



**VALUATION OF THE
EDUCATION BENEFITS FUND
SEPTEMBER 30, 2018**

DoD Office of the Actuary

January 2020

ACTUARIAL CERTIFICATION

This September 30, 2018 report on the Education Benefits Fund (Fund) has been prepared in accordance with generally accepted actuarial principles and practices. In preparing the report, we have relied upon information maintained by the Department of Defense and Department of Veterans Affairs regarding plan provisions, assets, eligible members, and benefit usage. The purpose of this report is to document the actuarial status of the Fund and develop actuarial liability and funding amounts to support the Secretary of Defense and the DoD Board of Actuaries (Board) in meeting the requirements of Section 2006, Title 10, United States Code. Use of these results for other purposes may not be appropriate.

We have performed the valuation using methods and assumptions approved by the Board. In general, the decrement rates used in the valuation are based on actual experience of the Fund. The annual economic assumptions include an interest rate of 3.25%, an ultimate Consumer Price Index increase of 2.10%, and a National Center for Education Statistics' Index increase of 5.00%.

In our opinion, the actuarial assumptions are reasonable and the valuation results present a fair picture of the financial condition of the Fund, given the material limitations to available data as detailed in Section 3.



Brad Ryder *
Actuary
ASA, MAAA
US Dept of Defense
Office of the Actuary
4800 Mark Center Drive, Suite 03E25
Alexandria, VA 22350
John.B.Ryder2.civ@mail.mil



Richard Allen *
Actuary
ASA
US Dept of Defense
Office of the Actuary
4800 Mark Center Drive, Suite 03E25
Alexandria, VA 22350
Richard.S.Allen40.civ@mail.mil

* Meets the qualification standards of the American Academy of Actuaries to render the actuarial opinion referenced above.

EDUCATION BENEFITS FUND REPORT

TABLE OF CONTENTS

<u>Sections</u>	<u>Page</u>
Actuarial Certification	2
Table of Contents	3
Section 1 – Introduction	4
Section 2 – Executive Summary	6
Section 3 – Valuation Data	7
Section 4 – Assets, Unfunded Liabilities, and Annual Changes	8
Section 5 – Amortization Payments	12
Section 6 – Per Capita Costs	14
Section 7 – Transaction Process	16
<u>Appendices</u>	<u>Page</u>
Appendix A – Description of Benefits	19
Appendix B – Population Data	25
Appendix C – Assumptions and Methods	28
Appendix D – Fund History	36
Appendix E – Legislative History	40
Appendix F – Benefit Payment Projections	45
Appendix G – SFFAS Accounting Statement	47
Appendix H – Glossary	49

SECTION 1 – INTRODUCTION

The Fund was established on July 1, 1985 to pay education benefits to members of the armed forces. Benefits covered by the Fund have been expanded many times (see Appendix D) and the Fund can now pay for the following benefits:

- Title 38, Chapter 30/33 kicker and transferred kicker benefits
- Title 10, Chapter 1606 basic and transferred basic benefits¹
- Title 10, Chapter 1606 kicker and transferred kicker benefits¹
- Title 10, Chapter 1607 basic and transferred basic benefits^{1,4}
- Title 38, Chapter 30 basic benefits for Post-Vietnam Era and Involuntary Separatees (Category III)
- Title 10, Chapter 31, Section 510 National Call to Service²
- Title 38, Chapter 30, Section 3020 transferred benefits²

The Board³, whose members are appointed by the Secretary of Defense, approves methods and assumptions used in the Fund valuation, reports to the Secretary of Defense annually on the actuarial status of the Fund, and recommends changes needed to maintain the Fund on a sound actuarial basis.

¹ Transferred benefits are not currently offered under Chapters 1606 and Chapter 1607 directly, but if transferability is achieved through Chapter 33, Chapter 1606 kicker benefits can be transferred.

² Due to the relatively small size of benefits for National Call to Service and Chapter 30, Section 3020 transferability, liability amounts for those programs have not been estimated.

³ Assumptions and methodologies for this valuation were reviewed and approved by DoD Board of Actuaries members James Verlautz (Chair), Marcia Dush, and John Moore.

⁴ Public Law 114-92 (November 25, 2015), The National Defense Authorization Act of 2016, sunsetted Chapter 1607 (also known as Reserve Educational Assistance Program, or REAP) benefits on November 25, 2015. Some individuals remained eligible for REAP benefits until November 25, 2019.

SECTION 1 – INTRODUCTION (Cont.)

How to Use this Report

- An executive summary of the Fund can be found in Section 2.
- Annual amortization payments for each component can be found in Section 5.
- The per capita costs for newly eligible members can be found in Section 6.
- A projection of future years’ benefit payments can be found in Appendix F.
- In various places in the report, numbers may not add exactly due to rounding.
- Supplementary explanation can be obtained by contacting the Office of the Actuary as detailed on page 2.
- Only Chapter 1606 kickers and Chapter 30 kickers are currently being used by the services. For the purpose of this report, please refer to the following table when referencing kickers:

OACT Report name	Description
Chapter 30 kickers	Chapter 30 kickers used with Chapter 30 basic
Chapter 33 kickers	Chapter 30 kickers used with Chapter 33
Chapter 30/33 kickers	Chapter 30 kickers used with Chapter 30 basic AND Chapter 30 kickers used with Chapter 33
Chapter 1606 kickers	Chapter 1606 kickers used with Chapter 1606 basic
Chapter 1606 kickers	Chapter 1606 kickers used with Chapter 1607 basic
Chapter 1606 kickers	Chapter 1606 kickers used with Chapter 33

SECTION 2 – EXECUTIVE SUMMARY

(\$ in millions)

	<u>Chapter 30/33</u>	<u>Chapter 1606</u>	<u>Chapter 1607²</u>	<u>Other³</u>	<u>Total</u>
<u>Sept. 30, 2018 Eligibles¹</u>	162,838	444,952	3,359	2,352	613,501
<u>Sept. 30, 2018 Fund Balance</u>					
Sept. 30, 2017 Fund Balance	\$466.4	\$611.3	\$13.2	\$8.6	\$1,099.5
FY18 Asset Transfers	\$0.0	\$6.8	\$(6.8)	\$0.0	\$0.0
FY18 Amortization Payments	41.3	0.0	0.0	0.3	41.6
FY18 Per Capita Contributions	0.0	126.3	0.0	0.0	126.3
FY18 Benefit Payments	(85.8)	(131.4)	(3.1)	(0.1)	(220.4)
FY18 Interest	<u>15.7</u>	<u>21.0</u>	<u>0.2</u>	<u>0.3</u>	<u>37.2</u>
FY18 Total Changes	\$(28.8)	\$22.7	\$(9.8)	\$0.5	\$(15.4)
Sept. 30, 2018 Fund Balance ⁴	\$437.6	\$634.0	\$3.4	\$9.1	\$1,084.1
<u>Sept. 30, 2018 Snapshot</u>					
Actuarial Liability (AL)	\$475.1	\$333.9	\$1.6	\$0.3	\$811.0
<u>Fund Balance⁴</u>	<u>(437.6)</u>	<u>(634.0)</u>	<u>(3.4)</u>	<u>(9.1)</u>	<u>(1,084.1)</u>
Unfunded AL (Surplus)	\$37.6	\$(300.0)	\$(1.8)	\$(8.8)	\$(273.0)

The above summarizes FY 2018 Fund experience and actuarial valuation results as of September 30, 2018. The majority of liabilities detailed in this report stem from active duty kickers, reserve kickers, and reserve basic benefits.

These results depend on the underlying data and assumptions. We relied without audit on the data provided by the Defense Manpower Data Center (DMDC) and the Defense Finance and Accounting Service (DFAS). Current results may vary if data are inaccurate and future results will vary to the extent that experience differs from assumptions.

¹ Members eligible for multiple programs are counted separately for each program.

² Chapter 1607 eligible counts were not necessary for the latest valuation.

³ While the fund balances for National Call to Service and Chapter 30 transferability have been included in this column, liabilities for those programs have not been included. Due to the relatively small size of benefits for National Call to Service and Chapter 30 transferability, liability amounts for those programs have not been estimated. Liability amounts in this column represent only the Cat III liability. Fund balances and eligible counts for National Call to Service and Chapter 30 transferability are reflected in this column but are based on older data and may not be accurate.

⁴ Officially, there is only one Fund. The DoD Office of the Actuary allocates the Fund into separate accounts for the various programs, using reported contributions and benefit payments by program and allocating reported interest earnings by program.

SECTION 3 – VALUATION DATA

The valuation data are taken from files maintained by DMDC along with financial data from DFAS. Data on members of the Chapter 30 (active duty)/Chapter 33 (active duty and reserve), Chapter 1606 (reserve), and Chapter 1607 (reserve) programs are taken from DMDC, DFAS, Office of the Secretary of Defense (OSD) (Reserve Affairs), and OSD (Comptroller). An overview of the number of members in each program and their status can be found in Appendix B. Data on benefit payments and contributions are from DFAS, in some cases supplemented by Department of Veterans Affairs (VA) reports. In the case of benefit payments, VA makes payments to members and receives reimbursement from the Fund where appropriate; DFAS reports information submitted to them by VA. In the case of Fund contributions, DFAS reports monies and associated information received from the military components.

The Office of the Actuary (OACT) has unresolved concerns with VA regarding the inability of VA to make accurate and complete member level data available to DoD. The missing and inaccurate data create large and material limitations to valuation accuracy. In particular, for Chapter 1606, there are unresolved discrepancies between DMDC and DFAS total benefit usage. For data as of September 30, 2018, DoD OACT received 80% of the data needed for MGIB-SR and 88% of the data needed for MGIB-AD.

The data was reviewed for reasonableness and consistency, including a reasonableness check of eligible counts, modifications for codes that conflict with dates given, adjustments for unreasonable benefit amounts, and adjustments to months used to account for discrepancies between DMDC and DFAS total benefit usage. However, the data has not been audited by OACT and OACT is not responsible for the accuracy of the data. Responsibility for the accuracy of the member data lies with the components who report eligibility and demographic data to DMDC. Responsibility for financial data related to Fund transactions and benefit usage is shared between the components, VA, and DFAS.

SECTION 4 – ASSETS, UNFUNDED LIABILITIES, AND ANNUAL CHANGES

(\$ in millions)

Using the input data described in the previous section and Appendix B, OACT computed the actuarial liability for the Chapter 30/33 kicker benefit, the Chapter 1606 basic benefit, the Chapter 1606 kicker benefit, and the Chapter 1607 benefit. The total value of assets on the valuation date (September 30, 2018) was obtained from the Fund's investment manager at DFAS. For official accounting, the assets and liabilities are pooled into one Fund. However, OACT tracks assets and liabilities separately by program and component and may transfer assets between programs (not components) with Board approval. The assets are given at book value, rather than at market value. The programs' unfunded liabilities or surpluses are as follows:

Chapter 30/33 Kicker Benefits as of September 30, 2018

<u>Program</u>	<u>Actuarial Liability</u>	<u>Assets</u>	<u>Unfunded Liability or Surplus</u>
Army	\$344.4	(\$358.5)	(\$14.1)
Navy	\$81.2	(\$38.6)	\$42.6
Marine Corps	\$48.4	(\$39.2)	\$9.2
<u>Coast Guard</u>	<u>\$1.1</u>	<u>(\$1.2)</u>	<u>(\$0.1)</u>
Total	\$475.1	(\$437.6)	\$37.6

Chapter 1606 Basic and Kicker Benefits as of September 30, 2018

<u>Program</u>	<u>Actuarial Liability</u>	<u>Assets</u>	<u>Unfunded Liability or Surplus</u>
Army Nat Guard	\$134.0	(\$282.6)	(\$148.6)
Army Reserve	\$70.1	(\$137.3)	(\$67.2)
Navy Reserve	\$10.3	(\$26.9)	(\$16.6)
Marines Reserve	\$20.3	(\$40.6)	(\$20.3)
Air Force Nat Guard	\$76.2	(\$80.7)	(\$4.5)
Air Force Reserve	\$22.6	(\$61.8)	(\$39.2)
<u>Coast Guard Reserve</u>	<u>\$0.4</u>	<u>(\$4.0)</u>	<u>(\$3.6)</u>
Total	\$333.9	(\$634.0)	(\$300.0)

SECTION 4 – ASSETS, UNFUNDED LIABILITIES, AND ANNUAL CHANGES**(cont.)**

(\$ in millions)

Chapter 1607 Basic Benefits as of September 30, 2018

<u>Program</u>	<u>Actuarial Liability</u>	<u>Assets</u>	<u>Unfunded Liability or Surplus</u>
Army Nat Guard	\$0.9	(\$1.9)	(\$1.0)
Army Reserve	\$0.4	(\$0.7)	(\$0.3)
Navy Reserve	\$0.0	(\$0.1)	(\$0.1)
Marines Reserve	\$0.1	(\$0.1)	(\$0.0)
Air Force Nat Guard	\$0.2	(\$0.4)	(\$0.2)
Air Force Reserve	\$0.0	(\$0.2)	(\$0.1)
<u>Coast Guard Reserve</u>	<u>\$0.0</u>	<u>(\$0.0)</u>	<u>(\$0.0)</u>
Total	\$1.6	(\$3.4)	(\$1.8)

In addition to the above assets and liabilities, there are 15 items not reflected in this report (some of which are zero), one for each active duty component for Category III, National Call to Service, and Chapter 30 Section 3020 transferred benefits paid from the Fund. However, OACT tracks the assets and liabilities by each combination of component and program. This Fund allocation is dependent on the accuracy of the reported Fund transactions; errors and missing information directly impact the accuracy of the allocation.

