods. So, we're looking at September of 2018, and now we're looking at May of 2019.

Now, for slides 9 and 10, I need you to grab out your magnifying glass because these are all of the current portfolio holdings. This slide is very large, in order to be able to present the information as required. We included everything on here, but, as you can see, it's not -- the ability to view it is not as great as (inaudible) but, again, it is our holding, and it is showing the rates shown by the coupon interest rates, and, additionally, we included the book value in here as well. So, you just have to get out your magnifying glasses in order to view that information. However, the data is useful, and to see the summary. In summary, each type is more useful (inaudible) trying to compare (inaudible), which is reflected in slide 11 and 8.

So, moving on to slide 11, this slide (inaudible) I need -- and the amount expected at maturity, and it equals the Par plus inflation on the slide, showing that individual securities, so, slides 9 and 10, and this inflation purchase earned, as of May, will be higher at maturity, and that is the expectation. So, that concludes out MRF slide deck. Are there any questions?

MR. VERLAUTZ: Anybody have questions?

MS. DUSH: Not at this time.

MR. VERLAUTZ: You're getting off scot-free. No questions. Thank you --

MS. JONES: All right.

MR. VERLAUTZ: -- thank you very much. You're welcome to stay and -- as long as you like.

MS. JONES: Thank you. I intend to dial back in. I have a 10:30 that I have to drop out for, and I will dial back in. So, if you hear the beep, that will be me.

MR. VERLAUTZ: Thank you very much.

MS. JONES: All right, thank you. You guys have a great day.

MR. VERLAUTZ: You, too. All right, Pete, you are up.

MR. ZOURAS: Okay, when looking at page 7, at the starting population for last year and this year's valuation, I just want to point out that the BRS and non BRS populations are based on assumptions, and, starting next year, we'll have actual data, and we'll talk about that later, in regards to, you know, to the effect on the normal cost, and other issues.

Page 8 shows the development of unfunded accrued liability, and as you can see on line five, it decreased by 6 percent, and, as of 9/30/2018, it was $719.6 billion. Also shown, on lines 6 and 7, are the evaluation, normal cost percentages for the First Out Year, and then in line 7, it shows the implemented normal cost percentages, and line 8 gives the treasury normal cost percentages to pay for concurrent receipt.

MR. VERLAUTZ: Okay. So, one question, Pete. The actuarial value of assets is 813.9, which ties exactly to the total assets on the Financial Data that we just got from DFAS. Well, I would have thought that we would subtract out the benefits payable, is that handled some other way or --

MR. ZOURAS: Benefits Payable? I don't know.

MS. DUSH: Or is that a coincidence, that the numbers are the same? Because isn't this a book value number?

MR. ZOURAS: So is ours.

MR. VERLAUTZ: Yeah, they're both book --

MS. DUSH: They're both book value?
MR. ZOURAS: Yeah. Yeah.
MR. VERLAUTZ: Yeah. That would be one heck of a good clause.
MS. DUSH: Yeah.
MR. ROSSI: Even if we don't subtract it out because it's benefits payable the following day, so the evaluation as of the 9/30/2018 is (inaudible)
MR. VERLAUTZ: Okay. So, does the evaluation on the liability side include those benefits in it?
MR. ROSSI: Yes.
MR. VERLAUTZ: Okay, so that's why, okay. Okay. Good.
MR. ROSSI: (inaudible) and then that was my hesitation because the payment falls on a -- if the first falls on a Wednesday or a holiday, it gets pushed back to the --
MR. VERLAUTZ: Right.
MR. ROSSI: -- prior year, so then -- the prior months, and then we have to make an

additional adjustment for book value.

MR. MOORE: That would be a weekend.

MR. ROSSI: Yeah.

MR. MOORE: Wednesday?

MR. ROSSI: Yeah, exactly.

MR. MOORE: While we're on -- while we're on this page is the DFAS Liability of 1.621, on that same page, versus our 1.5, just a discount rate issue, or --

MR. ZOURAS: Discount rate and flow forward.

MR. ROSSI: Financial Statement (inaudible)

MR. ZOURAS: All right, thank you. Thanks for noting that. Okay. Page 9 shows the development of the Actuary Loss, for the year, and it was.3 billion, and, as you can see, it's broken out by experience and assumption change, gains and losses. It's a very -- very small, and the -- line 6B shows the sequestration loss of $0.8 billion, that it has been the Board's practice to pay that off the following year, over one year, as part of the Treasury payment, which is on the next page.

So, page 10 shows the total Treasury payment, which for FY20 is $101.178 billion, which consists of an amortization payment of 91.873, and a normal cost payment for concurrent receipt of $9.305 billion, and that amount will be sequestered by a certain percentage, 8.4, I believe.

