

## Chapter 9

# Risk and Combat Compensation

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## Executive Summary

The Eleventh Quadrennial Review of Military Compensation (11th QRMC) was chartered to review four areas of the military compensation system. The QRMC asked the Institute for Defense Analyses (IDA) to focus on combat compensation and, specifically, to:

- ❖ Document differences in combat-related compensation by pay grade and marital status
- ❖ Identify factors that could be used to distinguish the level of risk to which members are exposed
- ❖ Trace the development of the central features of U.S. policy on provision of combat (or imminent danger) pays

Combat compensation is an important element in the remuneration of military personnel. The principal justification for combat compensation is to recognize military personnel who face significant combat risk. In the past, there was a direct relationship between the risk faced by military personnel and the combat compensation they received. For example, Badge Pay was initially only awarded to front-line units in World War II. That relationship has eroded over time through numerous actions taken since WWII to broaden coverage. Today some members who are in declared combat zones are subject to little risk and receive all elements of combat compensation; others who are in hostile situations but not in combat zones do not

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fully receive combat compensation. Examining casualty rates, both killed-in-action and wounded-in-action, we find many areas in designated combat zones give rise to very little risk (e.g., Saudi Arabia and United Arab Emirates, as well as ships in the combat zone)—more than half of the countries in combat zones have zero casualty rates. Surveys show that military members recognize their combat-zone deployments are often not dangerous.

Eligibility for combat compensation is determined by the designation and management of combat zones. Military members deployed to areas of combat or to combat support operations receive hostile fire pay/imminent danger pay (HFP/IDP) and the combat zone tax exclusion (CZTE). HFP/IDP provides \$225 for any month or part of a month the member is deployed to a combat zone or to a designated imminent danger area. In a designated combat zone, all pays and bonuses received by an enlisted member or warrant officer are excluded from the calculation of federal and state income taxes. Officers, in 2011, can exclude up to \$7,714.80 per month from their tax returns. HFP/IDP cost the Department of Defense \$789 million in 2009 while the cost to the Treasury for CZTE was \$3.6 billion—approximately 4.5 times the cost of HFP/IDP.

While all military members, regardless of rank, deployed to a combat zone receive the same amount of HFP/IDP, there is considerable variation in the value of the CZTE. The tax exclusion lowers the individual's income tax obligations and creates eligibility for various tax credits and deductions; therefore, depending upon an individual's circumstances—marital status, filing status, family size, medical deductions, etc.—the value of the CZTE is quite variable. IDA was able to collaborate with the Department of the Treasury to determine, for the first time, the value of the CZTE to the individual service member. In 2009, the average value of the CZTE was \$5,990, with the value at the first percentile at \$280 and the 99th percentile at \$22,430—almost 100 times the value at the lower end. More than half of those deployed to a combat zone received at least \$4,660 in federal tax savings and benefits. One unexpected aspect of CZTE-related compensation is that senior officers qualify for the Earned Income Credit (EIC), established to help low-wage earners. The O-6, whose total compensation is about five times that of the E-4, can receive more in EIC than an E-4 stationed in the United States. Over 2,000 officers of rank O-4 and above receive the EIC (sometimes called the Earned Income Tax Credit).

We find virtually no correlation across countries within combat zones between casualty rates and average combat compensation. Countries with zero casualty rates tend to have the highest average benefit primarily because of their pay grade structure. Furthermore, junior enlisted personnel (along with junior officers) have the highest incidence of death and injury, but, on average, benefit the least from the CZTE.

The divergence between the risks that military members face when deployed and the associated compensation can be brought into better alignment in a number of ways. The designation of combat zones is difficult to initiate and even more difficult to terminate. As a result, combat zones include areas where there is no combat, as well as areas in which there is no threat of hostilities. Better management of combat zones could eliminate combat compensation from being paid to areas in which there is no risk or threat of danger. As a result, compensation could be limited to members actually exposed to danger.

CZTE benefits, the major component of combat compensation, depend to a large extent upon individual circumstance and the vagaries of the tax code, which are totally unrelated to risk. Because of its complexity, it is not likely that members know the actual amount of benefit, nor can they compare these rewards with the risks of combat. CZTE benefits could be made more uniform by substituting a refundable income tax credit for the present system of income exclusion.

A major part of the current CZTE benefit is eligibility for the EIC—a program designed to assist low-wage households. Income exclusion allows field-grade officers and senior enlisted personnel—in some cases officers with basic pay and allowances in excess of \$150,000 per year—to be eligible for this program. Basing EIC eligibility on all income, including that excluded for tax purposes by the CZTE, would restrict EIC payments to those households that qualify within the original intent of the program.

The stated philosophy of the Department of Defense (DoD) is for compensation to increase with increased danger or risk. This goal cannot be achieved within the current structure of CZTE. A closer relationship than current practice between risk and compensation could be attained in a variety of ways. For example, the CZTE could be eliminated in favor of a tiered, refundable tax credit available to those in designated areas. Another possibility would be for DoD to adopt a “true” combat pay for members actually in a combat environment. This combat pay could be a supplement to other kinds of combat compensation or a substitute.

## 1. Introduction

“I didn’t deserve my combat pay,” is the title of an Op-Ed piece in the Washington Post of March 18, 2011. Michael G. Cummings, the author, described the conditions surrounding his recent deployment to Iraq as being safe and the living conditions as plush. Captain Cummings wrote:<sup>1</sup>

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1. Captain Cummings was an Army intelligence officer with multiple deployments to combat zones.

I don't tell people I deployed to Baghdad. I say that I deployed to Victory Base Complex (VBC)—the largest, most luxurious base wartime soldiers have ever had the pleasure of visiting. I never set foot in Baghdad proper. The only gunshots I heard were from our shooting range. I never fired a weapon or rode in a convoy or on a helicopter. The only improvised explosive devices I saw were in pictures.