SECTION 4 – ASSETS, UNFUNDED LIABILITIES, AND ANNUAL CHANGES**(cont.)**

(\$ in millions)

<u>Chapter 30/33 Annual Changes</u>	<u>Actuarial Liability</u>	<u>% of Projected Actuarial Liability</u>
Projected September 30, 2018 Assets	\$435.3	
<u>Projected September 30, 2018 Liability</u>	<u>\$535.5</u>	
Projected September 30, 2018 Unfunded Liability	\$100.2	
Actual September 30, 2018 Assets	\$437.6	
<u>Actual September 30, 2018 Liability</u>	<u>\$475.1</u>	
Actual September 30, 2018 Unfunded Liability	\$37.6	
September 30, 2018 (Gain)/Loss	(\$62.7)	-11.7%
<u>(Gain)/Loss Due to Liability</u>		
Withdrawal Experience & Census Changes	\$25.9	4.8%
Interest Rate Assumption Change	\$0.0	0.0%
Usage Rate and Other Assumption Changes	(\$86.3)	-16.1%
<u>2018 Population Changes</u>	<u>\$0.0</u>	<u>0.0%</u>
Total Liability (Gain)/Loss	(\$60.4)	-11.3%
<u>(Gain)/Loss Due to Assets</u>		
Benefit Usage Experience	(\$2.9)	-0.5%
Contribution Experience	\$0.0	0.0%
<u>Interest Experience¹</u>	<u>\$0.7</u>	<u>0.2%</u>
Total Assets (Gain)/Loss	(\$2.3)	-0.4%

The development above reflects the changes in actuarial liability from the last valuation to the latest valuation for Chapter 1606. Rates are updated each year to reflect the most recent experience. The organizations responsible for administering transferability under Chapter 1606 have communicated to the Office of the Actuary that transferability is not currently offered through Chapter 1606. Differences between actual and expected usage rates were the largest driver of the gain and that is reflected in “Usage Rate and Other Assumption Changes.”

¹The percentage change for Interest Experience is expressed as a percent of “Projected September 30, 2018 Assets”.

SECTION 4 – ASSETS, UNFUNDED LIABILITIES, AND ANNUAL CHANGES**(cont.)**

(\$ in millions)

<u>Chapter 1606 Annual Changes</u>	<u>Actuarial Liability</u>	<u>% of Projected Actuarial Liability</u>
Projected September 30, 2018 Assets	\$622.2	
<u>Projected September 30, 2018 Liability</u>	<u>\$383.8</u>	
Projected September 30, 2018 Unfunded Liability	(\$238.4)	
Actual September 30, 2018 Assets	\$634.0	
<u>Actual September 30, 2018 Liability</u>	<u>\$333.9</u>	
Actual September 30, 2018 Unfunded Liability	(\$300.0)	
September 30, 2018 (Gain)/Loss	(\$61.7)	-16.1%
(Gain)/Loss Due to Liability		
Withdrawal Experience & Census Changes	(\$11.2)	-2.9%
Interest Rate Assumption Change	\$0.0	0.0%
Usage Rate and Other Assumption Changes	(\$51.5)	-13.4%
<u>2018 Population Changes</u>	<u>\$12.8</u>	<u>3.3%</u>
Total Liability (Gain)/Loss	(\$49.8)	-13.0%
(Gain)/Loss Due to Assets		
Benefit Usage Experience	(\$2.3)	-0.6%
Contribution Experience	(\$8.9)	-2.3%
<u>Interest Experience¹</u>	<u>(\$0.6)</u>	<u>-0.1%</u>
Total Assets (Gain)/Loss	(\$11.8)	-3.1%

The development above reflects the changes in actuarial liability from the last valuation to the latest valuation for Chapter 1607. Rates are updated each year to reflect the most recent experience. The organizations responsible for administering transferability under Chapter 1607 have communicated to the Office of the Actuary that transferability is not currently offered through that chapter. Decreases in usage rates, reflective of the sunseting of Chapter 1607, was the largest driver of the gain and that is reflected in “Usage Rate and Other Assumption Changes.”

¹The components of (Gain)/Loss Due to Assets represents the difference between expected and actual amounts for each item. The percentage change for Interest Experience is expressed as a percent of "Projected September 30, 2018 Assets."

SECTION 5 – AMORTIZATION PAYMENTS

When a program is projected to have an unfunded liability, an amortization payment is scheduled to be paid into the Fund. This payment is the first year’s payment of a five year amortization schedule at the valuation interest rate. The amortization schedule is reset each year, i.e., the schedule is given a “fresh start” every year. While this amortization method asymptotically approaches full funding, technically, the fund will not actually reach full funding until many years into the future. For budgetary reasons, annual amortization payments are determined two years in advance and therefore do not reflect all information available as of the date the amortization payments are made.

The amortization payments for FY 2020 (determined in the September 30, 2017 valuation) and FY 2021 (determined in the September 30, 2018 valuation) are shown in the following tables. The amortization payments for the Chapter 1606 basic program and the Chapter 1606 kicker program are calculated together as a single Chapter 1606 amortization payment.

Because of Public Law 114-92, The National Defense Authorization Act of 2016, which ended Chapter 1607 (REAP) on November 25, 2015, and because there are enough funds to pay the projected benefits to those individuals who are eligible to receive REAP benefits through the sunset date of November 25, 2019, there are no amortization payments for Chapter 1607.

Note that the payment for Category III is determined differently. The payment for October 1, 2019 for Involuntary Separatees and Voluntary Separation Incentive/Special Separation Bonus recipients (i.e., Category III) was determined by estimating FY 2019 benefits and bringing forward any surplus or liability from October 1, 2018. Both items were adjusted for interest and then added together to determine the October 1, 2019 payment.

Chapter 30/33 Annual Amortization Amounts

	<u>Fiscal Year</u>	<u>2020</u>	<u>2021</u>
	<u>Due Date</u>	<u>10/1/2019</u>	<u>10/1/2020</u>
Army		\$5,936,275	\$0
Navy		\$8,703,835	\$5,204,989
Marine Corps		\$3,607,805	\$139,593
Coast Guard		\$0	\$0

Chapter 1606 Annual Amortization Amounts

	<u>Fiscal Year</u>	<u>2020</u>	<u>2021</u>
	<u>Due Date</u>	<u>10/1/2019</u>	<u>10/1/2020</u>
Army National Guard		\$0	\$0
Army Reserve		\$0	\$0
Navy Reserve		\$0	\$0
Marine Corps Reserve		\$0	\$0
Air National Guard		\$0	\$0
Air Force Reserve		\$0	\$0
Coast Guard Reserve		\$0	\$0

SECTION 5 – AMORTIZATION PAYMENTS (cont.)

Chapter 1607 Basic Benefits Annual Amortization Amounts

	<u>Fiscal Year</u> <u>Due Date</u>	<u>2020</u> <u>10/1/2019</u>	<u>2021</u> <u>10/1/2020</u>
Army National Guard		\$0	\$0
Army Reserve		\$0	\$0
Navy Reserve		\$0	\$0
Marine Corps Reserve		\$0	\$0
Air National Guard		\$0	\$0
Air Force Reserve		\$0	\$0
Coast Guard Reserve		\$0	\$0

Category III Basic Annual Amortization Amounts¹

	<u>Fiscal Year</u> <u>Due Date</u>	<u>2020</u> <u>10/1/2019</u>	<u>2021</u> <u>10/1/2020</u>
Army		\$56,742	Set next year
Navy		\$6,572	Set next year
Marine Corps		\$4,902	Set next year
Air Force		\$6,091	Set next year
Coast Guard		\$0	Set next year

¹ Payments for Category III are not pre-funded, but are calculated based on actual benefit payments during the previous year.

SECTION 6 – PER CAPITA COSTS

The per capita costs for the Chapter 30/33 and Chapter 1606 programs are given below. A separate per capita cost is set for each component, program, and benefit amount. Per capita costs are usually determined once per year, but may be calculated more often if there are extenuating circumstances, such as major legislative changes. The per capita costs below have corresponding normal costs that are shown in Appendix C. Note that there are not any per capita costs for Category III because the cost for that benefit is determined in aggregate after benefits are paid; there are not any per capita costs for Chapter 1607 because the program is closed to new entrants.

When a program is expected to have a surplus, a portion of the surplus is used to decrease the per capita cost. This portion is the first year's payment of a five year amortization schedule at the valuation interest rate for reserve programs, and the first year's payment of a ten year amortization schedule at the valuation interest rate for active duty programs. The amortization schedule is reset each year, i.e., the schedule is given a "fresh start" every year. The Chapter 30/33 kicker amortization offset is capped at 50% of the projected normal costs; thus, the per capita costs are at least 50% of the normal cost. For budgetary reasons, expected surpluses (and unfunded liabilities) are determined two years in advance and therefore do not reflect all data available as of the date the per capita costs are paid.

College Fund Kicker Amounts from Letters for FY 2020

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

College Fund Kicker Amounts from Letters for FY 2021

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

SECTION 6 – PER CAPITA COSTS (cont.)

Chapter 1606 Basic and Kicker Benefit Per Capita Costs During FY 2020

	<u>Army</u> <u>Guard</u>	<u>Army</u> <u>Reserve</u>	<u>Navy</u> <u>Reserve</u>	<u>Marine</u> <u>Reserve</u>	<u>Air</u> <u>Guard</u>	<u>Air</u> <u>Reserve</u>	<u>Coast</u> <u>Guard</u>
Basic	\$1,809	\$707	\$386	\$1,083	\$1,942	\$0	\$0
\$100 Kicker	\$698	\$588	\$1,068	\$1,041	\$833	\$802	\$641
\$200 Kicker	\$1,445	\$1,331	\$2,103	\$1,767	\$1,726	\$1,656	\$1,732
\$350 Kicker	\$4,796	\$2,476	\$4,580	\$3,825	\$3,329	\$3,107	\$4,037

Chapter 1606 Basic and Kicker Benefit Per Capita Costs During FY 2021

	<u>Army</u> <u>Guard</u>	<u>Army</u> <u>Reserve</u>	<u>Navy</u> <u>Reserve</u>	<u>Marine</u> <u>Reserve</u>	<u>Air</u> <u>Guard</u>	<u>Air</u> <u>Reserve</u>	<u>Coast</u> <u>Guard</u>
Basic	\$626	\$576	\$226	\$762	\$1,981	\$0	\$0
\$100 Kicker	\$481	\$540	\$1,038	\$977	\$755	\$750	\$588
\$200 Kicker	\$987	\$1,202	\$1,986	\$1,611	\$1,551	\$1,536	\$1,471
\$350 Kicker	\$3,353	\$2,265	\$4,265	\$3,445	\$2,932	\$2,829	\$3,313

Note that there are not any per capita costs for Chapter 1607 because the program closed as of November 26, 2019.

SECTION 7 – EDUCATION BENEFITS FUND TRANSACTION PROCESS

The effects of the EBF transaction process on the deficit, the debt, the DoD budget, and benefit security described in this section are applicable under the current practices of the federal government regarding budget accounting and tax policy. These practices do not provide for increases in taxes to pre-fund the education benefits programs but do result in increases in the national debt.

A trust fund was created inside the Unified Budget of the federal government for the monies of the education benefits programs. This fund has three sources of income: (1) monthly per capita payments made by DoD¹, (2) annual amortization payments made by DoD, and (3) interest earnings on investments in government securities made by Treasury and the payment of the par values of these securities at maturity. All three of these items are intra-governmental transfers consisting of debits from one government account and credits to another.

The fund has two types of payouts--payments for members' and dependents' benefits, and purchases of U.S. Treasury securities. The purchase of a Treasury security is also an intra-governmental transfer, while a payment for a member's or dependent's benefit is not.

Effect of the EBF transaction process on the deficit

Figure 1 on the following page depicts this process. The only transactions in a particular year that directly affect the **deficit** of the Unified Budget are those that pass in or out of the government, such as tax collections (which decrease the deficit) and payments for members' or dependents' benefits (which increase the deficit). The intra-governmental transfers are debits and credits within the federal budget, with no direct effect on the deficit. The following examples illustrate the process:

- If DoD debits \$170 million in per capita payments and the Fund credits the \$170 million, the net direct federal budget deficit effect is zero.
- If the fund purchases \$70 million in securities (debit) and the Treasury sells \$70 million in securities (credit), the net direct federal budget deficit effect is zero.
- If the Treasury pays \$70 million in interest (debit) and the fund earns \$70 million interest (credit), the net direct federal budget deficit effect is zero.
- Disregarding all other government programs, if the government collects \$150 million in tax revenues (credit) and pays \$170 million for members' and dependents' benefits (debit), the net direct federal budget deficit effect is \$20 million.

¹ References to "DoD" in this section also include Coast Guard.

SECTION 7 – EDUCATION BENEFITS FUND TRANSACTION PROCESS
(cont.)