MR. VERLAUTZ: Any concerns or comments?

MS. DUSH: No.

MR. VERLAUTZ: Nope?

MS. DUSH: No.

MR. VERLAUTZ: Anything? Anybody? Okay. I think --

MR. MOORE: I don't know if that -- consider it as a motion.

MR. VERLAUTZ: I don't -- I don't think -- you're presenting calculations and results to us. I don't think we need a motion. I think it's great. Thank you. All right. So, Brad's up.

MR. RYDER: So, on page 12 and 13, you

can see some, kind of, yield projections, and each of them is looking at our current portfolio. The first set is going to use some Social Security assumptions for a long-term kind of comparison, and the second set is going to use the Blue-Chip assumptions for expectations for long-term performance. So, I'll just focus on the Social Security assumption set on page 12.

In the first column, you can see what the assumed inflation is for the next many number of years, and then the nominal fund yield is the projection including our current assets in the fund, and how they'll play out over their life, and then, also, reinvestments, and we assume the reinvestments will be invested in the funds at -- and return a rate similar to those assumed by Social Security. If you want to see what that particular assumption is, in any particular year, that would be the new investments "annual" column, and if you wanted to know what a theoretical cumulative portfolio would be, that would be the new investments cumulative column.

So, if you're looking at kind of a cumulative fund analysis, it would be the two, the nominal fund yield and the new investments for accumulative, and then, on the right, you can see longer term averages in the first set, some fund weighted averages, what the ultimate rate is, again, for Social Security in this set, and then the current Board assumptions. We have some durations there, just so that you understand how very, very sensitive the retirement fund is to a change in interest rates, and, so, you know, it -- for example, for the normal cost, full time, should the interest rate change by one percent, the full time normal cost would change by 30 percent. That's what a duration means, and then we also added, this year, we added some inflation sensitivities. So, you can see, if we brought inflation down, there would be relatively, minimal impacts, in terms of what would be made, the tamed, in the normal cost, were we to bring inflation down 25 basis points, and, so, that's PDF page 12. Again, that's Social Security assumptions. Those are -- they do have a team of economists over there, and we don't necessarily have a team of economists here. So, it's kind of good to get a different set to look at --

MR. VERLAUTZ: Yep.

MR. RYDER: -- and one of the reasons we wanted to do that was because the next page, which is Blue-Chip, is an assumption set that we've historically used, but they're really only looking at about eight or 10 years, in terms of what they expect for the market. So, Blue-Chip is just a set of people, a set of professionals, academic and private, that are putting together expectations over the next eight or 10 years.

So, if you'd like to compare the two, I would say, you know, Social Security is more of a long term look at things, and Blue-Chip is more of a shorter term look at things, and then, on the pages after that, you have some other sets we look at, just for comparison. We have other government programs that are being run: Social Security, OPM, and do you have current rates for the Military

Retirement Fund in the first column, and there are some shorter term rates over on the right, and some financial statements over on the right, if you'd like to look at what those are, for financial statements, or CBO, or what Blue-Chip is expecting, and, so, on PDF page 15, these are the nominal rates. If you want to see the real rates, that's on, excuse me, on PDF page 14 are the nominal rates, and if you wanted to see the real rates, those are on page 15, and then we have some triangular tables after that. So, you can look at -- if you wanted to look at, for example, the history of basic pay increases, and the -- maybe the annual Military Retirement Fund yields, the whole history is there in the table, if you wanted to look at that to see what we've experienced in the Retirement Fund, and that's all I have to present on those.

MR. VERLAUTZ: There's a lot of numbers here.

MR. RYDER: Mm-hmm. Yes. It's a long history.

MR. VERLAUTZ: Well,(inaudible) even the prior pages, too. Well, I will comment for the benefit of those who don't know that there was a formal Board meeting last March, in which we had a number of economists come in and talk to us about economic assumptions, and it was very useful and interesting. Then, we've had some informal discussions, as a result of that meeting, but I'll throw it over to Marcia or John, or reactions, thoughts, what --

MS. DUSH: Well, I think the -- every year, we need to take a close look at what we're assuming for CPI and real rate of return, and I think we have had a sense, in prior years, that even though near term inflation was relatively modest, that, you know, essentially, we do expect inflation to pick up, and we've kind of looked to Social Security to be our -- to be a guidepost in this discussion, and yet, you know, we want to be mindful of that, and -- but after last year's meeting, we did ask about the sensitivity of the liabilities and normal costs to a change, a singular change in inflation, and we have found out that there's not much sensitivity to just changing inflation because not only does inflation change the interest rate, total interest rate that we would use, but the benefits are also heavily inflation protected. So, they tend to move in the same direction without much gain or loss.