On our compound, the water was always warm (sometimes too warm). The chow hall had a Caesar salad bar, a sandwich bar, an ice cream freezer, and shrimp and steak Fridays. My (personal) room had a working AC [air conditioning] unit and Internet connection. VBC hosted multiple PXs [Post Exchanges], coffee shops and nightly dance parties. I could buy pillows, microwaves, televisions or any video game.

Captain Cummings's comments largely focused on the merits of providing combat compensation for conditions that are not dangerous. As he wrote, "I absolutely do not mean to disparage troops who deploy but don't see combat. Yet our country needs to recognize and reward the sacrifices of those who really do fight on the front lines." Mr. Cummings's article provides a useful context for the QRMC's assessment of combat compensation.

Individuals who join the military should expect that sometime in their career they will see combat. While patriotism is a powerful motivator for joining and potentially placing one's self in harm's way, the nation has chosen to supplement patriotism by a compensation system in order for the military to recruit, retain, motivate, and secure a sufficient number and quality of service members.

The compensation system must establish a basic structure that makes a military career an economically viable alternative to private sector careers. Because there is no conscription, the military career must be chosen voluntarily. Throughout the individual's tenure in the military, compensation must remain sufficiently attractive relative to the private sector so that the Services are able to retain those individuals who are the most motivated and productive. The system must be structured to encourage meritorious performance and advancement to higher responsibilities through promotions.

While the system must be adequate to attract and retain personnel in the face of some generally expected level of risk, additional compensation may be warranted for those in especially risky situations. Aside from strictly economic considerations, it may be desirable to reward high risk service to improve morale or simply to recognize the importance of dangerous service in combat. Linking reward to risk is the principal justification for combat compensation.

It is this relationship that is the subject of this paper. Section 2 of the paper describes the elements of combat compensation, including their relative magnitude and cost. After a short theoretical discussion of risk and return in labor markets in Section 3, we provide data on the magnitude of and variation in combat-related benefits. Section 4 examines the relationship between compensation and risk. Eligibility for combat compensation is determined by the designation and management of combat zones, which is described in Section 5. We then focus further, in Section 6, on the reasons for variation in the level of benefits among those who receive combat compensation. Section 7 provides recommendations for modifying combat compensation and administering combat zones to ensure a closer relationship between combat compensation and risk.

## 2. Elements of Combat Compensation

Military members, when deployed to a combat zone, receive additional compensation and additional benefits. The two elements of compensation that are exclusive to combat and combat support operations are Hostile Fire Pay/Imminent Danger Pay (HFP/IDP) and the Combat Zone Tax Exclusion (CZTE).

### A. Eligibility for Combat Compensation

HFP/IDP is paid in designated imminent danger areas according to criteria established by 37 U.S.C. §310, in which a member:

- (A) was subject to hostile fire or explosion of hostile mines;
- (B) was on duty in an area in which the member was in imminent danger of being exposed to hostile fire or explosion of hostile mines and in which, during the period the member was on duty in the area, other members of the uniformed services were subject to hostile fire or explosion of hostile mines;
- (C) was killed, injured, or wounded by hostile fire, explosion of a hostile mine, or any other hostile action; or
- (D) was on duty in a foreign area in which the member was subject to the threat of physical harm or imminent danger on the basis of civil insurrection, civil war, terrorism, or wartime conditions.

Hostile Fire Pay (HFP) and Imminent Danger Pay (IDP) are both provided for in 37 U.S.C. §310, but in theory, they should be separate pays for separate purposes. HFP is an event-based pay; that is, it is applicable “when bullets are flying.” IDP, on

the other hand, is a threat-based pay; it is applicable when there is a danger of hostilities breaking out.<sup>2</sup>

The Under Secretary of Defense for Personnel and Readiness USD (P&R) is responsible for designating which foreign areas contain members who are in imminent danger due to civil war, civil insurrection, terrorism, or wartime conditions. These designations are made based on recommendations from the Joint Staff (in coordination with the Services). Currently, locations in over 45 countries and 7 sea areas are designated for IDP. HFP/IDP is currently \$225 per month or any part of a month for which the member is deployed to an IDP area. All members, regardless of rank or dependency status, receive the same amount.

The CZTE benefit relieves military members from paying federal income tax on pay received while in a designated combat zone.<sup>3</sup> All military pay and bonuses earned by enlisted and warrant officers can be excluded; the exclusion for officers is capped at the basic pay of the Senior Enlisted Advisor (SEA) plus the \$225 per month received in HFP/IDP, equal in 2011 to \$7,714.80 per month. Almost all states allow a similar exclusion on state income taxes. Members are still required to pay Federal Insurance Contributions Act (FICA) taxes on total earnings, including the income excluded for federal income tax purposes. The benefit to members is not easily quantified, since it depends upon the individual member's marginal tax bracket plus the impact on a variety of federal and state programs governed by adjusted gross income or net taxable income—e.g., the Earned Income Credit (EIC) and college tuition.<sup>4</sup>

Table 1 shows total expenditure by the Department of Defense (DoD) on HFP/IDP for the years 2003–2009. Also shown in the table is the total cost to the U.S. Treasury in lost income tax collections because of the CZTE for the years 2005–2009. In 2009, the total cost of HFP/IDP was \$790 million—the equivalent of 292,000 man-years.<sup>5</sup> About 85 percent of HFP/IDP goes to enlisted personnel. Approximately 640,000 military members received at least one month of HFP/IDP in the 2009 fiscal year.