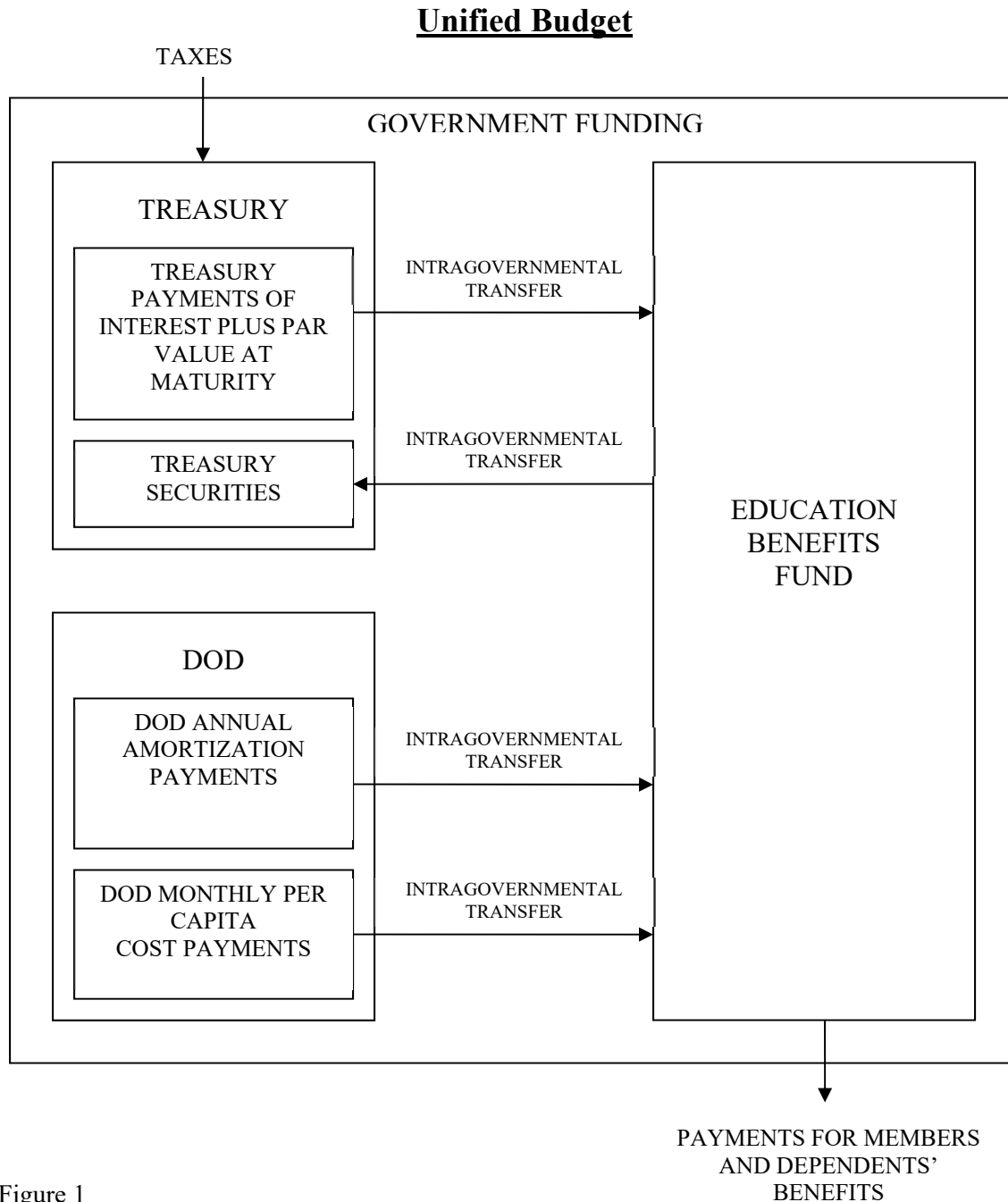


Figure 1

All of the intra-governmental transfers inside Figure 1 will generate both a credit and an associated equal debit within the Unified Budget. Consequently, under current federal budget accounting practices, contributions to the Fund beyond what are required to pay benefits to members and dependents that year have no impact on the total federal deficit. Just as with the pay-as-you-go method, the only transactions that directly affect the deficit in the education benefits accounting process are payments for benefits.

SECTION 7 – EDUCATION BENEFITS FUND TRANSACTION PROCESS **(cont.)**

Effect of the EBF transaction process on the debt

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

Suppose that the amount needed to pay for members' and dependents' benefits was \$400 million and the Fund had grown to \$2 billion. The following transactions would take place:

- Fund cashes in \$400 million in securities (credit).
- Treasury pays \$400 million to the Fund (debit).
- Net federal surplus zero.

Since no budget surplus can be derived from using Fund money, the government still has a need for \$400 million to pay for benefits—the same need it would have under the pay-as-you-go system. Accordingly, the Fund cannot transfer liabilities from one tax year to another.

Effect of the EBF transaction process on the DoD budget

The EBF transaction process has an effect on the **DoD budget**. With the per capita cost payments in the DoD budget, policymakers are forced to consider how manpower decisions affect future costs. For example, if a decision were made today to double the number of active duty members given kicker benefits under a 6-year contract, the DoD budget would have an immediate increase in obligations. Under the pay-as-you-go method, the expenses would not necessarily be considered to the same extent in the initial decision since they would not show up for several years (typically, active duty kickers are used after a service member completes their contract).

Effect of the EBF transaction process on benefit security

The EBF transaction process also provides benefit security that the pay-as-you-go method does not. In the short term, the EBF transaction process provides benefit security because it is not dependent on obtaining the necessary appropriation from Congress each year in order to pay benefits. In the long term, the EBF transaction process provides benefit security because it helps prevent benefits from being over-extended and later reduced.

APPENDIX A – DESCRIPTION OF BENEFITS

The descriptions in this appendix are intended as an overview. For more detailed information visit the links suggested.

Chapter 30 Kicker Eligibility

A member cannot receive a Chapter 30 kicker benefit without being eligible to receive the Chapter 30 basic or the Chapter 33 basic benefit. Service members may be eligible if they have an honorable discharge, a high school diploma or GED or in some cases 12 hours of college credit, and meet the requirements of one of the four main categories. Categories I, II, and IV are described below and Category III is described in a separate section. For more detailed information visit: https://www.benefits.va.gov/gibill/mgib_ad.asp.

Category I includes those who entered active duty for the first time after June 30, 1985, and had military pay reduced by \$100 a month for the first 12 months. The member must have a) continuously served for 3 years, b) served for 2 years if he or she first enlisted for 2 years, or c) served for 2 years if he or she entered the selected reserve within a year of leaving active duty and served 4 years in the selected reserve.

Category II includes those who entered active duty before January 1, 1977, served at least 1 day between October 19, 1984 and June 30, 1985, and stayed on active duty through June 30, 1988 (or stayed on active duty through June 30, 1987, if they entered the selected reserve within 1 year of leaving active duty and served 4 years). The member must have had entitlement left from the Vietnam-Era GI Bill on December 31, 1989.

Category IV includes those who were on active duty on October 9, 1996, had money remaining in a Veteran's Educational Assistance Program (VEAP) account on that date, and elected Montgomery GI-Bill (MGIB) by October 9, 1997. Another way to be included in Category IV would have been to enter full-time National Guard duty under Title 32, USC between July 1, 1985 and November 28, 1989 and have elected MGIB during the period October 9, 1996 through July 8, 1997. Under either way, the member would have had to have military pay reduced by \$100 a month for 12 months or have made a \$1,200 lump-sum contribution.

Chapter 30 Kicker Benefit Amount

The Secretary of Defense may increase the basic benefit up to an additional \$950 per month. Kicker amounts do not receive cost-of-living increases.

Chapter 30 Kicker Restrictions

Generally, members are eligible to use the benefit up to 10 years after the date of their last discharge, but the number of years can vary, depending on the situation.

APPENDIX A – DESCRIPTION OF BENEFITS (cont.)

Chapter 33 Kicker Service Member Eligibility

A member cannot receive a Chapter 33 kicker benefit without being eligible to receive the Chapter 33 basic benefit. Service members may be eligible if they have served at least 90 days of aggregate active duty service after September 10, 2001, and are still on active duty, or if they are honorably discharged or were discharged with a service-connected disability after 30 days. For more detailed information, visit https://www.benefits.va.gov/gibill/post911_gibill.asp.

Chapter 33 Kicker Transferred Benefit Eligibility

The transferability option under the Post-9/11 GI Bill allows service members to transfer all or some unused benefits to their spouse or dependent children. The Forever GI Bill expands transferability eligibility in certain cases for Purple Heart recipients; the impact of this is expected to be minor and no explicit adjustment has been made to the valuation. The option to transfer is open to any member of the armed forces active duty or Selected Reserve, officer or enlisted who is eligible for the Post-9/11 GI Bill, and meets the following criteria: 1) has at least six years of service in the armed forces (active duty and/or Selected Reserve) on the date of approval and agrees to serve four additional years in the armed forces from the date of election or 2) has at least 10 years of service in the armed forces (active duty and/or Selected Reserve) on the date of approval, is precluded by either standard policy (by Service Branch or DoD) or statute from committing to four additional years, and agrees to serve for the maximum amount of time allowed by such policy or statute.

Spouses 1) may start to use the benefit immediately, 2) may use the benefit while the member remains in the Armed Forces or after separation from active duty, 3) are not eligible for the monthly housing allowance while the member is serving on active duty, and 4) can use the benefit for up to 15 years after the service member's last separation from active duty.

Children 1) may start to use the benefit only after the individual making the transfer has completed at least 10 years of service in the armed forces, 2) may use the benefit while the eligible individual remains in the armed forces or after separation from active duty, 3) may not use the benefit until he or she has attained a secondary school diploma (or equivalency certificate), or he or she has reached age 18, 4) are entitled to the monthly housing allowance stipend even though the eligible individual is on active duty, and 5) are not subject to the 15-year delimiting date, but may not use the benefit after reaching 26 years of age.

Chapter 33 Kicker Benefit Amount

The Secretary of Defense may increase the basic benefit up to an additional \$950 per month. Kicker amounts do not receive cost-of-living increases. Chapter 33 kicker benefits are values between and including \$150 and \$950, increasing in \$100 increments.

Chapter 33 Kicker Restrictions

For Veterans who left active duty on or after January 1, 2013, the period of eligibility for the Post-9/11 GI Bill does not end (for Chapter 30 and Category III, the period of eligibility ends 10 years from date of the last discharge or release from active duty). For Veterans who left active duty before January 1, 2013, the period of eligibility ends 15 years from the date of last discharge from active duty.

APPENDIX A – DESCRIPTION OF BENEFITS (cont.)

Chapter 1606 Basic and Kicker Eligibility

Eligible members must have had a six-year obligation to serve in the Selected Reserve signed after June 30, 1985. Officers must have agreed to serve 6 years in addition to their original obligation. For some types of training, it is necessary to have a six-year commitment that begins after September 30, 1990. Members must have completed their initial active duty for training (IADT). Members must meet the requirement to receive a high school diploma or equivalency certificate before completing IADT. Lastly, members must remain in good standing while serving in the Selected Reserve. For more detailed information, visit https://www.benefits.va.gov/gibill/mgib_sr.asp.

At the discretion of the Secretary concerned, a member may receive a Chapter 1606 kicker benefit if that member's occupation has been designated as a critical occupational specialty.

Chapter 1606 Basic and Kicker Benefit Amount

The full-time institutional training rate is \$384 per month for fiscal year 2019. This rate became effective October 1, 2018. Fractional amounts may apply for less than full-time education.

The basic benefit may be increased by a kicker benefit of as much as \$350 per month for recruits in critical skills or critical specialties.

Consumer Price Index (CPI) increases are given to the basic benefit, but not to the kicker benefit.

Chapter 1606 Basic and Kicker Restrictions

The maximum number of months of educational assistance that may be provided to any member under this chapter is 36.

Generally, the entitlement period for a member of the Selected Reserve expires at the date the member is separated from the Selected Reserve. For persons involuntarily separated from October 1, 1991 to September 30, 2001, or from October 1, 2007 to September 30, 2014, or for persons separated for disability not the result of willful misconduct, the period of entitlement expires at the end of the 14-year period beginning on the date on which the person became entitled to the benefit. The time period does not run if the member is prevented from pursuing a program of education because of a mental or physical disability incurred in or aggravated by service in the Selected Reserve.

APPENDIX A – DESCRIPTION OF BENEFITS (cont.)

Chapter 1607 (REAP) Eligibility

The National Defense Authorization Act of 2016 ended REAP on November 25, 2015. Some individuals remained eligible for REAP benefits until November 25, 2019, while others are no longer eligible for REAP benefits. While counts were not used directly in the latest valuation, DMDC data indicates there are only 3,359 REAP eligible members as of November 2019. For more detailed information visit: <https://www.benefits.va.gov/gibill/reap.asp>.

Chapter 1607 Benefit Amount

Each member is eligible for a portion of the Montgomery GI Bill Active Duty (MGIB-AD) 3-year benefit rate. The following rates become effective October 1, 2018:

- Members who serve 90 days to less than 1 year receive:
40% of the MGIB-AD 3-year rate or \$797.60 per month
- Members who serve 1 year but less than 2 years receive:
60% of the MGIB-AD 3-year rate or \$1,196.40 per month
- Members who serve 2 or more continuous years (or 3 years cumulative) receive:
80% of the MGIB-AD 3-year rate or \$1,595.20 per month

Annual increases for Chapter 1607 are linked to the MGIB-AD annual increases as determined by the National Center for Education Statistics' index reflecting the average cost of undergraduate tuition.

Chapter 1607 Restrictions

For a member of the Selected Reserve who has completed a service obligation, the period of eligibility ends on the earlier of November 25, 2019 or 10 years from the date of the last discharge or release from the Selected Reserve. For members separated while serving in the Individual Ready Reserve or members who have not completed a service obligation, eligibility ends upon separation from either the Individual Ready Reserve or Selected Reserve, as applicable.

APPENDIX A – DESCRIPTION OF BENEFITS (cont.)

Category III Eligibility

To qualify under Category III, a member must not be eligible under Category I or Category II¹, must have been on active duty on September 30, 1990, elected MGIB before being separated, and before separation must have had military pay reduced by \$1,200. In addition, the member must have an involuntary separation after February 2, 1991, or have been voluntarily separated under either VSI or SSB. For more detailed information visit: https://www.benefits.va.gov/gibill/mgib_ad.asp.

Category III Benefit Amounts

The full-time institutional training rate is \$1,994 per month for fiscal year 2019. This rate became effective October 1, 2018. Fractional amounts may apply for less than full-time education.

Annual increases for Category III are determined by the National Center for Education Statistics' index reflecting the average cost of undergraduate tuition.