So, while we need to discuss inflation and look at it, compare it to Social Security, it -- a movement doesn't really affect our evaluation of -- if we only move that number, and, so, for that reason, looking particularly at the Social Security projection, that Brad has prepared, you know, I'm still comfortable with our two and three quarters inflation projection with our -- because we have such a long view, and I'm glad to see that Social Security projection included in our packet.

MR. MOORE: I'll just add that, building on Marcia, I agree. Again, the -- despite the low current inflationary environment that we sit in today, this is a long-term perspective, and, so, we align in -- with that, Social Security, in terms of a, you know, higher rate for the longer term. Then, when we factor in our sensitivity remain -- I mean, you know, personally, whether it's 2.6 or 2.75, it just isn't a big difference for us, given the sensitivity. So, for that reason, I remain comfortable with our inflation assumption.

MR. VERLAUTZ: And I'll throw out that we've talked in prior years. I'm very worried about the effects of current deficits, Federal deficits, the Federal debt levels, and the effects of that on inflation. I know we've tamped it down, but I think we're continuing to build inflationary pressure, you know? I worry that we're too low, at 2.75, that that's not being taken into account, but, as you guys said, it isn't a huge sensitivity anyway. So, I'm also comfortable at 2.75.

MR. MOORE: I'm sorry. Would you like me to make some comments about the real return?

MS. DUSH: Yeah.

MR. VERLAUTZ: Yeah.

MS. DUSH: Why don't you start?

MR. MOORE: Yeah. I think, really, part of the reason we did that summit earlier this year, at -- you know, I know, I, personally, have been very concerned about the real rate of return. We've been using 2.25. Current market data shows real rates of return closer to one, for the investments that we're talking about, the one percent. Social Security had, like, a two and a half percent long-term, a real rate of return assumption, and, so, I think part of that benefit of that summit was to try to reconcile all these different perspectives.

I think the, you know, the Office of Actuary giving us the presentation this year of the Blue-Chip assumptions against the Social Security assumptions has been very helpful to kind of analyzing how these real return rates are playing out. You know, I, personally, have remained a little concerned that our two and a quarter percent assumption is high, but, fortunately, I'm also realizing the, you know, the current one percent environment that we're in, again, over the long term, there's reasons to expect real rates have returned increase. So, when you, you know, run it through the -- how the new investments will come in and, you know, recognizing that we start with a book value evaluation, I think this information gives us good justification for considering, you know, lowering our assumption a little bit, and I know I'll be looking to maybe bring that down 25 basis points, to around two percent, now that we've really been able to chew through and digest this information.

MS. DUSH: I also agree with lowering the real rate of return. I think, as we've learned more about how investments are made for this fund, and we look at the projected cash flows, with the large Treasury payments being made over the next five years, and then trailing down somewhat and significantly, after what is it, 2026, that I'm -- I -- while I have a very long-term perspective for this fund, I'm also nervous about the types of investments that will be made in the next six years, and they will really anchor the returns for the long term, and, so, while we have a long term perspective, I also think we need to be sensitive to short term returns and, therefore, I'm in agreement with bringing it down a quarter.

MR. MOORE: Okay, and, if I may, just --

MS. DUSH: Yeah, clarify.

MR. MOORE: -- further clarify, but, in my mind, it just -- your statement is that we use a book value approach on this. It locks in, essentially, those returns at the time of purchase --

MS. DUSH: Right. Right.

MR. MOORE: -- and, so, that's what's been critical about, as you were raising, Marcia, that we need to look at when these investments come in, and then build in what can -- then becomes locked in as we project forward, and, so, it -- it's -- takes a while to get from that current environment to that long term state because we're not doing a market value approach.

MS. DUSH: And assets are held to maturity --

MR. MOORE: Yes.

MS. DUSH: -- and are not traded. So, we're not picking up changes in the interest rate environment as the economy changes. So, we really do, like I say, we've got a lot of money. I think the presentation made by Coralita showed what we have, $446 billion, coming in over the next four years, but, after that, it's going to trail down significantly.

MR. RYDER: Right, and I'll just amplify that. I don't know if there's anybody from IAC on, but what Marcia's saying is that as those large contributions come in over the next few years, not, you know, 100 years, but over the next few years, it's going to be really important where we put them, in terms of what the Board of Actuaries -- how that impacts the fund return.

MS. DUSH: Yeah, and kind of going on beyond that, I think, when we're looking at it, we're assuming that they're going into at least, like, a 20-year instrument, and to the extent that the Investment Committee chooses to put them in shorter notes, in order to maybe plan for higher interest rates in future years, you know, essentially have turnover in the investments. We may run more losses than we otherwise would have, but, in fact, the bet by the Investment Committee is that, in the long run, it'll work out because they'll be able to reinvest money at higher rates later on down the line.