The revenue foregone by the federal government due to CZTE amounted to \$3.6 billion in 2009, approximately 4.5 times as much as the cost of HFP/IDP. The average benefit was approximately \$6,000.

2. 37 U.S.C. §351 proposes to separate these pays: 351(a)(1) would relate to hostile fire areas and hostile fire events; 351(a)(2) relates to hazardous duty incentive pay; and 351(a)(3) would apply to designated IDP areas.

3. See Appendix A for a list of current combat zones.

4. Financial aid and, therefore, college tuition at both state and private institutions is often based upon adjusted gross income. CZTE lowers adjusted gross income and presumably results in tuition reductions via financial aid.

5. Since deployment lengths vary and most often carry over two years, the number of members who receive at least one month of IDP in a given year will be much greater than 292,438.

**Table 1. Hostile Fire Pay/Imminent Danger Pay (HFP/IDP) 2003–2009**

Calendar Year	Total Personnel	Cost \$M	Total Officers	Cost \$M	Total Enlisted	Cost \$M	Total CZTE Benefits (\$M)
2003	322,681	871	43,147	116	279,534	754,742	n/a <sup>a</sup>
2004	198,534	536	35,161	95	163,373	441,107	n/a
2005	277,106	748	47,216	127	229,890	620,703	3,200
2006	257,687	696	36,891	100	220,796	596,138	3,200
2007	263,209	711	34,808	94	228,401	616,682	3,800
2008	291,469	787	41,740	113	249,729	674,270	3,800
2009	292,438	790	44,250	119	248,188	670,107	3,600

*Sources:* Department of Defense, Directorate of Military Compensation, Military Compensation Background Papers, 7th edition, forthcoming; and Department of the Treasury, Office of Tax Analysis, April 15, 2011.

a. Information on the cost to the Treasury was not available for 2003 and 2004.

## B. Related Elements of Compensation

While the focus of this paper is on assessing the HFP/IDP and CZTE, there are a number of other elements of compensation that are keyed to operational deployments. These elements, defined below, comprise a relatively small fraction of combat-related compensation and are not assessed.

Another benefit received as combat compensation is the payment of Servicemembers' Group Life Insurance (SGLI) premiums for the duration of the member's deployment to a combat zone. Premiums amount to \$.065 per \$1,000 of life insurance or \$26 per month for the maximum coverage of \$400,000 plus \$1 per month for the SGLI Traumatic Injury Protection Program (T-SGLI).

Other combat zone benefits include programs such as student loan repayment, income replacement for Reservists, savings program, and the Marine GYSGT John David Fry Scholarship<sup>6</sup>—to name a few—that are neither automatically distributed to members, nor very widespread in terms of the number of members receiving them.

Servicemembers deployed to a combat zone receive other pays and allowances not received by their counterparts stationed within the United States. Such compensation includes family separation allowance, hardship duty pay, and incidental expense allowance, none of which is considered combat compensation because servicemembers may also receive them in non-combat situations. Table 2 contrasts the pays and allowances received by an E-6 and an O-3 in Iraq with the compensation they would receive in a continental U.S. (CONUS) location. Compensation for the E-6 was more than 20 percent higher in the combat zone, more than half of which derived

6. Marine GYSGT John David Fry Scholarship is a GI Bill benefit paid to surviving dependent children. It is mentioned below as an ex-post compensation item.

from the CZTE. The benefit for the O-3, with fewer children and years of service (YoS), was \$1,575, or 22 percent of CONUS compensation. Almost 60 percent of the \$1,575 in additional compensation was attributable to CZTE.<sup>7</sup>

Military members serving in a combat zone are also eligible for a number of supplementary benefits as listed in Table 3.

**Table 2. Military Compensation (Monthly)**

	E-6, 10 YoS, married, 2 children		O-3, 8 YoS, married, 1 child	
	CONUS	Iraq (1 yr TDY)	CONUS	Iraq (1 yr TDY)
Basic Pay (BP) <sup>a</sup>	\$3,192	\$3,192	\$5,449	\$5,449
Basic Allowance for Housing (BAH) <sup>b</sup>	\$1,526	\$1,526	\$1,759	\$1,759
Basic Allowance for Subsistence (BAS)	\$325	\$325	\$224	\$224
Family Separation Allowance (FSA)	n/a	\$250	n/a	\$250
Temporary Duty (TDY)– Per Diem (Incidental Expense) <sup>c</sup>	n/a	\$105	n/a	\$105
Hardship Duty Pay– Location (HDP-L) <sup>d</sup>	n/a	\$100	n/a	\$100
Imminent Danger Pay (IDP)	n/a	\$225	n/a	\$225
Combat Zone Tax Exclusion (CZTE) <sup>e</sup>	n/a	\$588	n/a	\$895
<b>Total</b>	<b>\$5,043</b>	<b>\$6,311</b>	<b>\$7,432</b>	<b>\$9,007</b>
<i>Difference (from CONUS Station)</i>		\$1,268		\$1,575

Sources: Department of Defense, Directorate of Military Compensation, Selected Military Compensation Tables, January 2011; and Department of the Treasury, Office of Tax Analysis, April 15, 2011.

Notes:

a. From 1 Jan 11 pay table.

b. Assumes average BAH for all E-6s and O-3s, respectively, with dependents. Actual BAH rate would be determined based on geographical location.

c. Members on TDY who are provided meals and quarters receive the portion of per diem for “incidentals and expenses,” which is \$3.50/day (\$105/mo) OCONUS.

d. DoD policy caps HDP-L at \$150/mo., except in IDP areas, where it is capped at \$100/mo. (The intent of this policy is to prevent dual payment for personal security issues.)

e. Amount of CZTE benefit varies by person (based on number of dependents, spousal income, length of deployment). Data is 2009 (latest available data) average per year/12.