Category III Restrictions

Generally, members are eligible to use the benefit up to 10 years after the date of their last discharge. However, if the member's eligibility is based on 2 years of active duty and 4 years in the Selected Reserve, the 10 years begins on the date of release from active duty, or the date of completion of the four-year Selected Reserve obligation, whichever is later.

¹ Note that only a portion of Category III benefits are paid by the Fund.

APPENDIX A – DESCRIPTION OF BENEFITS (cont.)

Restrictions for all EBF Benefits

Members entitled to educational assistance under a program established by the MGIB who are also eligible for assistance under another educational assistance program may not receive assistance under both programs simultaneously; they must choose one or the other.

If a member is eligible for more than one program, they must notify VA in writing which program they intend to use before enrolling in training.

No member may receive basic benefits from any one program for more than 36 months or its equivalent in part-time educational assistance. Excluding transferred benefits, a member may only receive a total of 48 months of benefits from all benefit programs combined.

If a member is eligible for the Post-9/11 GI Bill and another benefit program (like the Montgomery GI Bill - Active Duty), they must make an irrevocable election in writing before receiving any Post-9/11 GI Bill benefits. This means they cannot change back to the other program after they receive any Post-9/11 GI Bill benefits.

https://gibill.custhelp.va.gov/app/answers/detail/a_id/523 offers more detailed information.

https://www.benefits.va.gov/GIBILL/comparison_chart.asp offers some comparison tools for several types of VA education and training benefits.

APPENDIX B – POPULATION DATA

Chapter 30 and 33 “Kicker” Eligibles

	<u>Sept. 30, 2017</u>	<u>Sept. 30, 2018</u>
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
Total	183,304	162,838
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

APPENDIX B – POPULATION DATA (cont.)**Chapter 1606 Eligibles**

	<u>Sept. 30, 2017</u>	<u>Sept. 30, 2018</u>
1606 Eligibles, Excluding 33 Eligibles		
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
<u>Coast Guard Reserve</u>	<u>497</u>	<u>425</u>
Total	194,317	197,569
Eligible for a \$100 Kicker Benefit		
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
<u>Coast Guard Reserve</u>	<u>0</u>	<u>0</u>
Total	10,928	7,578
Eligible for a \$200 Kicker Benefit		
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
<u>Coast Guard Reserve</u>	<u>0</u>	<u>0</u>
Total	48,286	47,477
Eligible for a \$350 Kicker Benefit		
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
<u>Coast Guard Reserve</u>	<u>0</u>	<u>0</u>
Total	64,968	61,815

APPENDIX B – POPULATION DATA (cont.)

Category III Eligibles¹

Number of Voluntary and Involuntary Separates at End of Fiscal Year

	<u>Sept. 30, 2017</u>	<u>Sept. 30, 2018</u>
Enrolled, But No Benefit Usage		
Army	16	3
Navy	359	232
Marine Corps	9	6
Air Force	20	14
<u>Coast Guard</u>	<u>6</u>	<u>4</u>
Total	411	259
Enrolled, Has Used The Benefit		
Army	17	3
Navy	1,034	924
Marine Corps	14	8
Air Force	34	24
<u>Coast Guard</u>	<u>17</u>	<u>13</u>
Total	1,117	971
Total		
Army	34	7
Navy	1,393	1,156
Marine Corps	23	13
Air Force	55	37
<u>Coast Guard</u>	<u>23</u>	<u>17</u>
Total	1,527	1,230

¹ This includes only those involuntary and voluntary separates whose basic benefit is paid from the Department of Defense Education Benefits Fund. This includes separates who entered the service after December 31, 1976 and before July 1, 1985. Counts may increase due to DMDC data adjustments.

APPENDIX C – ASSUMPTIONS AND METHODS

Board Minutes Links

Minutes documenting the Board meetings addressing methods and assumptions for the September 30, 2017 valuation and the September 30, 2018 valuation can be found here:

<https://actuary.defense.gov/External-Links/>

Actuarial Assumptions

Actual experience of the programs will not coincide exactly with assumed experience, regardless of the choice of the assumptions, the skill of the actuary, and the precision of the calculations. Each valuation provides a complete recalculation of assumed future experience and takes into account past differences between assumed and actual experience. The result is a series of adjustments to the computed expense. The assumptions are modified annually to reflect experience trends and future expectations.

General Methodology Notes: Rate Determination

Programs for which data is available depend on rates¹ determined by actual experience in the most recent 10-year period with adjustments when results are based on too few cases to be credible as well as adjustments for future expectations. Recent years' historical experience is weighted more heavily than older years. For active duty rates, each year is weighted 20% less than the year after it. For Reserve program rates, such weight is 40% less. Usage may be adjusted if it is expected to deviate from historical averages when different conditions may be forecast than existed during the time period the historical rates were taken. This year, as in previous years, aggregate model expectations have been adjusted to account for the poor quality of data.

¹"Rate" refers to probabilities or averages, for example, the probability of staying in service, probability of using the benefit in a given year, or average months of benefit used in a given year.

APPENDIX C – ASSUMPTIONS AND METHODS (cont.)

General Methodology Notes: Pre-Funding, Per Capita Costs, and Liability Calculations

All benefits are pre-funded except for Category III benefits. For all pre-funded benefits, monthly contributions known as per capita costs go into the Fund. Per capitas are reduced, if possible, by transferring money between programs within the same service or component. For all pre-funded benefits with a projected deficit, if assets cannot be transferred between programs to reduce such a deficit to \$0, a portion of the unfunded liability is scheduled to be paid on the first day of the projected fiscal year. The annual amortization payment and the monthly per capita costs are collectively referred to in this report as contributions to the Fund.

Per capita costs are the amounts needed to pay the benefits of persons entering the various programs. Per capita costs reflect the time value of money, the fact that not everyone uses the entire benefit for which they could become eligible, differences between services and components, and differences between programs. Per capita costs are reduced when a service or component has a projected surplus. In such cases, the per capita cost represents the normal cost reduced for surplus.

Calculating the actuarial liability is similar to calculating the per capita costs. For both calculations, we find the expected value of the benefits for those participants eligible to receive benefits in the future, adjusted for the time value of money. However, the per capita cost and the actuarial liability calculations are different in terms of the population involved and the time at which benefits are valued. The per capita cost calculation uses a hypothetical new-entrant group, whereas the liability calculation uses the actual census population as of the valuation date.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. OACT did not perform an analysis of the range of such future measurements except for a brief interest sensitivity analysis.

General Methodology Notes: Amortization of Unfunded Liability

Unfunded liabilities are amortized over 5 years for reserve components and 10 years for active duty components. Each year, the amortization calculation is given a fresh start based on that year's unfunded liabilities. While this amortization method asymptotically approaches full funding, technically, the fund does not actually reach full funding until many years into the future (well beyond the original amortization period of 5 or 10 years).

General Methodology Notes: Normal Cost Calculation

In addition to the approach outlined in the "Methodology" section above, the normal cost can be derived by multiplying the "Average Benefit Amount" by the "Percent of Benefit Used", the "Discount Factor", and 36 months, as detailed on the pages 35 through 38. "Average Benefit Amount" is the dollar amount for benefits that are not indexed; for benefits that are indexed, it reflects the effect of future projected increases to the benefit. "Percent of Benefit Used" reflects what portion (of a hypothetical new entrant group) is projected to become eligible and use the benefit and how much of the potential 36-month total entitlement is projected to be used. "Discount Factor" reflects the reduction in the normal cost due to discounting for interest and changes in timing due to other assumptions. For example, a discount factor of 0.800 indicates the normal cost is 20% less than it otherwise would be if calculated with a zero interest rate.

APPENDIX C – ASSUMPTIONS AND METHODS (cont.)

Post-9/11 GI Bill Methodology Transferability Note

Transferability has been implemented for Chapter 30 kicker benefits taken with Chapter 33. Members elect transferability at the 6 year-of-service point and can transfer any amount of unused benefits up to the full 36-month entitlement. Members must serve 4 additional years with some exceptions for those nearing retirement. The costs for transferability are implicit in the Chapter 30 kicker valuation, as usage rates reflect both member and dependent usage.

Chapter 1607 Methodology Notes

Public Law 114-92, The National Defense Authorization Act of 2016, sunsetted REAP on November 25, 2015. Some individuals will remain eligible for REAP benefits until November 25, 2019, while others are no longer eligible for REAP benefits.

Liabilities for Chapter 1607 are calculated by projecting current benefit payments forward with monthly seasonality and expected cost of college adjustments. Fund surpluses in Chapter 1607 will be used to decrease Chapter 1606 contributions for the respective guard or reserve component, although sufficient monies are left in Chapter 1607 accounts to maintain a 20% margin (a judgmental adjustment). There are no per capita costs for Chapter 1607 because the program no longer has new entrants.

Chapter 1606 Methodology Notes

Adjustments for Data Deficiencies: It was appropriate for the 1606 model to compensate for known deficiencies in the available data. Increases to the base 1606 model were made as follows:

	<u>Sept. 30, 2017</u>	<u>Sept. 30, 2018</u>
Army National Guard	109%	78%
Army Reserve	103%	100%
Navy Reserve	97%	101%
Marine Corps Reserve	99%	98%
Air National Guard	100%	96%
Air Force Reserve	103%	91%
<u>Coast Guard Reserve</u>	<u>136%</u>	<u>81%</u>
All Components (Inc CG)	105%	87%

APPENDIX C – ASSUMPTIONS AND METHODS (cont.)

Economic Assumptions

The Board of Actuaries, independently of DoD, approves the methods and assumptions used to determine the costs of these programs. In July 2019, the DoD Board of Actuaries approved the following economic assumptions for use in the valuation as of September 30, 2018.

Interest Rate

The Board set the interest rate assumption at 3.25% annually.

Inflation

Annual inflation for the Chapter 1606 basic benefit is calculated, per Section 16131 (b) (2) of Title 10, USC, as the percentage increase, rounded to the nearest dollar, of the rate equal to the percentage by which the CPI (all items, United States city average) for the 12-month period ending on the June 30 preceding the beginning of the fiscal year for which the increase is made, exceed such CPI for the preceding 12-month period. The ultimate rate of inflation (CPI) is assumed to be 2.1% per year and the select (short-term) rates are given in the table below. These rates are projected using Blue Chip financial forecasts. Note that the only benefit covered by the EBF that is directly adjusted by this CPI index is the Chapter 1606 basic benefit.

			<u>Last</u>	<u>This</u>
			<u>year</u>	<u>Year</u>
FY 2019	to	FY 2020	2.9%	2.1%
FY 2020	to	FY 2021	2.3%	2.6%
FY 2021	to	FY 2022	2.3%	2.1%
FY 2022	to	FY 2023	2.3%	2.1%
FY 2023	to	FY 2024	2.3%	2.2%
FY 2024	to	FY 2025	2.2%	2.2%
FY 2025	to	FY 2026	2.2%	2.1%
FY 2026	to	FY 2027	2.2%	2.1%

Annual inflation for Chapter 30 and Chapter 1607 is based on the National Center for Education Statistics' average cost of undergraduate tuition. The future rate of inflation for these chapters is assumed to be 5.0% per year.

APPENDIX C – ASSUMPTIONS AND METHODS (cont.)**Chapter 30/33 Usage Assumptions FY 2021**

	<u>Avg Benefit</u>	<u>Percent of</u>	<u>Discount</u>	<u>Normal Cost</u>
Chapter 30/33 Kicker	<u>Amt</u>	<u>Benefit Used</u>	<u>Factor</u>	
Army 2 Year	\$150	47.4%	74.3%	\$1,901
Army 2 Year	\$250	47.9%	74.4%	\$3,204
Army 2 Year	\$350	48.4%	74.5%	\$4,537
Army 2 Year	\$450	48.8%	74.6%	\$5,897
Army 2 Year	\$550	49.3%	74.6%	\$7,284
Army 2 Year	\$650	49.7%	74.7%	\$8,697
Army 2 Year	\$750	50.2%	74.8%	\$10,136
Army 2 Year	\$850	50.6%	74.9%	\$11,600
Army 2 Year	\$950	51.1%	74.9%	\$13,088
Chapter 30/33 Kicker				
Army 3 Year	\$150	46.9%	72.1%	\$1,828
Army 3 Year	\$250	47.4%	72.2%	\$3,081
Army 3 Year	\$350	47.9%	72.3%	\$4,362
Army 3 Year	\$450	48.4%	72.4%	\$5,669
Army 3 Year	\$550	48.8%	72.4%	\$7,001
Army 3 Year	\$650	49.3%	72.5%	\$8,359
Army 3 Year	\$750	49.7%	72.6%	\$9,740
Army 3 Year	\$850	50.1%	72.7%	\$11,145
Army 3 Year	\$950	50.5%	72.7%	\$12,573
Chapter 30/33 Kicker				
Army 4 Year	\$150	45.7%	70.3%	\$1,736
Army 4 Year	\$250	46.2%	70.3%	\$2,923
Army 4 Year	\$350	46.6%	70.4%	\$4,135
Army 4 Year	\$450	47.0%	70.5%	\$5,369
Army 4 Year	\$550	47.4%	70.6%	\$6,625
Army 4 Year	\$650	47.8%	70.6%	\$7,903
Army 4 Year	\$750	48.2%	70.7%	\$9,201
Army 4 Year	\$850	48.6%	70.8%	\$10,520
Army 4 Year	\$950	49.0%	70.8%	\$11,859
Chapter 30/33 Kicker				
Army 5 Year	\$150	44.7%	69.1%	\$1,665
Army 5 Year	\$250	45.0%	69.1%	\$2,801
Army 5 Year	\$350	45.4%	69.2%	\$3,957
Army 5 Year	\$450	45.8%	69.2%	\$5,133
Army 5 Year	\$550	46.1%	69.3%	\$6,326
Army 5 Year	\$650	46.4%	69.4%	\$7,539
Army 5 Year	\$750	46.8%	69.4%	\$8,768
Army 5 Year	\$850	47.1%	69.5%	\$10,015
Army 5 Year	\$950	47.4%	69.5%	\$11,279