So, from -- I think, from an Actuary's perspective, that difference will take as a gain or loss, as it emerges, you know? If we have losses now, we'll have gains later on, if they can invest at higher rates, but, from our projection standpoint, we're assuming that things are going into, like, a 20-year instrument.

MR. MOORE: Sorry.

MR. VERLAUTZ: So, as an aside, we're getting a lot of rattling on the phone from somebody. If you could put your phones on mute, if you've called in, that'd be great. So, I don't really have much to add to what you're saying. I mean, it all makes perfect sense to me. I, unfortunately, think you're right, so. Yeah. I have nothing to add on.

MS. DUSH: So, the last piece would be, then, the salary scale.

MR. VERLAUTZ: Okay, and --

MS. DUSH: Okay, and, there, we've assumed 50 basis points on top of inflation, and, again, I'm not sure I've seen anything to change my expectations on that.

MR. VERLAUTZ: No, and I think what we heard from Andy was consistent. Yeah, I --

MR. MOORE: Sorry (inaudible whispering)

MR. VERLAUTZ: Oh, yeah. Well, we have to put that in the motion.

MR. MOORE: Yeah, and I would agree. There's no -- nothing new in the data that suggests any need to really tweak that assumption. So, I remain comfortable with where that stands.

MR. VERLAUTZ: Okay. So, who wants to make a motion?

MR. MOORE: I'll be happy to. I would like to make a motion that, for the 9-30-19 evaluation, we leave the inflation assumption at 2.75 percent. The real return assumption, I propose lowering from 2.25 percent down to 2 percent, giving us a gross interest rate of 4.75, and then leaving salary scale at 50 basis points above inflation. So, that would also remain at three and a quarter. So, I believe I got all the components for that motion.

MS. DUSH: Second.

MR. VERLAUTZ: Okay, anything else we need to talk about on it? Nope? All right. All in favor?

AUDIENCE: Aye.

MR. VERLAUTZ: The motion passes. All right. Pete?

MR. ZOURAS: Okay. Page 26 shows the presentation of the FY2021 normal cost percentages, and, this year, we're proposing two noneconomic changes. We've also included the effect on the NCP, due to lowering the real by 25 basis points, and the final NCP for 2021 is 34.6 percent for full time and 26.7 percent for part time. The first noneconomic changes to update are retiree divorce rates, and that resulted in no change to the third decimal place in the NCP, and we're moving the rates up from 2008 to 2009 to 2017 to 2018. There was a reduction in divorces at younger ages. That that did not have much of an effect, and then Pete Rossi will talk about the BRS proposal.

MR. ROSSI: Pete Rossi's talked a lot about BRS opt- ins in the last few years, here. So, this, hopefully, is the last time we're going to talk about opt-ins, and, so, over the prior years we've -- we have proposed, and the Board has accepted, different varying levels of Blended Retirement System opt-in elections. So, the opt-in period concluded in the end of 2018, and one of the things that -- oh, this is on PDF page 30, for those following here or at home, and one of the things we have been attempting to do is to pick up actual BRS opt-in election data.

There is a bit of a delay getting it, that data, onto the personnel files we're using. So, we have used our numerous connections at DFAS and within the Marine Corps to receive files directly from the services themselves, and member level data, which we then match to the personnel files that we use, and what you'll see here is that we went from last year, I believe is the dotted lines, which were opt-in assumptions approved at last year's Board meeting, which resulted in about 850,000 BRS opt-in elections to the solid line of actual BRS opt-in elections, which totaled about 390K. So, this is an abridged version of what we did last year.

The single slide's the top part of the current assumptions. The file on the left side copies the current by all DOD, officer and enlisted, and the bottom is the update now, moving from an assumed world to an actual world, and the corresponding chart's on the right side. It's not to say the opt-in open season is over. However, there could be additional opt-ins, which trickle in, in the coming years, for hardship extensions, people going into the force, service academy grads. We're told that those are going to be very, very small, but we will keep an eye on them. So, we are not going to propose holding any more BRS opt-in elections.

If those do account to a lot, over the years, we could be Board -- Board record corrections, et cetera. We may have to come back and make a proposal to hold some, moving forward, but at this point we're not. So, we will use this actual data moving forward, and we will work with our folks. I believe Andy Corso's team is leading that to have the services directly report to DMBC. So, the personnel files that we get ensure that the BRS data is on the files directly, too, for additional audit control. So, hopefully that's the end of BRS opt-in. This is good. If I have to come back and do this next year, that will be something.