7. See Appendix B for combat compensation in selected countries.



**Table 3. Combat Zone Supplementary Benefit Programs**

Program	Current Level
Death Gratuity	\$100K
SGLI	\$400K
T-SGLI	Up to \$100K
Dependency & Indemnity Compensation (DIC)	Varies by grade/# of dependents
Survivor Benefit Plan (SBP)*	Varies by grade/# of dependents
Other:	
Social Security	
Basic Allowance for Housing (BAH)	Up to one year
Commissary & Exchange	
Federal Income Tax Forgiveness	
Post 9/11 Government Issue (GI) Bill	

Source: 2010 Uniformed Services Almanac, Debra M. Gordon, Dana L. Smith, and Sol Gordon, editors.

\*or Reserve Component Survivor Benefit Plan.

The Death Gratuity, SGLI, T-SGLI, Dependency and Indemnity Compensation (DIC), and Survivor Benefit Plan (SBP) can be thought of as elements of insurance—ex-post compensation that would accrue to the survivors in the event of a death and/or the member in case of a traumatic injury. Other death benefits include the Social Security death benefit of \$255 per month, payments to surviving spouse and children, and housing benefits equal to one year of the Basic Allowance for Housing (BAH) or housing on-base. Additional benefits are continued commissary and exchange privileges, forgiveness of federal income taxes in the year of the member's death, and eligibility for the Marine GYSGT John David Fry Scholarship. Reservists are eligible for a similar set of benefits.

Critical to achieving manpower goals and objectives, especially in the context of combat operations, is the use of reenlistment, enlistment, and critical skills retention bonuses. These payments are used to equate demand and supply by occupation, in the case of selective reenlistment and critical skills retention bonuses. Assignment incentive pay, by encouraging volunteerism, is an additional tool for balancing demand with supply. While these compensation elements have sometimes been targeted at participation in a combat operation,<sup>8</sup> they are principally applicable to non-combat operations. These compensation elements are listed in Table 4 with the statutory limits (caps) that can be offered.

8. For example, in 2004, soldiers in selected units who were involuntarily extended received \$800 per month in assignment incentive pay. "Some Soldiers in Iraq to Receive Extra Pay," *Army News Service*, February 23, 2004.

**Table 4. Selected Compensation Programs**

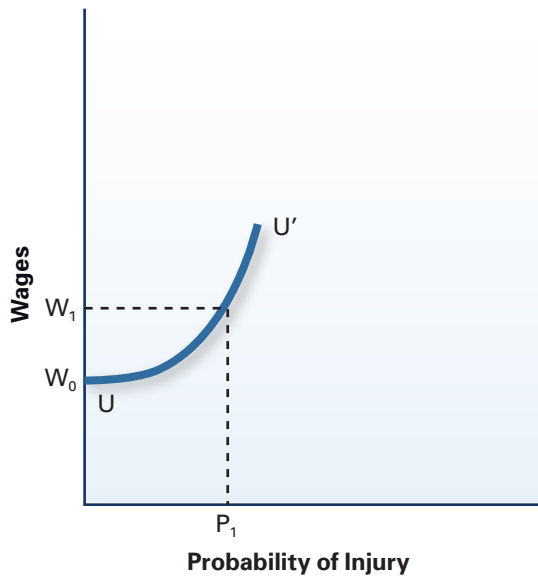
Program	Statutory Limit (Cap)
Assignment Incentive Pay	\$3,000 per month
Selective Reenlistment Bonus	\$90K
Enlistment Bonus	\$40K
Critical Skills Retention Bonus	\$200K

### 3. Compensation and Risk—Theoretical Background

Most individuals consider risk and hardship to be undesirable characteristics of the work environment. While individuals may have different tolerances for those characteristics, it is certainly the case that at any given wage rate, the number of workers who are willing to supply their labor to risky occupations is lower than the number who would be willing to supply to safe occupations, all else being equal. Firms and other organizations that wish to attract workers into dangerous employments can only do so if they offer wages or other forms of compensation that are higher than in less dangerous employment. In equilibrium, wages will tend to be higher in riskier jobs. The wage premium necessary to secure the equilibrium level of employment above and beyond wages paid to similarly qualified workers in safe jobs is called the “compensating wage differential for risk.”

Consider Figure 1, representing the tradeoffs between risk and compensation for an individual.<sup>9</sup> The vertical axis represents the individual’s wage and the horizontal axis the probability of injury or death. The curve labeled  $UU'$  shows the increased wages the individual requires for increased risk. Anywhere along the curve  $UU'$ , the individual considers himself to be just as well off as at any other point on the curve. As the curve illustrates, the minimum wage required for this individual to seek employment in a job with no risk of injury is  $W_0$ . As the probability of an injury increases, the individual requires a higher wage to be just as well off. In the diagram, a wage of  $W_1$  is needed for a job where the probability of an injury is  $p_1$ . If individuals eschew risk, the supply of labor to risky occupations will be lower than the supply of labor to riskless occupations, so employers in risky occupations will have to pay a higher wage to attract a given number of workers. Given the demand for workers in given occupations, the market determines an equilibrium differential for different levels of risk, the compensating differential. The amount of the differential represents the premium needed to entice the last (most risk averse) worker to take the position for the increase in risk.

9. Job choice depends on a variety of factors, including expected job satisfaction. This assumes that other factors do not vary in order to simplify the choice to one between risk and wages.