APPENDIX C – ASSUMPTIONS AND METHODS (cont.)**Chapter 30/33 Usage Assumptions FY 2021 (cont.)**

<u>Chapter 30/33 Kicker</u>	<u>Avg Benefit Amt</u>	<u>Percent of Benefit Used</u>	<u>Discount Factor</u>	<u>Normal Cost</u>
Army 6 Year	\$150	42.5%	66.9%	\$1,533
Army 6 Year	\$250	42.8%	66.9%	\$2,579
Army 6 Year	\$350	43.1%	67.0%	\$3,642
Army 6 Year	\$450	43.5%	67.1%	\$4,722
Army 6 Year	\$550	43.8%	67.1%	\$5,820
Army 6 Year	\$650	44.1%	67.2%	\$6,934
Army 6 Year	\$750	44.4%	67.2%	\$8,064
Army 6 Year	\$850	44.7%	67.3%	\$9,209
Army 6 Year	\$950	45.0%	67.3%	\$10,369
<u>Chapter 30/33 Kicker</u>				
Navy 4 Year	\$150	52.9%	66.9%	\$1,913
Navy 4 Year	\$250	53.4%	67.0%	\$3,222
Navy 4 Year	\$350	53.9%	67.1%	\$4,556
Navy 4 Year	\$450	54.3%	67.2%	\$5,915
Navy 4 Year	\$550	54.8%	67.3%	\$7,297
Navy 4 Year	\$650	55.2%	67.4%	\$8,702
Navy 4 Year	\$750	55.6%	67.4%	\$10,128
Navy 4 Year	\$850	56.0%	67.5%	\$11,576
Navy 4 Year	\$950	56.4%	67.6%	\$13,043
<u>Chapter 30/33 Kicker</u>				
Marine Corps 4 Year	\$150	47.4%	73.7%	\$1,887
Marine Corps 4 Year	\$250	47.8%	73.8%	\$3,173
Marine Corps 4 Year	\$350	48.2%	73.8%	\$4,482
Marine Corps 4 Year	\$450	48.5%	73.9%	\$5,811
Marine Corps 4 Year	\$550	48.9%	74.0%	\$7,162
Marine Corps 4 Year	\$650	49.3%	74.0%	\$8,532
Marine Corps 4 Year	\$750	49.6%	74.1%	\$9,923
Marine Corps 4 Year	\$850	50.0%	74.1%	\$11,332
Marine Corps 4 Year	\$950	50.3%	74.2%	\$12,759
<u>Chapter 30/33 Kicker</u>				
Marine Corps 5 Year	\$150	47.6%	71.9%	\$1,849
Marine Corps 5 Year	\$250	48.0%	71.9%	\$3,109
Marine Corps 5 Year	\$350	48.4%	72.0%	\$4,390
Marine Corps 5 Year	\$450	48.8%	72.0%	\$5,692
Marine Corps 5 Year	\$550	49.1%	72.1%	\$7,014
Marine Corps 5 Year	\$650	49.5%	72.1%	\$8,355
Marine Corps 5 Year	\$750	49.8%	72.2%	\$9,715
Marine Corps 5 Year	\$850	50.2%	72.2%	\$11,093
Marine Corps 5 Year	\$950	50.5%	72.3%	\$12,489

APPENDIX C – ASSUMPTIONS AND METHODS (cont.)**Chapter 30/33 Usage Assumptions FY 2021 (cont.)**

	<u>Avg Benefit</u>	<u>Percent of</u>	<u>Discount</u>	
<u>Chapter 30/33 Kicker</u>	<u>Amt</u>	<u>Benefit Used</u>	<u>Factor</u>	<u>Normal Cost</u>
Marine Corps 6 Year	\$150	47.9%	69.2%	\$1,787
Marine Corps 6 Year	\$250	48.3%	69.2%	\$3,006
Marine Corps 6 Year	\$350	48.6%	69.3%	\$4,245
Marine Corps 6 Year	\$450	49.0%	69.3%	\$5,504
Marine Corps 6 Year	\$550	49.4%	69.4%	\$6,783
Marine Corps 6 Year	\$650	49.7%	69.4%	\$8,081
Marine Corps 6 Year	\$750	50.1%	69.5%	\$9,397
Marine Corps 6 Year	\$850	50.4%	69.6%	\$10,730
Marine Corps 6 Year	\$950	50.8%	69.6%	\$12,082
 <u>Chapter 30/33 Kicker</u>				
Coast Guard 4 Year	\$150	47.0%	58.9%	\$1,495
Coast Guard 4 Year	\$250	47.3%	58.9%	\$2,508
Coast Guard 4 Year	\$350	47.5%	59.0%	\$3,532
Coast Guard 4 Year	\$450	47.8%	59.0%	\$4,569
Coast Guard 4 Year	\$550	48.0%	59.1%	\$5,616
Coast Guard 4 Year	\$650	48.2%	59.2%	\$6,675
Coast Guard 4 Year	\$750	48.4%	59.2%	\$7,744
Coast Guard 4 Year	\$850	48.7%	59.3%	\$8,824
Coast Guard 4 Year	\$950	48.9%	59.3%	\$9,913

APPENDIX C – ASSUMPTIONS AND METHODS (cont.)

Chapter 1606 Usage Assumptions FY 2021

	<u>Average</u> <u>Benefit Amount</u>	<u>Percent of</u> <u>Benefit Used</u>	<u>Discount</u> <u>Factor</u>	<u>Normal</u> <u>Cost</u>
Chapter 1606 Basic				
Army National Guard	\$422	13.4%	92.9%	\$1,895
Army Reserve	\$423	9.1%	92.4%	\$1,278
Navy Reserve	\$426	5.3%	91.5%	\$745
Marine Corps Reserve	\$424	11.1%	92.3%	\$1,566
Air National Guard	\$420	18.2%	93.7%	\$2,569
Air Force Reserve	\$423	4.3%	92.5%	\$603
Coast Guard Reserve	\$423	11.1%	92.6%	\$1,564
Chapter 1606 Kicker - \$100				
Army National Guard	\$100	16.6%	80.3%	\$481
Army Reserve	\$100	18.2%	82.5%	\$540
Navy Reserve	\$100	31.7%	91.0%	\$1,038
Marine Corps Reserve	\$100	29.6%	91.6%	\$977
Air National Guard	\$100	25.9%	80.8%	\$755
Air Force Reserve	\$100	25.8%	80.8%	\$750
Coast Guard Reserve	\$100	19.5%	83.5%	\$588
Chapter 1606 Kicker - \$200				
Army National Guard	\$200	17.0%	80.7%	\$987
Army Reserve	\$200	20.1%	82.9%	\$1,202
Navy Reserve	\$200	30.4%	90.7%	\$1,986
Marine Corps Reserve	\$200	24.6%	91.0%	\$1,611
Air National Guard	\$200	26.6%	81.1%	\$1,551
Air Force Reserve	\$200	26.3%	81.1%	\$1,536
Coast Guard Reserve	\$200	23.5%	86.8%	\$1,471
Chapter 1606 Kicker - \$350				
Army National Guard	\$350	30.3%	87.8%	\$3,353
Army Reserve	\$350	21.8%	82.6%	\$2,265
Navy Reserve	\$350	37.1%	91.1%	\$4,265
Marine Corps Reserve	\$350	29.9%	91.5%	\$3,445
Air National Guard	\$350	28.4%	82.0%	\$2,932
Air Force Reserve	\$350	27.5%	81.8%	\$2,829
Coast Guard Reserve	\$350	30.2%	87.1%	\$3,313

* Currently offered by the component.

APPENDIX D – FUND HISTORY¹

(\$ in millions)

Chapter 30 & 33 Kicker Benefit Contributions

<u>FY</u>	<u>Army</u>	<u>Navy</u>	<u>Marine Corps</u>	<u>Coast Guard</u>	<u>Total</u>
2009	\$86.5	\$10.9	\$10.8	\$0.0	\$108.1
2010	\$171.8	\$28.2	\$4.6	\$0.0	\$204.5
2011	\$35.9	\$19.9	\$11.6	\$0.1	\$67.5
2012	\$13.6	\$19.7	\$4.9	\$0.1	\$38.3
2013	\$0.0	\$22.9	\$3.2	\$0.4	\$26.5
2014	\$0.0	\$18.2	\$2.4	\$0.4	\$20.9
2015	\$0.0	\$20.2	\$7.0	\$0.3	\$27.5
2016	\$4.4	\$19.2	\$9.6	\$0.3	\$33.5
2017	\$0.3	\$16.3	\$7.1	\$0.3	\$23.9
2018	\$15.9	\$16.6	\$8.6	\$0.2	\$41.3

Chapter 30 & 33 Kicker Benefit Interest

<u>FY</u>	<u>Army</u>	<u>Navy</u>	<u>Marine Corps</u>	<u>Coast Guard</u>	<u>Total</u>
2009	\$7.5	\$1.0	\$1.6	\$0.0	\$10.1
2010	\$18.1	\$1.9	\$2.9	\$0.0	\$23.0
2011	\$29.2	\$2.4	\$4.1	(\$0.0)	\$35.8
2012	\$21.0	\$1.6	\$2.9	(\$0.0)	\$25.5
2013	\$21.9	\$1.6	\$2.8	\$0.0	\$26.3
2014	\$17.9	\$1.2	\$2.1	\$0.0	\$21.2
2015	\$13.0	\$0.9	\$1.4	\$0.0	\$15.4
2016	\$12.5	\$1.0	\$1.4	\$0.0	\$15.0
2017	\$12.4	\$1.2	\$1.4	\$0.0	\$15.0
2018	\$12.7	\$1.5	\$1.5	\$0.0	\$15.7

Chapter 30 & 33 Kicker Benefit Payments

<u>FY</u>	<u>Army</u>	<u>Navy</u>	<u>Marine Corps</u>	<u>Coast Guard</u>	<u>Total</u>
2009	\$36.4	\$31.6	\$15.6	\$0.1	\$83.7
2010	\$45.3	\$37.4	\$17.3	\$0.1	\$100.1
2011	\$39.7	\$28.0	\$13.3	\$0.1	\$81.2
2012	\$56.4	\$30.1	\$16.9	\$0.1	\$103.6
2013	\$71.8	\$27.8	\$19.7	\$0.2	\$119.5
2014	\$84.9	\$24.8	\$20.5	\$0.1	\$130.4
2015	\$86.1	\$21.9	\$19.6	\$0.1	\$127.7
2016	\$82.2	\$18.7	\$17.2	\$0.1	\$118.1
2017	\$72.2	\$14.7	\$14.0	\$0.1	\$101.0
2018	\$61.9	\$12.9	\$10.9	\$0.1	\$85.8

Chapter 30 & 33 Kicker Benefit End of Year Fund Balance

<u>FY</u>	<u>Army</u>	<u>Navy</u>	<u>Marine Corps</u>	<u>Coast Guard</u>	<u>Total</u>
2009	\$559.3	\$60.4	\$109.2	\$0.0	\$729.0
2010	\$703.9	\$53.1	\$99.4	(\$0.1)	\$856.4
2011	\$729.4	\$47.4	\$101.8	(\$0.1)	\$878.5
2012	\$707.6	\$38.6	\$92.7	(\$0.1)	\$838.7
2013	\$657.1	\$35.2	\$79.0	\$0.1	\$771.5
2014	\$589.6	\$29.9	\$62.9	\$0.4	\$682.8
2015	\$516.6	\$29.1	\$51.8	\$0.6	\$598.1
2016	\$451.3	\$30.7	\$45.6	\$0.8	\$528.4
2017	\$391.8	\$33.5	\$40.1	\$1.0	\$466.4
2018	\$358.5	\$38.6	\$39.2	\$1.2	\$437.6

¹The breakouts (by component and program) show OACT’s internal allocation of the Fund. There is only one EBF.

APPENDIX D – FUND HISTORY (cont.)