MR. VERLAUTZ: Okay. So, just as an aside, I'm sorry I didn't prepare anybody. What are we doing for mortality improvement assumption?

MR. ZOURAS: So, yeah, last year, we presented mortality improvement assumptions, based on military experience, for most of the categories of retirees, I mean, and active. We're using the MP-20 -- I believe it's 16 for active duty mortality improvement, and you can see in the gain or loss the effect of those new improvement factors.

MR. VERLAUTZ: So, we have a new scale out. We're having -- you're closer to this than I am, but is there a reason to adopt that for this evaluation, or do you --

MR. ZOURAS: Well, for active duty, there are -- the mortality rates are very low, so, yeah.

MR. VERLAUTZ: Yeah. It doesn't make a lot of difference does it?

MR. ZOURAS: There's a number of other factors, but it wouldn't make much of a difference. I mean, there is -- we could update the military --

MR. VERLAUTZ: Right.

MR. ZOURAS: -- mortality improvement factors, but we can maybe do that next year or (overtalking)

MR. VERLAUTZ: Yeah, I would suggest we look at it. You know, again, you've been so active in looking at all that, those tables coming out. So, you know, your judgement as to how that should affect the military would be useful.

MR. ZOURAS: Okay. Thank you.

MR. VERLAUTZ: Okay.

MR. ZOURAS: All right.

MS. DUSH: So, there is no, I mean, in your chart, you do talk about the fact that you've reflected an additional year of mortality improvement in the NCPs between '17 and '18, but there is no change between '18 and '19.

MR. ZOURAS: Correct. Correct. Yeah.

MS. DUSH: Okay.

MR. VERLAUTZ: Rick?

MR. VIRGILE: Just a comment on Coast Guard that might apply here also. Every October, the SOA comes out with their new projection scale, and we get a hard time from the auditors about did we adopt it or not adopt it, and because last year you came out with the simpler scale for retirees, we were able to convince the auditors that it's really not material, what we're doing with the auditors. So, they stopped bother us, but --

MR. VERLAUTZ: Any other questions? There are none. We need a motion. Marcia's turn?

MS. DUSH: I move that we adopt the new divorce rates as proposed by the Office of the Actuary, as well as the fact that we are eliminating our assumption regarding the election of who will elect the Blended Retirement System, and move to that we use the actual data, as discussed.

MR. MOORE: Second.

MR. VERLAUTZ: Anything else to cover this?

MR. MOORE: Yes. Yeah, just -- I'll just elaborate a little on the opt-in rates. As of 9 -- again, to further reinforce what we're saying, as of 9-30-19, it's no longer an assumption. We have data. We don't need to make an assumption about what hap -- is going to happen in opt-ins.

As of 9-30-18, we did have an assumption. Data has proven that assumption not to be very much on target, even after our revisions, what we initially thought, a million would opt-in, then 850, and then data's 400. Again, just kind of highlighting, that assumption was set at 9-30. There was still three mon -- it was initially built on a Rein model, for lack of us having anything else to look at. There was still the last three months of the window available for elections, and, so, sitting there, at 9-30, the assumption was as good as we could make it at the time.

So, we've highlighted, in here, the impact that that, the deviation between that assumption and reality, what the impact of that's been, but it doesn't change, you know, we can't retroactively change what was the right assumption sitting back at 9-30-18. So, it's kind of -- the Office of the Actuary's done a good job for us, showing just the significance and the impact of that, but it's now -- it comes through in the 9-30-19 evaluation. It will be addressed accordingly, you know?

MS. DUSH: And while it's painful, I'm assuming that there is an offsetting savings because these people who did not opt-in are not qualified for the thrift plan and are not getting matches. So, is there a relative offset?

MR. MOORE: Mm-hmm. Partial.

MR. VERLAUTZ: Partial.

MS. DUSH: Partial?

MR. VERLAUTZ: Yeah.

MR. MOORE: Partial.

MR. VERLAUTZ: Yeah, and then -- and just to pile on, you know, we're making an assumption about lump sum options, too, based on --

MS. DUSH: Yeah.

MR. VERLAUTZ: -- no data. So, we could

have the same thing happen again, based on the lump sums. It's just -- that's life.

MR. MOORE: And, actually, I'll comment on that, too. We're not -- that's not part of the motioning because we're not making a change to it.

MR. VERLAUTZ: Right.

MR. MOORE: In the DFAS presentation, you know, there was a comment about the importance of a work -- their work with the Office of the Actuary for future cash flows. That lump sum, not knowing how that lump option will be --

MR. RYDER: Right.