**Figure 1. Tradeoffs between Risk and Compensation for an Individual**

These compensating differentials are typically ex-ante amounts; that is, the individual, given his reservation price—the minimum wage that is needed to enter the labor force—compares risk and reward before starting employment to determine his or her optimum choice. In practice, Regular Military Compensation (RMC) is significantly higher than measurably comparable civilian earners, and this, along with enlistment and reenlistment bonuses, special and incentive pays, and the insurance provided to members, provides sufficient remuneration to compensate for the additional risk and hardships of being in the military.<sup>10</sup>

As discussed earlier, the DoD does provide increased compensation for combat and combat support operations. The stated DoD philosophy is the greater the risk, the greater should be the compensation.<sup>11</sup> While this added compensation may be an element of a compensating differential, historically the Department has considered combat compensation to be recognition pay, recognizing the hazards and hardships that members face in combat or the danger and hardship in combat support operations.<sup>12</sup>

## 4. The Relationship between Risk and Reward for Those Receiving Combat Compensation

### A. The Relationship between Combat Risk and Compensation Today

All members within a designated combat zone receive combat compensation. However, the risk of injury or death varies considerably, depending upon the member's location within the zone and the member's occupation and responsibilities. Table 5 provides a summary by country of the killed-in-action (KIA) and wounded-in-action (WIA) rates for the Arabian Peninsula areas and Afghanistan combat zones

10. RMC consists of BP, BAH, BAS, and the tax advantage resulting from the non-taxability of the housing and food allowances.

11. Directorate of Military Compensation, Brief delivered to the Association for Financial Counseling and Planning Education, Denver, CO, November, 2010.

12. *Report of the 1971 QRM: Hostile Fire Pay*, Second Edition, December 1971.

for 2010. Casualty rates are the number of killed and/or seriously wounded divided by the number of military members deployed as of a given date in 2010. As can be seen in the table, casualty rates vary considerably from a high of 57 per thousand deployed in Afghanistan to 0 in countries like the United Arab Emirates (UAE), Bahrain, and Israel.

Even within a country, there is considerable variation in casualty rates. For example, some areas of Iraq were incident free, while others had significant casualty rates.

Casualty rates also vary considerably by pay grade. Figure 2 and Figure 3, containing data from the Defense Manpower Data Center, illustrate combat zone casualty rates by enlisted and officer pay grade for 2005–2010. For both injuries and deaths, starting from the pay grade of E-2, casualty rates decreased with increased pay grade. For officers, there was almost always a decrease in casualty rate as the grade rose.

The benefit received by members within the combat zone varies widely. Since HFP/IDP does not vary by pay grade, any variation in combat compensation benefit is the result of differences in CZTE benefit. Table 6 and Figure 4 present the average CZTE savings by country. The average CZTE savings is calculated by pay grade and weighted by the number of members of that pay grade deployed,

**Table 5. Casualty Rates by Country 2010 (Per Thousand Deployed Members)**

Country	WIA	KIA	KWIA (total of WIA and KIA)
Afghanistan	46.69	10.38	57.07
Bahrain	0.00	0.00	0.00
Djibouti	0.00	1.28	1.28
Israel	0.00	0.00	0.00
Iraq	4.30	1.05	5.35
Jordan	0.00	0.00	0.00
Kuwait	2.86	5.66	8.52
Oman	0.00	0.00	0.00
Pakistan	0.00	33.89	33.89
Qatar	0.55	0.14	0.69
Saudi Arabia	0.00	0.00	0.00
Somalia	0.00	0.00	0.00
UAE	0.00	0.00	0.00
Yemen	0.00	0.00	0.00

Source: Defense Manpower Data Center.