(\$ in millions)

Chapter 1606 Basic and Kicker Benefit Contributions

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$113.7	\$63.0	\$4.4	\$10.5	\$43.3	\$5.4	\$0.9	\$241.2
2010	\$114.8	\$54.1	\$3.8	\$18.1	\$38.2	\$13.6	\$0.8	\$243.4
2011	\$62.6	\$29.3	\$2.3	\$8.2	\$31.3	\$11.4	\$1.6	\$146.8
2012	\$28.8	\$22.8	\$1.5	\$6.6	\$28.4	\$14.6	\$0.4	\$103.1
2013	\$49.3	\$19.1	\$0.7	\$4.7	\$29.9	\$12.2	\$0.0	\$115.9
2014	\$14.2	\$6.7	\$0.4	\$1.2	\$16.0	\$3.4	\$0.4	\$42.2
2015	\$13.0	\$9.9	\$0.0	\$0.6	\$21.3	\$3.7	\$0.0	\$48.7
2016	\$13.4	\$8.9	\$0.0	\$0.4	\$11.0	\$2.4	\$0.0	\$36.1
2017	\$1.3	\$5.4	\$0.2	\$0.8	\$10.3	\$1.5	\$0.0	\$19.6
2018	\$66.3	\$32.4	\$0.1	\$3.9	\$20.8	\$2.9	\$0.0	\$126.3

Chapter 1606 Basic and Kicker Benefit Interest

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$5.5	\$3.4	\$0.4	\$0.7	\$0.9	\$0.3	\$0.0	\$11.2
2010	\$12.1	\$7.4	\$0.7	\$1.4	\$2.0	\$0.7	\$0.1	\$24.3
2011	\$17.4	\$10.4	\$1.0	\$2.3	\$3.1	\$1.2	\$0.1	\$35.6
2012	\$11.8	\$7.1	\$0.8	\$1.8	\$3.1	\$1.5	\$0.1	\$26.2
2013	\$12.0	\$7.2	\$0.9	\$2.0	\$3.4	\$1.9	\$0.1	\$27.6
2014	\$9.7	\$5.2	\$0.8	\$1.7	\$2.6	\$1.7	\$0.1	\$21.7
2015	\$8.1	\$3.5	\$0.5	\$1.2	\$2.0	\$1.2	\$0.1	\$16.8
2016	\$8.1	\$3.9	\$0.9	\$1.4	\$2.4	\$1.7	\$0.1	\$18.6
2017	\$8.6	\$4.1	\$0.9	\$1.4	\$2.6	\$1.9	\$0.1	\$19.7
2018	\$9.2	\$4.5	\$1.0	\$1.4	\$2.7	\$2.1	\$0.1	\$21.0

Chapter 1606 Basic and Kicker Benefit Benefit Payments

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$66.7	\$28.4	\$5.0	\$7.0	\$27.3	\$9.0	\$0.8	\$144.2
2010	\$87.4	\$42.7	\$5.1	\$6.7	\$28.9	\$8.8	\$0.6	\$180.2
2011	\$89.7	\$49.1	\$4.5	\$6.7	\$28.7	\$8.1	\$0.4	\$187.3
2012	\$84.5	\$50.0	\$4.3	\$6.2	\$27.5	\$8.7	\$0.3	\$181.5
2013	\$79.8	\$49.5	\$4.5	\$7.4	\$25.9	\$9.1	\$0.3	\$176.6
2014	\$77.2	\$45.5	\$4.9	\$8.3	\$24.7	\$9.8	\$0.4	\$170.9
2015	\$75.4	\$40.6	\$5.2	\$9.3	\$24.5	\$9.6	\$0.5	\$165.1
2016	\$72.8	\$34.9	\$5.1	\$9.6	\$25.6	\$8.5	\$0.4	\$156.8
2017	\$67.8	\$32.1	\$4.9	\$9.6	\$25.4	\$7.0	\$0.3	\$147.1
2018	\$59.8	\$27.5	\$4.5	\$9.2	\$24.2	\$6.0	\$0.2	\$131.4

Chapter 1606 Basic and Kicker Benefit End of Year Fund Balance

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$412.8	\$260.7	\$26.7	\$51.2	\$59.1	\$20.9	(\$0.1)	\$831.2
2010	\$452.3	\$273.6	\$26.1	\$55.9	\$70.5	\$26.4	\$1.9	\$906.6
2011	\$424.4	\$254.0	\$25.0	\$59.8	\$76.1	\$30.8	\$3.2	\$873.3
2012	\$380.5	\$234.0	\$27.7	\$62.0	\$106.0	\$55.0	\$4.1	\$869.2
2013	\$362.0	\$210.7	\$28.0	\$61.3	\$107.8	\$59.9	\$4.4	\$834.2
2014	\$308.7	\$163.3	\$24.2	\$55.9	\$85.9	\$55.1	\$4.5	\$697.5
2015	\$317.5	\$136.2	\$19.6	\$48.4	\$84.7	\$50.5	\$4.0	\$660.9
2016	\$285.1	\$138.0	\$33.3	\$51.2	\$87.8	\$65.1	\$4.2	\$664.7
2017	\$262.4	\$126.5	\$30.4	\$44.5	\$80.6	\$62.9	\$4.1	\$611.3
2018	\$282.6	\$137.3	\$26.9	\$40.6	\$80.7	\$61.8	\$4.0	\$634.0

APPENDIX D – FUND HISTORY (cont.)

(\$ in millions)

Chapter 1607 Benefit Contributions

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$136.3	\$36.8	\$0.0	\$10.6	\$25.4	\$0.5	\$0.0	\$209.7
2010	\$45.6	\$3.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$48.7
2011	\$34.2	\$0.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$35.0
2012	\$27.9	\$5.4	\$0.0	\$5.4	\$0.7	\$0.4	\$0.0	\$39.8
2013	\$23.0	\$5.7	\$0.0	\$0.4	\$2.0	\$0.7	\$0.0	\$31.8
2014	\$0.0	\$0.0	\$0.0	\$0.1	\$0.0	\$0.0	\$0.0	\$0.1
2015	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2016	\$1.5	\$0.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2.0
2017	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2018	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

Chapter 1607 Benefit Interest

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$3.6	\$1.4	\$0.4	\$0.3	\$0.6	\$0.7	\$0.1	\$7.1
2010	\$7.2	\$2.3	\$0.8	\$0.5	\$1.3	\$1.2	\$0.1	\$13.4
2011	\$10.2	\$2.8	\$1.1	\$0.5	\$1.7	\$1.6	\$0.1	\$18.1
2012	\$6.7	\$1.6	\$0.7	\$0.4	\$0.3	\$0.7	\$0.0	\$10.4
2013	\$6.8	\$1.6	\$0.6	\$0.4	\$0.5	\$0.7	\$0.0	\$10.6
2014	\$5.3	\$1.6	\$0.6	\$0.4	\$0.8	\$0.6	\$0.0	\$9.2
2015	\$2.1	\$1.1	\$0.5	\$0.3	\$0.6	\$0.5	\$0.0	\$5.1
2016	\$1.4	\$0.4	\$0.0	\$0.0	\$0.2	\$0.1	\$0.0	\$2.1
2017	\$0.3	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0	\$0.0	\$0.5
2018	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.2

Chapter 1607 Benefit Benefit Payments

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$104.2	\$52.3	\$3.7	\$17.5	\$12.7	\$8.7	\$0.6	\$199.6
2010	\$73.7	\$29.3	\$2.0	\$7.1	\$8.6	\$5.3	\$0.3	\$126.3
2011	\$72.0	\$22.9	\$1.4	\$4.4	\$7.2	\$3.5	\$0.2	\$111.6
2012	\$54.0	\$15.8	\$1.0	\$2.8	\$4.4	\$1.9	\$0.1	\$80.0
2013	\$48.7	\$13.3	\$0.8	\$1.9	\$4.0	\$1.5	\$0.1	\$70.2
2014	\$39.5	\$11.0	\$0.7	\$1.3	\$3.5	\$1.1	\$0.1	\$57.2
2015	\$27.0	\$8.5	\$0.6	\$0.8	\$3.0	\$0.8	\$0.1	\$40.8
2016	\$13.2	\$4.4	\$0.4	\$0.3	\$1.9	\$0.5	\$0.0	\$20.8
2017	\$4.8	\$1.6	\$0.1	\$0.1	\$0.7	\$0.2	\$0.0	\$7.5
2018	\$1.9	\$0.7	\$0.1	\$0.1	\$0.3	\$0.1	\$0.0	\$3.1

Chapter 1607 Benefit End of Year Fund Balance

<u>FY</u>	<u>ARNG</u>	<u>USAR</u>	<u>USNR</u>	<u>USMCR</u>	<u>ANG</u>	<u>USAFR</u>	<u>USCGR</u>	<u>Total</u>
2009	\$267.8	\$87.8	\$29.5	\$13.6	\$51.4	\$45.7	\$4.1	\$500.0
2010	\$247.0	\$69.7	\$28.3	\$15.1	\$44.2	\$41.6	\$2.1	\$448.0
2011	\$237.6	\$60.6	\$28.0	\$11.2	\$38.7	\$39.7	\$1.9	\$417.7
2012	\$218.2	\$51.8	\$23.0	\$14.2	\$9.5	\$22.1	\$1.2	\$339.9
2013	\$199.3	\$45.8	\$19.6	\$13.1	\$13.5	\$22.0	\$0.7	\$314.0
2014	\$165.0	\$50.2	\$19.5	\$12.2	\$26.7	\$21.6	\$0.6	\$295.9
2015	\$77.2	\$42.8	\$19.3	\$11.8	\$24.2	\$21.3	\$0.6	\$197.3
2016	\$47.9	\$15.5	\$1.1	\$0.9	\$7.3	\$1.9	\$0.1	\$74.6
2017	\$8.2	\$2.9	\$0.2	\$0.2	\$1.4	\$0.3	\$0.0	\$13.2
2018	\$1.9	\$0.7	\$0.1	\$0.1	\$0.4	\$0.2	\$0.0	\$3.4

APPENDIX D – FUND HISTORY (cont.)

(\$ in thousands)

Category III Benefit Contributions

FY	Army	Navy	Marine Corps	Air Force	Coast Guard	Total
2009	\$856.6	\$1,637.2	\$56.1	\$330.9	\$146.5	\$3,027.4
2010	\$941.1	\$1,733.7	\$85.7	\$477.0	\$8.4	\$3,245.8
2011	\$854.2	\$1,216.4	\$93.4	\$403.3	\$0.2	\$2,567.4
2012	\$696.9	\$937.0	\$87.9	\$339.9	\$0.8	\$2,062.5
2013	\$525.9	\$606.7	\$23.9	\$209.5	\$17.0	\$1,383.0
2014	\$448.2	\$299.0	\$23.8	\$230.8	\$13.8	\$1,015.6
2015	\$267.8	\$166.3	\$33.1	\$184.8	\$20.5	\$672.4
2016	\$435.8	\$222.4	\$33.1	\$79.0	\$20.7	\$791.0
2017	\$272.8	\$192.6	\$0.0	\$100.0	\$8.0	\$573.4
2018	\$170.7	\$42.4	\$7.0	\$79.4	\$0.0	\$299.5

Category III Benefit Interest

FY	Army	Navy	Marine Corps	Air Force	Coast Guard	Total
2009	(\$5.9)	(\$11.3)	(\$0.7)	(\$3.1)	(\$2.1)	(\$20.9)
2010	(\$10.4)	(\$14.8)	(\$1.3)	(\$4.9)	(\$0.0)	(\$31.5)
2011	(\$12.7)	(\$16.4)	(\$1.7)	(\$6.0)	(\$0.1)	(\$36.8)
2012	(\$7.1)	(\$7.6)	(\$0.3)	(\$2.7)	(\$0.3)	(\$17.8)
2013	(\$6.5)	(\$4.0)	(\$0.5)	(\$3.6)	(\$0.2)	(\$14.5)
2014	(\$3.6)	(\$2.2)	(\$0.7)	(\$2.4)	(\$0.3)	(\$8.8)
2015	(\$5.0)	(\$2.6)	(\$0.2)	(\$0.8)	(\$0.3)	(\$8.6)
2016	(\$3.1)	(\$2.0)	\$0.2	(\$1.3)	(\$0.1)	(\$6.3)
2017	(\$1.9)	(\$0.2)	(\$0.0)	(\$1.0)	\$0.0	(\$3.1)
2018	(\$0.5)	\$0.0	(\$0.1)	(\$0.3)	\$0.0	(\$0.8)

Category III Benefit Payments

FY	Army	Navy	Marine Corps	Air Force	Coast Guard	Total
2009	\$911.2	\$1,670.5	\$88.1	\$455.4	\$7.6	\$3,125.2
2010	\$863.5	\$1,194.3	\$86.0	\$396.6	\$0.5	\$2,540.4
2011	\$686.6	\$926.7	\$84.5	\$337.4	\$4.0	\$2,035.2
2012	\$528.0	\$600.3	\$17.4	\$208.6	\$14.0	\$1,354.4
2013	\$416.1	\$293.7	\$43.5	\$240.2	\$14.2	\$993.6
2014	\$304.2	\$192.7	\$16.6	\$153.7	\$20.1	\$667.2
2015	\$409.7	\$203.7	\$24.3	\$103.2	\$20.5	\$740.9
2016	\$256.2	\$171.2	\$7.2	\$86.7	\$5.2	\$521.3
2017	\$161.7	\$55.4	\$8.0	\$76.2	\$0.0	\$301.2
2018	\$69.1	\$12.1	\$6.9	\$28.7	\$0.0	\$116.7

Category III Benefit End of Year Fund Balance

FY	Army	Navy	Marine Corps	Air Force	Coast Guard	Total
2009	(\$920.4)	(\$1,721.7)	(\$94.8)	(\$473.8)	(\$154.7)	(\$3,210.7)
2010	(\$853.2)	(\$1,197.1)	(\$96.5)	(\$398.4)	(\$0.3)	(\$2,545.2)
2011	(\$698.3)	(\$923.8)	(\$89.2)	(\$338.6)	(\$4.3)	(\$2,049.9)
2012	(\$536.5)	(\$594.8)	(\$19.0)	(\$210.1)	(\$17.7)	(\$1,360.5)
2013	(\$433.2)	(\$285.9)	(\$39.0)	(\$244.4)	(\$15.1)	(\$1,002.5)
2014	(\$292.8)	(\$181.8)	(\$32.4)	(\$169.7)	(\$21.7)	(\$676.8)
2015	(\$439.8)	(\$221.8)	(\$23.9)	(\$88.9)	(\$22.0)	(\$774.4)
2016	(\$263.4)	(\$172.7)	\$2.1	(\$97.8)	(\$6.6)	(\$531.7)
2017	(\$154.2)	(\$35.6)	(\$5.9)	(\$74.9)	\$1.4	(\$270.6)
2018	(\$53.1)	(\$5.2)	(\$5.8)	(\$24.5)	\$1.4	(\$88.6)

APPENDIX E – LEGISLATIVE HISTORY

Background

Chapter 34 of Title 38 covers service back to 1955. The immediate predecessor of the MGIB was the VEAP. It is covered by Chapter 32 of Title 38 and provides for those who first entered active duty between January 1, 1977 and June 30, 1985.