MR. MOORE: -- utilized in the future means our cash flow projections, or the timing of it, even if the liability is good, the timing of the cash flows. You know, we'll just have to see how it plays out over time, but --

MR. RYDER: Right. So, when those lump sums really come online, we might have some unexpected results.

MR. MOORE: So, it's probably important that that element of uncertainty is well understood by the investment side of the house.

MR. VERLAUTZ: Yeah, to the extent the lump sums are frequent. That'll reduce the duration of the funds (inaudible)

MS. DUSH: Mm-hmm.

MR. RYDER: Yeah. They asked me about that. That was one of their first questions -

MR. VERLAUTZ: Okay, good.

MR. RYDER: -- but I'll reiterate it.

MR. VERLAUTZ: Good.

MS. DUSH: Yeah, and that may further incent them to go short, or hold cash, more cash than they otherwise would have.

MR. RYDER: I will reiterate that as well.

MS. DUSH: Okay.

MR. VERLAUTZ: On the flip side, I do believe Andy said that we've had precisely zero applications for lump sums. So, who knows?

MS. DUSH: Because some people are eligible --

MR. VERLAUTZ: Right. Some are, yeah.

MS. DUSH: -- even though most are not yet --

MR. VERLAUTZ: Right.

MS. DUSH: -- eligible for the lump sum.

MR. MOORE: And, Jim, if I may call you -- do you remember when you said that? That's largely expected. The real data won't start coming in until -- how far down the line was it?

MR. ZOURAS: 2026.

MS. DUSH: '26, yeah, eight years from when --

MR. MOORE: '26?

MR. VERLAUTZ: Yeah.

MS. DUSH: -- '11 --'18.

MR. MOORE: So, like, we're still going to be operating without much insight for a long time.

MR. VERLAUTZ: I could make a comment here, but I won't, or maybe you, John.

MR. MOORE: No further discussion.

MR. VERLAUTZ: We have a motion at the table, I think, further discussion. All right.

All in favor?

AUDIENCE: Aye.

MR. VERLAUTZ: And it passes. Sorry.

MR. MOORE: That was good.

MR. VERLAUTZ: Okay. Pete? (inaudible whispering) Oh, wait. Am I (overtalking) Did you want to talk about normal price percentages?

MR. ZOURAS: I announced them (overtalking)

MR. VERLAUTZ: Oh. Then, I must have been looking at the other stuff. So, okay.

MS. DUSH: Someone can state them again.

MR. ZOURAS: Okay.

MR. VERLAUTZ: Mm-hmm.

MR. MOORE: So, on the VSI (overtalking)

MR. ZOURAS: Do you want me to -- I'll announce the 2021 DOD NCPs of 34.6 for full time and 26.7 for part time and Treasury NCPs, 15.8 for full time and 4.2 for part time.

MR. VERLAUTZ: Okay. Thank you. Does anybody have anything else on the Military Retirement System?

MR. VIRGILE: Well (inaudible) problem. It's a concern with the MDAA timing. Up until last year, we didn't know the military pay increases until December (inaudible) and, so, we ignored them in the evaluation. Last year, we got the law passed in August. So, we knew the pay increases that were coming the following year, in time to reflect them in the evaluation, and we did. So, it's sort of an -- a question. How long can you wait before knowing what next year's military pay increase is going to be before deciding to reflect it in the current year's evaluation? And we thought August was enough time. September gets a little dicey. It's at a point --

MR. VERLAUTZ: Well, I don't know if there is one answer to that question. I guess my sense would be, as of the dates you're setting the assumptions, you take the best information you have, and the dates you set the assumptions is predicated a little bit on the use of the information, and when that information has to come out in -- now, we do have a, you know, a 10-1 evaluation date. Ideally, it would be whatever we know as of 10-1, but sometimes, practically speaking, that doesn't work, and, so, you do the best you can when you have to get it out. I -- that's not a definitive answer, but I don't think there is one.

MR. VIRGILE: Okay.

MR. VERLAUTZ: Anybody want to quarrel with that?

MR. VIRGILE: No, sounds good.

MR. VERLAUTZ: Okay. All right. Let's move on to VSI. Brad?

MR. RYDER: Okay. So, on page 32, you have a similar fund yield projection, and this is just using Blue- Chip. It's a very short-term fund. So, we're fine with using Blue-Chip. Again, you have inflation expectations, what we expect for the fund yield in the third column, 2.11, and -- on down. That includes current investments and future expectations. If you wanted to compare that to a theoretical fund of

Blue-Chips, that's in the final column, and, for VSI, we are also doing a little -- things a little bit differently, here, than we are on retirement because we know it's a closed group. We know it'll end in 2039.