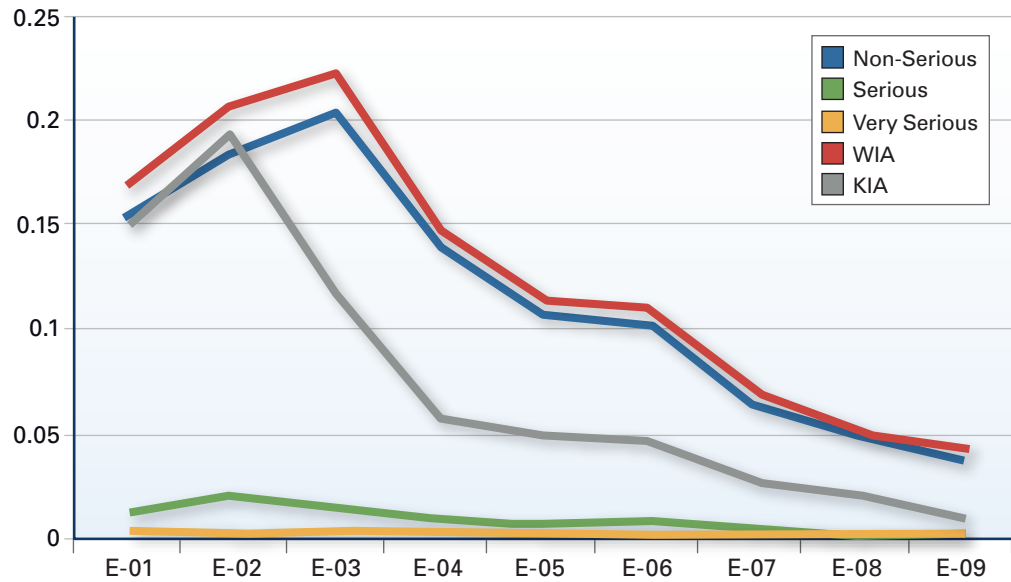


Figure 2. Casualty Rates by Enlisted Pay Grade 2005 to 2010

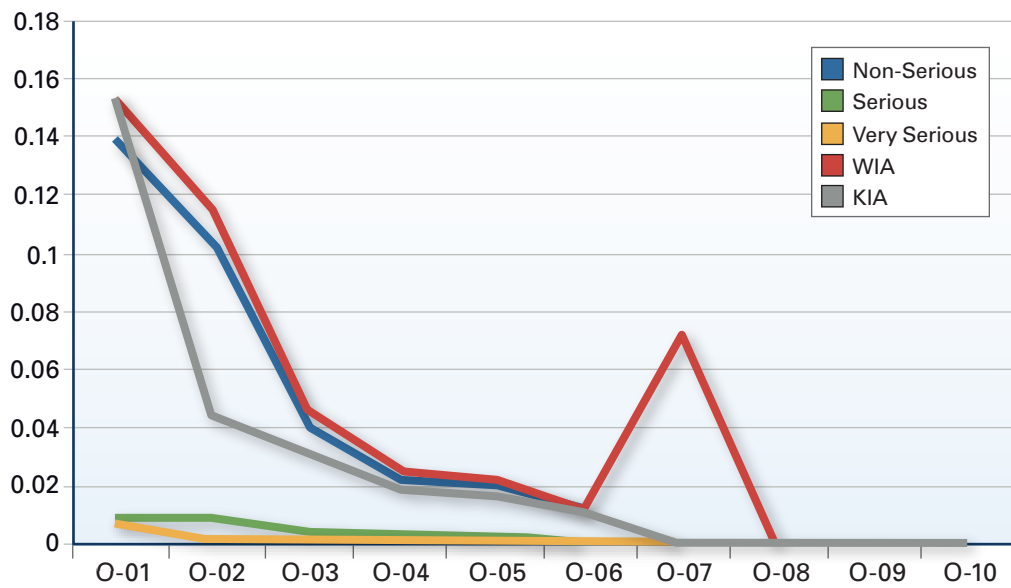


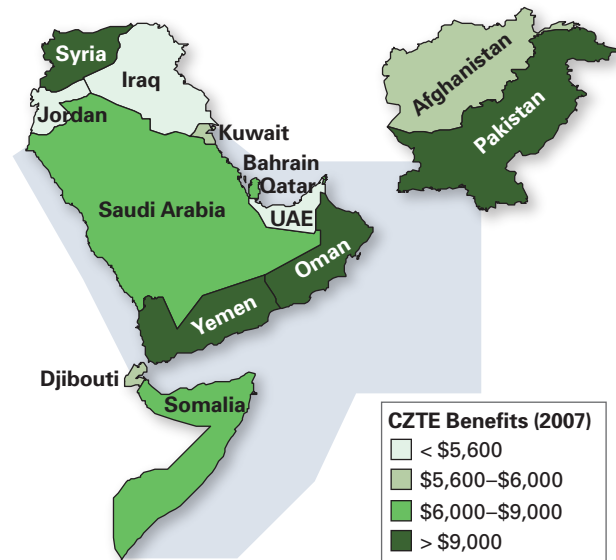
Figure 3. Casualty Rates by Officer Pay Grade 2005 to 2010

by country.<sup>13</sup> The greater the percentage of officers and the greater the seniority, the higher, in general, will be the average CZTE benefit.

Comparison of the average benefit with the average casualty rate, indicates many anomalies. For example, Oman, a country with a zero casualty rate, has an average benefit that is almost 50 percent higher than Afghanistan, the country with the highest casualty rate.

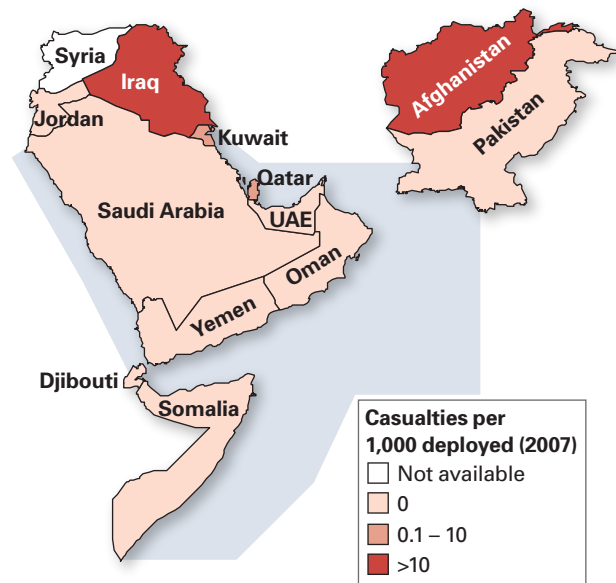
Table 7 and Figure 5 show casualty rates by country for 2007.<sup>14</sup> Comparing Table 5, with casualty rates from 2010, and Table 7, casualty rates for Iraq have decreased, while casualties in Afghanistan have increased, from 2007 to 2010. In both years we find the majority of countries have zero casualties.

A more aggregate comparison can be seen in Figure 6, which compares savings and casualties in combat-zone countries. Table 7 uses normalized data to show the relationship between CZTE savings and casualty rates. The points are the distance of each observation from the mean relative to the standard deviation in the total sample. This conversion allows us to represent each country's savings and casualty rates by numbers that are independent of the units in which the series was measured. A country that has CZTE savings that are greater than average will have a positive value for savings; a country with a zero casualty rate will be below the mean casualty rate and will have a



Source: Department of the Treasury, Office of Tax Analysis.

Figure 4. CZTE Savings by Country 2007



Source: Defense Manpower Data Center.

Figure 5. Casualties by Country 2007

13. Calculation of CZTE savings is based upon data provided by the Department of the Treasury. A detailed description of the procedure that was used to calculate these savings is provided in Section 6.

14. Appendix C provides data for the number of persons deployed, in man-years, by country, for 2005. Appendix D provides casualty rates for the period FY 2003–2009.