The Montgomery GI Bill provides education benefits for those entering the armed forces beginning July 1, 1985. It is called the Montgomery GI Bill (MGIB) after Congressman Sonny Montgomery, who was instrumental in passing the legislation. The permanent law for the MGIB is given by Chapter 1606 and Chapter 1607 of Title 10 and by Chapter 30 and Chapter 33 of Title 38. Chapter 1606, Chapter 1607, and Chapter 33 cover Reservists and Chapter 30 covers active duty (or former active duty) members.

Title 38 covers veterans benefits and the MGIB benefits for active duty members are generally used after members become veterans. Title 10, on the other hand, covers the armed forces, and Reservists generally use their MGIB benefits while they are still members of the Selected Reserve, where they attend monthly drills, etc.

Beginning in 1991, subsequent legislation required that basic Chapter 30 benefits be paid from the Fund for veterans who entered service in the VEAP era and were permitted to enroll in the MGIB as a consequence of involuntary separation or acceptance of a VSI or SSB benefit. In this case, the basic Chapter 30 benefit is paid by the Fund. These benefits are not pre-funded and are paid by a series of annual contributions. These benefit amounts are referred to in this report as Category III.

Transferability test programs were offered under Section 3020 to approximately 100 Air Force and 400 Army active duty members, where a member who has been in the service for six years and agrees to stay for four more years can transfer part of his Chapter 30 eligibility for benefits to a dependent. This program is partly paid by the Veterans Affairs (VA) and partly by the Fund. The part paid by the Fund is pre-funded by a normal cost mechanism.

Transferability is currently offered to all Chapter 33 participants where a member who has been in the service for six years and agrees to stay for four more years can transfer part of his Chapter 30 eligibility for benefits to a dependent.

Major Amendment History

Public Law 101-510 (November 5, 1990) allows active members involuntarily separated after February 2, 1991, with honorable discharges to enroll in the MGIB. Those who entered the service during the post-Vietnam era (January 1, 1977 through June 30, 1985) have their basic benefits paid from the Fund. Those who entered after June 30, 1985 have their basic benefits paid from other funds by VA. Those who entered prior to January 1, 1977 also have their basic benefits paid by VA, unless because of discontinuous service they are not already enrolled in the MGIB. The eligible involuntary separatees would receive the basic MGIB benefit, but not the "kicker" benefit.

APPENDIX E – LEGISLATIVE HISTORY (cont.)

Major Amendment History (cont.)

Public Law 102-25 (April 6, 1991) temporarily increased the Chapter 30 (active) basic benefit to \$275 per month for 2-year enlistments (formerly \$250) and \$350 per month for 3- and 4-year enlistments (formerly \$300), effective October 1, 1991. The Chapter 1606 (reserve) benefit was increased to \$170 per month (formerly \$140), effective October 1, 1991.

Public Law 102-568 (October 29, 1992) permanently increased the basic Chapter 30 benefit to \$400 per month for 3- and 4-year programs and \$325 per month for 2-year programs, beginning April 1, 1993. In addition, the benefit was automatically increased by the CPI each October, beginning October 1, 1993. Public Law 102-568 also increased the Chapter 1606 benefit to \$190 per month, beginning on April 1, 1993, and provided automatic CPI indexing for the Chapter 1606 benefit. The CPI indexing is to be based on a year ending with the June CPI that precedes the October increase, compared to the previous June. Informally, VA, the Office of Management and Budget, and DoD have decided (1) to use the CPI-W for this purpose, (2) to construct the multiplier by adding twelve months of CPI-W ending in the June prior to the increase and dividing by the sum of twelve months of CPI-W ending with the preceding June, (3) to round the multiplier to the nearest 1/10th of one percent for full cost-of-living adjustments (COLAs) and the nearest 1/100th of one percent for reduced COLAs, and (4) to compute the Chapter 1606 and Chapter 30 basic benefit to the nearest penny. Public Law 102-568 (October 29, 1992) increased the basic Chapter 30 benefits of those who enlisted in 2-year programs, but served three or more years. Their benefits are now identical to those whose initial enlistment was for three or more years. This has no effect on the “kicker” amounts.

Neither Public Law 102-25 nor Public Law 102-568 directly affects the kicker benefit. However, the Army, with DoD approval, modified their kicker amounts, effective April 1, 1993, so that the total of basic + kicker for 36 months would equal \$20,000, \$25,000, and \$30,000, respectively, for the 2-, 3-, and 4-year programs. The effect of this was to increase the 2- and 4-year kicker benefits, effective April 1, 1993, while decreasing the 3-year kicker benefit. Effective August 1, 1993 the Marine Corps, which began a 4-year kicker program January 1, 1993 raised the amount to that of the Army 4-year program. Effective May 1, 1994 the Navy also switched to this procedure for their 4-year program and added a 3-year program that also follows this procedure. For the near future, the kicker benefits would fall whenever the basic benefits increased, since the \$20,000, \$25,000, and \$30,000 totals of basic + kicker would remain constant. The benefit maximum would actually be larger than the \$20,000, \$25,000, and \$30,000, respectively, however. This occurred because the time of enrollment in a kicker program is what determined the benefit, but the time of benefit use (i.e. going to school) is what determined the basic benefit level.

Public Law 102-484 (October 23, 1992) treats separatees in the SSB and VSI programs in the same way that involuntary separatees were treated under Public Law 101-510. They can enroll in the MGIB. If they entered the service in the post-Vietnam era, their basic benefits are paid from the Fund. Persons separating under VSI or SSB prior to enactment are also eligible to enroll.

Public Law 102-484 also waived the continued service requirement for Chapter 1606 eligibility for persons involuntarily separated from the Selected Reserve during the period October 1, 1991 through September 30, 1995.

APPENDIX E – LEGISLATIVE HISTORY (cont.)

Major Amendment History (cont.)

Public Law 103-66 (August 10, 1993) eliminated the October 1, 1993 COLA , and reduced the October 1, 1994 COLA to one-half the value it would have been.

Public Law 103-160 (November 30, 1993) provided graduate school education under Chapter 1606. The benefit is still limited to 36 full-time months or their equivalent.

Public Law 104-106 (February 10, 1996) permits a supplement beyond the reserve basic MGIB benefit for persons in critical skills or units. It provides up to an additional \$350 per month under Chapter 1606 for persons in critical skills or critical units, at the discretion of the Secretary of Defense.

Public Law 105-178 (June 9, 1998) increased basic benefits in both the Chapter 30 and Chapter 1606 programs by 20% beginning in FY 1999. This is in lieu of the cost-of-living increase, rather than in addition to it. Normal CPI increases resumed in FY 2000. The 20% increase does not apply to the kicker amounts. However, for Chapter 30, the practice of solving for the kicker amount [using $\text{kicker} = (\text{advertised amount} - 36 * \text{basic monthly amount})/36$] means that groups entering in FY 1999 will have lower kickers for a given advertised amount, such as \$40,000. Public Law 105-178 also caused the basic monthly amount to be rounded to the nearest dollar.

Public Law 105-261 (October 17, 1998) increased the kicker limit to \$950 per month, effective October 1, 1998.

Public Law 106-65 (October 5, 1999) made it possible for the Coast Guard to fund their Chapter 30 kicker benefits from the Fund.

Public Law 106-419 (November 1, 2000) increased the Chapter 30 basic MGIB benefits to \$528 per month for 2-year programs and to \$650 per month for programs of 3 or more years of active service. Section 102 of the bill also made eligible those in both the Chapter 30 and Chapter 1606 programs who completed the educational prerequisites (such as being a high-school graduate), but not before completing their obligated service (in the case of Chapter 30) or not before completing initial active duty training (in the case of Chapter 1606). Section 103 reduced from three years to two years the obligated service needed for full benefits for some types of separations.

Public Law 107-103 (December 27, 2001) increased the Chapter 30 basic MGIB benefits to \$650 per month for 2-year programs and \$800 per month for programs of 3 or more years of active service. These increases were effective January 1, 2002. The law also increased the monthly full-time benefits on October 1, 2002 to \$732 (for 2-year programs) and to \$900 (for programs of 3 or more years of active service). The law further increased the monthly full-time benefits on October 1, 2003 to \$800 (for 2-year programs) and to \$985 (for programs of 3 or more years of active service).

APPENDIX E – LEGISLATIVE HISTORY (cont.)

Major Amendment History (cont.)

Public Law 107-107 (December 28, 2001) permits transferring entitlement of MGIB benefits to dependents in certain conditions. Under the Service Secretary's discretion, those with critical military skills may transfer up to 18 months of benefits to one or more dependents. The military members transferring benefits must have served six years and agree to serve another four. A spouse can use the benefit immediately, but a child has to wait until the member has completed ten years of service. The law requires that the present value of the benefit for increased usage be transferred to the Fund on a monthly basis as new takers agree to serve an additional four years for the benefit.

Public Law 107-314 (December 2, 2002) extended the eligibility period for using Chapter 1606 benefits from 10 to 14 years (given that the member is still in the Selected Reserve).

Public Law 108-183 (December 16, 2003) removed the rounding on Chapter 30 benefits so that Chapter 30 benefits are now rounded to the nearest cent.

Public Law 108-375 (October 28, 2004) Section 527 created Chapter 1607, which provides educational assistance to members of the reserve components called or ordered to active service in response to a war or national emergency. Eligible members receive benefits based on their longest continuous length of service. Benefits range from 40% to 80% of MGIB-AD.

Public Law 108-454 (December 10, 2004) Section 106 provided education benefits for the payment of national admissions exams and national exams for credit at institutions of higher learning under Chapter 30.

Public Law 109-163 (January 6, 2006) Section 539, provides that licensing and certification tests are now payable under Chapters 1606 and 1607 of title 10, U.S. Code. Entitlement for licensing and certification tests taken under Chapters 1606 and 1607 will be charged by dividing the amount paid for the test by the member's full-time rate, less any kicker the member would receive. Section 540 provides that a member can have a break in Selected Reserve service of up to 90 days and still receive Chapter 1607 benefits as long as the member remains in the Ready Reserve during and after the break. DoD and the Department of Homeland Security (for Coast Guard cases) determine eligibility under Chapter 1607 and will administer the provision. Section 545 amends Title 10 to clearly state that VA is to administer the two education incentive benefits provided by the National Call to Service program. (These two incentive programs are an education allowance equal to the chapter 30 3-year rate payable of up to 12 months or equal to one-half the chapter 30 2-year rates payable up to 36 months.)

Public Law 109-461 (December 22, 2006), Section 305, requires VA and DoD to submit separate biennial reports to Congress on education benefits beginning 180 days after December 22, 2006 (date of enactment of this Act) and ending January 1, 2011.

APPENDIX E – LEGISLATIVE HISTORY (cont.)

Major Amendment History (cont.)

Public Law 110-181 (January 28, 2008). Commonly referred to as “NDAA 08”, this law allowed reservists otherwise eligible for MGIB-SR or REAP the potential to receive accelerated payments for a non-degree program lasting 2 years or less. It made the REAP 80% rate available to anyone who was mobilized for at least 2 continuous years of active duty OR served multiple mobilizations totaling 3 years or more. It created a \$600 buy-up program for REAP participants. It modified ending dates for REAP participants separated from the Selected Reserve and for MGIB-SR participants separated involuntarily. It expanded REAP eligibility to anyone having a break in service (regardless of length) as long as they continue to serve in another component of the Ready Reserve (such as IRR or ING) during the break in service.

Public Law 110-252 (June 30, 2008). Commonly referred to as the “Post-9/11 GI Bill”, this is the most comprehensive education legislation since the original GI Bill. The Post-9/11 GI Bill created a new benefit structure including benefits for tuition, housing, books, and moving expenses. Any member who served 90 consecutive days on Active Duty in the Armed Forces (including reserve and guard components) since September 11, 2001 is eligible. Benefit levels are determined by cumulative service with 3 years of cumulative service receiving 100% of benefits. Members with at least 6 years of active duty can transfer benefits to their spouse and/or children if they complete an additional service period of at least four years. The legislation also removed the 14-year eligibility period for Chapter 1606 eligibles (except in the case of disability or involuntary separation, in which case the VA interpretation is that the 14-year eligibility period still applies).

Public Law 111-377 (January 4, 2011) The Post 9/11 Veterans Educational Assistance Improvements Act of 2010 allows National Guard members to use Title 32 service for Post-9/11 GI Bill benefits, places a \$17,500 cap on annual tuition and fees for non-public institutions, and creates a funding priority structure that makes the Post-9/11 GI bill paid after any federal, state, institutional, or employer-based aid.

Public Law 114-92 (November 25, 2015) The National Defense Authorization Act of 2016 ended REAP on November 25, 2015. Some individuals will remain eligible for REAP benefits until November 25, 2019, while others are no longer eligible for REAP benefits.

Public Law 115-48 (August 16, 2017) Among many changes in The Harry W. Colmery Veterans Educational Assistance Act (H.R. 3218), also known as the "Forever GI Bill" are 1) reservists who had eligibility under the REAP and lost it due to the program sunset provision receive credit toward establishing eligibility under the Post-9/11 GI Bill, 2) the 15-year time limitation for using the Post-9/11 GI Bill for Veterans who left active duty on or after January 1, 2013 has been eliminated, and 3) Servicemembers and honorably discharged Veterans who were awarded a Purple Heart on or after September 11, 2001 will be entitled to Post-9/11 GI Bill benefits at the 100-percent benefit level for up to 36 months. This was effective on August 1, 2018. The DoD Office of the Actuary has not had an opportunity to assess the impact to the liability from this act, but expects only minimal impact and did not adjust liabilities.