So, you see everything we expect out to 2039, based on the assumption that we're going to reinvest in, roughly, two-year bonds, on average, and if you want the five-year average, or the fund weighted average, that's on the left. Our current assumption is 2.25, and, if you look at the durations, this isn't very sensitive to the assumption. The duration's only three or four years.

MS. DUSH: I see no reason to change our two and a quarter interest rate assumption.

MR. MOORE: I would agree with that.

MR. VERLAUTZ: You got a motion?

MS. DUSH: Did we want to talk about inflation?

MR. VERLAUTZ: Oh, yeah, we should do that, too. Sorry.

MR. RYDER: Oh, if -- right. So, there (overtalking) I can say something. I can just say that --

MR. VERLAUTZ: Yeah.

MR. RYDER: -- inflation for this, again, is more of a short-term fund. So, if you're going to compare it to the retirement side, it would be understandable that there are differences, in terms of what would happen over the next 100 or so years, versus what we expected to happen over the next few years.

MS. DUSH: And I think -- and inflation, in this case, lowers -- higher inflation lowers our liabilities because what we're really talking about is inflation regarding the VA offset to this benefit.

MR. MOORE: Right.

MS. DUSH: This benefit is not inflation protected, but the offset grows with inflation, and it also grows to the extent that other -- that the VA increases the disability rating and people's disability benefits grow. So, essentially, higher inflation lowers our liability, and I think we were at an assumption of 2.2 percent inflation, which, as you said, Brad, is a little closer to, perhaps, what we expect in the near term, and we've also thrown on an additional one percent to assume that, in general, those who are receiving VA offsets, then, in general, their benefits will go up an additional one percent, having to do with increased ratings in higher disability benefits.

So, I propose that we would maintain the two and a quarter interest rate, the 2.2 COLA, with the one percent additional increase on VA offsets, attributable to other increases, and --

MR. VERLAUTZ: Easy for you to say, yeah?

MS. DUSH: What?

MR. VERLAUTZ: It's easy for you to say.

MS. DUSH: Yeah.

MR. MOORE: Yeah.

MS. DUSH: So, I should have said I move -- I move that we maintain those current assumptions.

MR. MOORE: I'll second that.

MR. VERLAUTZ: All in favor? (overtalking) oh, you wanted to give a comment? I'm sorry.

MR. MOORE: Yeah, just a quick discussion. I find it interesting because of where, again, when -- the DFAS presentation, we were talking about no TIPs in this account, which is kind of interesting because the liability is actually negative, but --

MS. DUSH: Universally related.

MR. MOORE: -- negatively correlated with inflation. So, TIPs would be exactly the wrong hold they would have.

MR. VERLAUTZ: Well, they should be selling them short, right?

MR. MOORE: Right. You'd fill in, but, yeah, we're not hedged against that, and, so, it's the opposite effect.

MS. DUSH: (inaudible)

MR. MOORE: Yeah, it's -- short year

TIPs is what we -- I think would be more directly aligned, but what -- yeah, with that, I'm -- I know we normally reflect changes, but I think it's even important to make a motion to acknowledge -- it was -- hold steady on this. I'm good with that.

MR. VERLAUTZ: And since you jogged the memory, it's a little off subject, but as we talk about TIPs, and we talked about this a little bit yesterday, the question that applied to education fund and applies, just as much, to Military Retirement Fund, for me, is TIPs are an insurance against inflation. Does it make sense for the Federal government to purchase, spend money, to buy insurance against inflation? You know, again, because, you know, they can print money, they can, in some respects, control inflation. Is that a good place to spend the money? And I'm just going to leave that question because it's rhetorical and --

MS. DUSH: It's your parting shot.

MR. VERLAUTZ: It's my parting shot.

You got it. You got it. Glad I don't have to answer it. All right.

MS. DUSH: So, so moved.

MR. MOORE: Second.

MR. VERLAUTZ: Moved and seconded. All in favor?

AUDIENCE: Aye.

MR. MOORE: Okay.

MR. VERLAUTZ: All right. Nick, take us home.

MR. GARCIA: Okay. Yeah, I'll finish it off by just showing some numbers, statistics, on the VSI population. As was stated earlier, it's a closed group. So, we know who is in the program. We know when their final payment is going to take place. The only thing that would change that is the VA offset, as Marcia stated, which offsets the VSI payment. So, as the VA award grows, their VSI payments decrease in size, and, eventually, will be fully offset.

So, page 33 shows the summary of officer enlisted and those with an offset, and those without an offset. There was a -- some changes, based on what we expected from last year. There were, you know, at, you know, as expected, there were people that died off, members that died off, survivors that came on, and, really, the liability and gain, and liability lost from those changes almost offset one another, so.