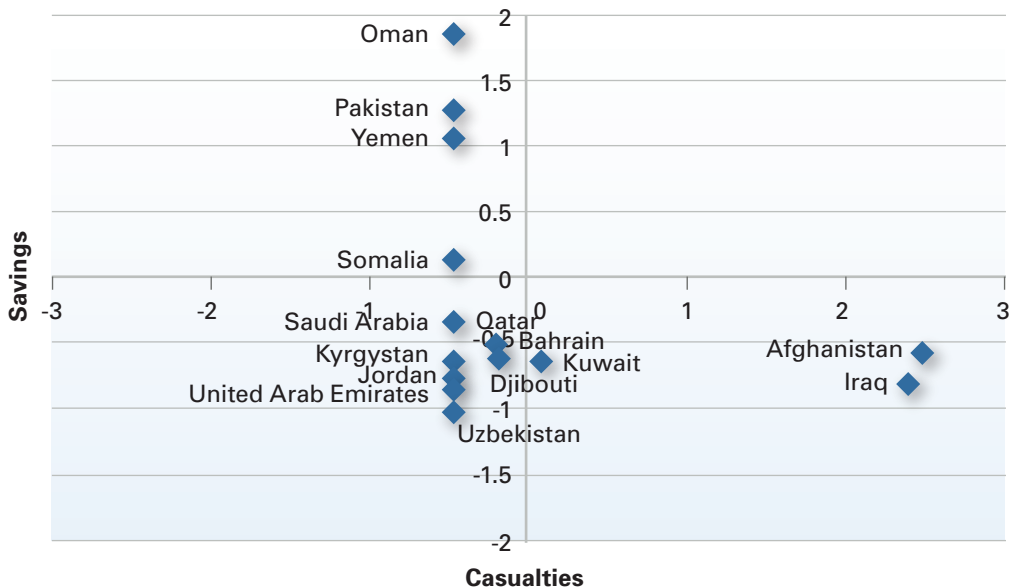
**Table 6. CZTE Savings by Country 2007**

Deployment Country	Average CZTE Benefit	Average Family Size	Percent Enlisted	Percent Officers	Percent Warrant Officers
Oman	\$11,090	3.3	38.49%	61.51%	0.00%
Tajikistan	\$10,839	3.1	65.31%	34.69%	0.00%
Syria	\$9,982	2.5	64.91%	8.77%	26.32%
Pakistan	\$9,879	3.1	47.35%	50.93%	1.72%
Yemen	\$9,480	3.3	60.34%	22.41%	17.24%
Somalia	\$7,411	2.2	83.33%	16.67%	0.00%
Saudi Arabia	\$6,428	2.8	78.98%	20.16%	0.86%
Qatar	\$6,092	2.5	78.39%	20.54%	1.07%
Bahrain	\$6,075	2.6	81.06%	17.65%	1.29%
Afghanistan	\$5,924	2.4	83.62%	13.67%	2.71%
Kyrgyzstan	\$5,868	2.4	84.95%	13.03%	2.02%
Kuwait	\$5,799	2.4	85.92%	11.91%	2.18%
Djibouti	\$5,798	2.4	83.19%	16.04%	0.78%
Jordan	\$5,565	2.4	79.19%	19.85%	0.96%
Iraq	\$5,439	2.3	87.01%	11.24%	1.75%

Sources: Department of the Treasury, Office of Tax Analysis; and Defense Manpower Data Center.

**Table 7. Casualty Rates by Country 2007 (Per Thousand Deployed Members)**

Country	KIA	WIA	KWIA
Afghanistan	1.38	11.26	12.64
Iraq	1.44	10.83	12.27
Kuwait	0.26	2.12	2.38
Kyrgyzstan	0.10	1.15	1.25
Bahrain	0.59	0.59	1.18
Qatar	0.06	1.08	1.14
Oman	0.00	0.00	0.00
Pakistan	0.00	0.00	0.00
Yemen	0.00	0.00	0.00
Somalia	0.00	0.00	0.00
Saudi Arabia	0.00	0.00	0.00
Djibouti	0.00	0.00	0.00
Jordan	0.00	0.00	0.00
United Arab Emirates	0.00	0.00	0.00



Sources: Casualties: Defense Manpower Data Center; Savings: Department of the Treasury, Office of Tax Analysis.

**Figure 6. Combat Zone Tax Exclusion Savings and Casualty Rates 2007**

negative number associated with it. If there were a perfect positive correlation between savings and casualties, all observations would lie on an upward-sloping 45 degree line through the origin. Figure 6 shows virtually no correlation between the two series.<sup>15</sup>

This comparison of Table 6 and Table 7 shows that there is no correlation between the CZTE savings and the degree of risk of death or injury from service in the relevant countries. Members exposed to lesser risk often receive greater compensation. This is not surprising since (as noted earlier) the size of the CZTE is determined by the quirks of the U.S. tax code and the risk of death or injury in various countries by vastly different factors.

### B. Members’ Perceptions of Risk

Members were asked in the 2010 QuickCompass Survey to compare either their current deployment to a combat zone with their previous CONUS deployment, or, their previous deployment to a combat zone with their current CONUS location.<sup>16</sup> The survey results are given in Table 8 and Table 9.

15. Appendix D shows more detailed information and analysis on the distribution of casualty rates and savings by country and by military occupation.

16. 2010 QuickCompass Survey was a web-based survey of the Department of Defense community directed through the Human Resources Strategic Assessment Program (HRSAP), Defense Manpower Data Center (DMDC) on a wide range of personnel issues.



For those members currently in a combat zone (Table 8), about 30 percent view this deployment as no more dangerous than their CONUS deployment and only 21 percent perceive their combat zone deployment to be very dangerous. While there is a slight increase from the overall percentage in the percentage of members who view their current deployment as being no more dangerous with both enlisted and officer grade, there is also a slight increase in the percentage who feel their current deployment is much more dangerous. Marines had the highest percentage of respondents who felt their current deployment was no more dangerous, while the Army had the lowest percentage.