APPENDIX F – PROJECTIONS

(\$ in Millions)

<u>FY</u>	<u>Per Capitas</u>	<u>Amorts</u>	<u>Interest</u>	<u>Benefits</u>	<u>Transfers</u>	<u>BOY Fund</u>	<u>BOY UFL</u>	<u>BOY Liab</u>	<u>Net Cash Flow</u>
<u>All Programs</u>									
2019	\$154.5	\$19.3	\$35.3	\$197.9	\$0.0	\$1,074.9	(\$264.0)	\$810.9	\$11.3
2020	\$134.3	\$18.3	\$35.3	\$196.7	\$0.0	\$1,086.2	(\$299.5)	\$786.7	(\$8.7)
2021	\$76.4	\$5.4	\$33.6	\$195.4	(\$0.0)	\$1,077.5	(\$321.0)	\$756.5	(\$79.9)
2022	\$89.5	\$4.4	\$31.3	\$193.7	\$0.0	\$997.6	(\$266.3)	\$731.2	(\$68.6)
2023	\$105.3	\$3.6	\$29.3	\$193.2	\$0.0	\$929.0	(\$227.1)	\$701.8	(\$55.1)
2024	\$114.3	\$2.9	\$27.7	\$191.4	\$0.0	\$873.9	(\$195.8)	\$678.1	(\$46.6)
2025	\$127.6	\$2.3	\$26.4	\$189.3	\$0.0	\$827.3	(\$170.2)	\$657.1	(\$33.0)
2026	\$131.0	\$1.9	\$25.4	\$189.2	\$0.0	\$794.4	(\$149.2)	\$645.2	(\$30.9)
2027	\$135.2	\$1.5	\$24.4	\$188.6	\$0.0	\$763.5	(\$131.8)	\$631.6	(\$27.3)
2028	\$142.0	\$1.3	\$23.6	\$189.5	\$0.0	\$736.1	(\$117.5)	\$618.6	(\$22.6)
2029	\$150.3	\$1.0	\$23.0	\$191.5	\$0.0	\$713.5	(\$105.6)	\$607.9	(\$17.2)
2030	\$161.3	\$0.8	\$22.6	\$194.5	\$0.0	\$696.4	(\$95.8)	\$600.6	(\$9.7)
<u>Chapter 30 & 33 Kickers</u>									
2019	\$0.0	\$17.5	\$13.7	\$75.0	\$0.0	\$437.6	\$37.6	\$475.1	(\$43.8)
2020	\$0.0	\$18.2	\$12.4	\$65.4	\$0.0	\$393.7	\$18.6	\$412.3	(\$34.7)
2021	\$0.0	\$5.3	\$11.0	\$58.0	\$0.0	\$359.1	\$0.4	\$359.4	(\$41.6)
2022	\$0.0	\$4.3	\$9.7	\$51.5	\$0.0	\$317.4	(\$5.1)	\$312.3	(\$37.4)
2023	\$0.0	\$3.5	\$8.5	\$44.9	\$0.0	\$280.0	(\$9.8)	\$270.2	(\$32.8)
2024	\$0.0	\$2.9	\$7.6	\$38.3	\$0.0	\$247.2	(\$13.8)	\$233.4	(\$27.9)
2025	\$0.0	\$2.3	\$6.7	\$31.9	\$0.0	\$219.3	(\$17.2)	\$202.1	(\$22.9)
2026	\$0.0	\$1.9	\$6.1	\$26.6	\$0.0	\$196.4	(\$20.1)	\$176.3	(\$18.7)
2027	\$0.0	\$1.5	\$5.5	\$22.7	\$0.0	\$177.7	(\$22.7)	\$155.0	(\$15.7)
2028	\$0.0	\$1.3	\$5.0	\$20.3	\$0.0	\$162.0	(\$25.1)	\$137.0	(\$14.1)
2029	\$0.0	\$1.0	\$4.6	\$18.7	\$0.0	\$147.9	(\$27.2)	\$120.8	(\$13.1)
2030	\$0.0	\$0.8	\$4.2	\$17.3	\$0.0	\$134.8	(\$29.1)	\$105.7	(\$12.3)
<u>Chapter 1606</u>									
2019	\$154.5	\$1.7	\$21.6	\$121.4	\$1.5	\$634.0	(\$300.0)	\$333.9	\$57.9
2020	\$134.3	\$0.0	\$22.9	\$131.0	\$0.3	\$691.9	(\$318.0)	\$373.9	\$26.6
2021	\$76.4	\$0.0	\$22.7	\$137.4	\$0.1	\$718.4	(\$321.5)	\$397.0	(\$38.3)
2022	\$89.5	\$0.0	\$21.6	\$142.2	\$0.0	\$680.2	(\$261.3)	\$418.9	(\$31.2)
2023	\$105.3	\$0.0	\$20.7	\$148.3	\$0.0	\$649.0	(\$217.4)	\$431.6	(\$22.3)
2024	\$114.3	\$0.0	\$20.1	\$153.0	\$0.0	\$626.7	(\$182.1)	\$444.6	(\$18.6)
2025	\$127.6	\$0.0	\$19.7	\$157.4	\$0.0	\$608.1	(\$153.0)	\$455.0	(\$10.1)
2026	\$131.0	\$0.0	\$19.3	\$162.6	\$0.0	\$598.0	(\$129.1)	\$468.9	(\$12.2)
2027	\$135.2	\$0.0	\$18.9	\$165.8	\$0.0	\$585.7	(\$109.1)	\$476.6	(\$11.7)
2028	\$142.0	\$0.0	\$18.6	\$169.2	\$0.0	\$574.1	(\$92.5)	\$481.6	(\$8.5)
2029	\$150.3	\$0.0	\$18.5	\$172.8	\$0.0	\$565.6	(\$78.5)	\$487.2	(\$4.0)
2030	\$161.3	\$0.0	\$18.5	\$177.2	\$0.0	\$561.6	(\$66.7)	\$494.9	\$2.6

APPENDIX F – PROJECTIONS (Cont.)

(\$ in Millions)

<u>FY</u>	<u>Per Capitas</u>	<u>Amorts</u>	<u>Interest</u>	<u>Benefits</u>	<u>Transfers</u>	<u>BOY Fund</u>	<u>BOY UFL</u>	<u>BOY Liab</u>	<u>Net Cash Flow</u>
<u>Chapter 1607</u>									
2019	\$0.0	\$0.0	\$0.0	\$1.4	(\$1.5)	\$3.4	(\$1.8)	\$1.6	(\$2.8)
2020	\$0.0	\$0.0	\$0.0	\$0.3	(\$0.3)	\$0.6	(\$0.3)	\$0.3	(\$0.6)
2021	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.1)	\$0.1	(\$0.1)	\$0.0	(\$0.1)
2022	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2023	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2024	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2025	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2026	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2027	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2028	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2029	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2030	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
<u>Cat III</u>									
2019	\$0.0	\$0.1	(\$0.0)	\$0.1	\$0.0	(\$0.1)	\$0.3	\$0.2	\$0.0
2020	\$0.0	\$0.1	(\$0.0)	\$0.1	\$0.0	(\$0.1)	\$0.2	\$0.1	\$0.0
2021	\$0.0	\$0.1	(\$0.0)	\$0.0	\$0.0	(\$0.1)	\$0.1	\$0.1	\$0.0
2022	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	(\$0.0)	\$0.1	\$0.0	\$0.0
2023	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0
2024	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2025	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2026	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2027	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2028	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2029	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2030	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

Note that Category III payments are reimbursements for benefits paid during the previous fiscal year adjusted for interest and carryover.

APPENDIX G – SFFAS ACCOUNTING STATEMENT

**EBF CFO Statement for 9/30/2019
(Amounts in thousands of \$)**

	Total
Beginning Actuarial Liability 9/30/2018	\$921,657
Plus Expenses	
Normal Cost	\$131,460
Interest Cost	\$29,051
Plan Amendments	\$0
Experience Losses (Gains)	\$85,164
Other factors	\$0
Subtotal: Expenses before Losses (Gains) from Actuarial Assumption Changes	\$245,675
Actuarial Losses (Gains) due to:	
Actuarials (gains)/losses due to changes in trend assumptions	\$0
Changes in assumptions other than trend	(\$164,188)
Subtotal: Losses (Gains) from Actuarial Assumption Changes	(\$164,188)
Total Expenses	\$81,487
Less Benefit Outlays	(\$216,454)
Total Change in Actuarial Liability	(\$134,967)
Ending Actuarial Liability 9/30/2019	\$786,690

For Education Benefits Fund liabilities, OACT performs an annual valuation that is governed by Sec 2006 of Title 10, United States Code, and uses methods and assumptions approved by the DoD Board of Actuaries.

A separate financial statement valuation (i.e., with different assumptions) may be necessary to satisfy a financial statement regulation called the Statement of Federal Financial Accounting Standards 33 (SFFAS 33) because SFFAS 33 requires the use of a yield curve whereas the Board valuation uses a single average discount rate. (The terms “interest rate” and “discount rate” are often used interchangeably in this context.)

APPENDIX G – SFFAS ACCOUNTING STATEMENT (Cont.)

SFFAS 33 requires a minimum of five years of historical rates for the yield curve input and a consistency in the number of historical rates used from period to period. OACT uses the U.S. Department of the Treasury-Office of Economic Policy's 10-Year Average Yield Curve for Treasury Nominal Coupon Issues (TNC yield curve) representing average rates from April 1, 2009, through March 31, 2019. These quarterly rates are equivalent (in terms of producing the same EBF Accrued Liability) to the SFFAS single equivalent rate of 2.23%. This compares to the Board valuation single average discount rate of 3.25%.

SFFAS 33 permits the use of a single average discount rate if the resulting present value is not materially different from what would be obtained using the yield curve. Increasing the single average discount rate from the SFFAS single equivalent rate of 2.23% to 3.25% decreases the EBF actuarial liabilities by 4.0%. As this difference is not material, the Board valuation single average discount rate of 3.25% will be used for 9/30/2019 financial statement purposes.

For 9/30/2019 financial statement purposes, SFFAS 33 did not require OACT to change any other assumption besides the discount rate. OACT considered the minor adjustment to expected future inflation that would result from basing the assumption on the same period used to derive the yield curve, and that adjustment is reflected in the above materiality test. Therefore, for 9/30/2019 financial statement purposes, all economic assumptions will be consistent with the Board valuation.

APPENDIX H – GLOSSARY

Actuarial Liability (AL)

The present value of benefits expected to be paid from the Fund to current plan participants; does not include new entrants after the valuation date

Amortization Payment

An annual payment of principal and interest on unfunded liability

Basic Benefit

The amount of basic educational assistance available in each program for approved education purposes; this amount may be reduced for education pursued on a less than full-time basis

Benefit Usage Rates

The likelihood that a member will use an offered benefit

Board

The Department of Defense Board of Actuaries

Book Value

Treasury bonds, notes, and bills that are valued with amortized premiums/discounts and yields that are set at purchase

Closed Group

The actuarial liability is based only on people already in the system. New entrants after the valuation date are not included. For this reason, the population is called a "closed" group.

Component

In the case of active duty benefits, the term “component” refers to the branch of service: Army, Navy, Air Force, Marine Corps, or Coast Guard. In the case of reserve benefits, the term component refers to the separate guard and reserve services: Army National Guard, Army Reserve, Navy Reserve, Marine Corps Reserve, Air National Guard, Air Force Reserve, and the Coast Guard Reserve.

Decrement

An event that causes the nature of liability to change; decrements for this report include disability, withdrawal from and re-entry to service, and death

DoD

Department of Defense

DMDC

Defense Manpower Data Center

DFAS

Defense Finance and Accounting Service

APPENDIX H – GLOSSARY (cont.)

Fund (EBF)

The Education Benefits Fund

Fund Balance

The amount of monies, tracked separately for each program and each component, available to pay future benefits

IADT

Initial Active Duty for Training is a military term referring to the first period, generally 6 months in length, of Active Duty training, a factor for eligibility under MGIB-SR. IADT is required for people entering the Selected Reserve

Inflation Rate

The rate of increase in the average price level of goods and services during a specified period

Interest Rate

The rate of investment return used to calculate the present value of a series of future payments

Interest (or Investment Earnings)

The amount of money the Fund earns from securities

Kicker Benefit

An additional benefit offered to members who have a critical skill or critical specialty; the Secretary of Defense may increase the amount of basic educational assistance by as much as \$950 per month for Chapter 30 and 33, and by as much as \$350 per month for Chapter 1606

Member

A person eligible to participate in a Fund program

MGIB-AD

Montgomery GI Bill benefits for Active Duty under Chapter 30 of Title 38, United States Code

MGIB-SR

Montgomery GI Bill benefits for Selected Reserve under Chapter 1606 of Title 10, United States Code

Normal Cost

The expected present value of liabilities for a new entrant

OACT

The Department of Defense Office of the Actuary

Offset

A reduction applied to the normal cost in order to decrease a surplus

APPENDIX H – GLOSSARY (cont.)

Pay-as-you-go

A method of recognizing the costs of a benefits system only as benefits are paid

Per Capita Cost

The normal cost minus any offset for expected surplus—this is the amount needed to be paid into a fund for future benefits for each new entrant. For the DoD Education Benefits Fund, the per capita cost is paid once for each new entrant.

Present Value of Benefits

The amount, discounted to the valuation date, of benefits expected to be paid from the plan to current plan participants; does not include new entrants after the valuation date

REAP

Reserve Education Assistance Program benefits under Chapter 1607 of Title 10, United States Code

Sunset Provision

Measure within a statute, regulation or other law that provides that the law shall cease to be in effect after a specific date

Surplus

The amount of assets in the Fund greater than the actuarial liability

Time Value of Money

The principle that an amount of money available at an earlier point in time has different usefulness and value than the same amount of money at a later point in time

Transferability

The ability to transfer a benefit to a spouse or dependent child

Unfunded Liability

The portion of the actuarial liability not covered by the Fund assets; if assets exceed the actuarial liability, there is a surplus

VEAP

Veteran's Educational Assistance Program

Withdrawal Rate

The probability that an active military member at the beginning of the year will separate from the service by the end of the year