Moving on to page 34, it's time for the gain-loss analysis here. We had a line one, 2017, unfunded liability 184.2 million, the contribution of 36.8 on 1-1-2018. That expected unfunded liability was 151 million, which, when compared to the actual of 148.8, it resulted in a $2.2 million gain. I further break that down into asset and liability. On line one, we had an asset loss of.1, from the fund not earning what we expected, but it was still close. We expected a 2.25. The fund actually earned 2.2 million. There was another asset loss from benefit payments being more than we expected. We expected 61.4 million, and actual payments were 62.3. So, again, we were close. The gain-loss on liability was the liability gain of 3.2 million, and broken out by a COLA, and residual, the main change, or the main gain, in the liability was from the VA update, and that was stated earlier. The actual increase was about 11 percent this year, but the thought is that some point they're going to reach a level where they can't get increases in VA awards. I think that, you know, even if everyone reaches 100 percent, there's not -- they can't get 110 percent, right? So, but -- so, that resulted in a $2.5 million gain, and the residual is just DFAS data changes, as I stated earlier. People came off the file. Survivors came on to the file.

Page 35 breaks up the amateurization. So, last year, the Board approved the $25.9 million contribution, and this year, based on the analysis, we're showing a Fiscal Year 2021 payment of 21.4 million, which is 55.4 percent of projected benefit payments, and, again, looking at the projected benefit payments, we are expecting the 2039 payment to take place, as the last benefit payment for VSI, and the -- and then, as usual, the last page just shows the -- how the fund gradually draws down to zero.

MS. DUSH: So, let me move that we would expect a contribution of $21.4 million to be made on October 1, 2020 for Fiscal Year 21, based on these results.

MR. MOORE: Second.

MR. VERLAUTZ: So, I want to comment, just for the record, that this is a little different than the other evaluations because, under law, it's the Board's responsibility to have this evaluation executed rather than just approve assumptions and methods. So, I think that's why you have to make the motion you did.

MS. DUSH: Mm-hmm.

MR. VERLAUTZ: I would ask, though, does anybody see a need, or for the amateurization approach to change?

MS. DUSH: Not at this time.

MR. MOORE: No.

MR. VERLAUTZ: No?

MR. MOORE: No, I --

MR. VERLAUTZ: Neither do I.

MR. MOORE: -- I think we should continue to use the method we've been using.

MR. VERLAUTZ: Okay. Ingrid, does that motion satisfy what you need?

MS. PETTYGROVE: Did we vote on it?

MR. VERLAUTZ: No. We'll do that, but I --

MR. MOORE: Wanted to make sure that it was satisfactory first.

MS. PETTYGROVE: Yes. Yes.

MR. VERLAUTZ: All right. All right. So, all in favor?

AUDIENCE: Aye.

MR. VERLAUTZ: Thank you. Does anybody else have anything on VSI they want to talk about? Does anybody else want to talk about the weather or anything else? No? All right. Well, then, as my last meeting, I'll make a couple comments. First, I want to say thank you to Joel, who, except for the last month or so, was Chief Actuary for my entire time here, and who did just an absolutely exceptional job, and made my life so much easier. So, thank you, Joel, and congratulations on the new position, and I hope it's as successful for you as the last one was.

MR. SITRIN: Thank you.

MR. VERLAUTZ: And then congratulations to Pete on assuming the role, and good luck. I hope you find it rewarding and -- drop that. I want to congratulate Marcia on taking over as -- to Chair. You will do spectacularly well, you know, and John will support you, and there will be a new Board member, and -- again, good luck, but you'll be fine. I wanted to say thank you to the advisors who have been here, and supporting us, or supporting me, for, again, 15 years, and to the rest of the staff of the Office of Actuary, who's been here, and done a great job. It's all very, very appreciated, and I think I will leave it at that, and say best wishes to everyone, and the meeting's adjourned.

MR. MOORE: Thank you.

MS. DUSH: Thank you.

MR. VERLAUTZ: Okay.

(Whereupon, at 11:21 a.m., the PROCEEDINGS were adjourned.)

* * * * *

CERTIFICATE OF NOTARY PUBLIC

COMMONWEALTH OF VIRGINIA

I, Mark Mahoney, notary public in and for the Commonwealth of Virginia, do hereby certify that the forgoing PROCEEDING was duly recorded and thereafter reduced to print under my direction; that the witnesses were sworn to tell the truth under penalty of perjury; that said transcript is a true record of the testimony given by witnesses; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this proceeding was called; and, furthermore, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Mark Mahoney

Notary Public, in and for the Commonwealth of Virginia

My Commission Expires: August 31, 2021

Notary Public Number 122985