Results differ for members who have recently returned from a combat zone (Table 9). About 20 percent thought their deployment to be no more dangerous, while 30 percent of respondents believed their deployment to be much more dangerous. In this sample also, the perception that their previous deployment was much more dangerous increases with pay grade for both officers and enlisted members.

**Table 8. Survey Results for Current Deployment Location**

Compared with your last CONUS duty location, how dangerous is your current deployment location?						
1. No more dangerous	2. Slightly more dangerous	3. Somewhat more dangerous				
4. More dangerous	5. Much more dangerous					
	Percentages					Max Margin of Error
	1	2	3	4	5	
<b>TOTAL</b>	<b>31</b>	<b>14</b>	<b>17</b>	<b>17</b>	<b>21</b>	<b>±3</b>
Army	26	13	18	18	25	±4
Navy	40	15	16	15	14	±5
Marine Corps	49	14	13	13	12	±6
Air Force	30	18	17	18	17	±5
Received IDP in Past 36 Months	29	13	17	17	23	±3
<i>Enlisted</i>	30	14	18	17	22	±4
E1–E4	31	14	17	17	20	±6
E5–E7	28	13	18	16	24	±5
E8–E9	32	13	11	20	23	±7
<i>Officers</i>	28	13	15	20	25	±3
W1–W5	23	11	11	27	28	±11
O1–O3	27	14	16	20	24	±5
O4–O6	32	12	14	16	26	±5

Source: Defense Manpower Data Center, 2010 QuickCompass Survey of Military Members.

**Table 9. Survey Results for Previous Deployment Location**

Compared with your current CONUS duty location, how dangerous was your previous deployment location?						
1. No more dangerous	2. Slightly more dangerous	3. Somewhat more dangerous				
4. More dangerous		5. Much more dangerous				
	Percentages					Max Margin of Error
	1	2	3	4	5	
<b>TOTAL</b>	<b>22</b>	<b>12</b>	<b>15</b>	<b>21</b>	<b>30</b>	<b>±2</b>
Army	22	9	15	21	32	±4
Navy	28	14	18	18	21	±4
Marine Corps	21	14	14	22	29	±3
Air Force	18	16	14	22	31	±3
Received IDP in Past 36 Months	20	11	15	22	32	±2
<i>Enlisted</i>	23	11	15	21	30	±3
E1–E4	26	11	15	21	26	±4
E5–E7	21	10	15	21	32	±3
E8–E9	17	8	11	19	44	±5
<i>Officers</i>	10	12	14	26	38	±3
W1–W5	12	8	18	26	35	±9
O1–O3	12	10	15	26	36	±4
O4–O6	7	14	12	26	41	±4

Source: Defense Manpower Data Center, 2010 QuickCompass of Military Members.

We see that not only are risks, as reflected by casualties, quite low in some parts of designated combat zones, but that servicemembers know it. That is the message of both the 2010 QuickCompass survey responses presented here and the piece by Captain Cummings referred to at the start of the paper.

In sum, while the entire Gulf region is designated a combat zone, actual combat is and has been limited to a few countries. Similarly, the Red Sea, Gulf of Oman, Gulf of Aden, and a part of the Arabian Sea are included in the combat zone, but have not experienced any casualties. In addition, the Bosnia/Kosovo Combat Zone and especially the Adriatic and Ionian Seas have had little in the way of combat or casualties. The presence of commercial and private transit in these areas is evidence of the areas' safety. The conclusion we would draw from these data is that many members who are far removed from combat receive the same compensation as those who are actively engaged in combat. The next section examines why many safe areas are in designated combat zones.

## 5. The History of Combat Compensation

We have observed that servicemembers in relatively safe countries and relatively safe jobs are often eligible for combat compensation. In this section, we examine the evolution of practices regarding eligibility for and administration of combat compensation.

### A. Hostile Fire Pay/Imminent Danger Pay

The purpose of recognition for combat risks originated in Badge Pay for combat infantry in World War II (WWII). Designed to boost flagging infantry morale, Badge Pay awarded \$10 per month to holders of a Combat Infantryman's Badge, earned through combat service, and \$5 to those with an Expert Infantryman's Badge, earned through proficiency in training. Unlike its successors, Badge Pay was not a combat pay in the traditional sense. Although other servicemembers endured similar risks and discomforts, Badge Pay was available only to the infantry, and once awarded, an infantryman would continue to receive compensation until the entitlement was curtailed in 1949. Future pays would extend eligibility beyond the infantry but restrict benefits to the periods of risk exposure. Still, by introducing the general concept of recognition and rewarding the "hazards and hardships" of infantry service, Badge Pay established two critical precedents for future special pays.

Combat Pay for servicemembers deployed to Korea, authorized in 1952, represented the first modern form of direct combat compensation. Advanced by the Army, Combat Pay awarded \$45 per month to members serving at least six days in designated "combat units" or individuals wounded, injured, or killed by hostile fire. Defined by statute, "combat units" were effectively restricted to frontline ground units with the intent that special recognition extend only to those enduring the worst "hazards and hardships" of war. Combat pay was not available to those who received other special and incentive pays, such as flight or submarine pay. This narrow, conditions-based interpretation of the purpose of recognition echoed its predecessor, Badge Pay, but drew the ire of the Navy and Air Force, whose members faced slim prospects of eligibility. Almost immediately upon enactment, the other Services and their supporters in the Congress sought to replace "unit designation" with broad, zonal eligibility. From the perspective of its opponents, the dual standard of "hazards and hardships" was both administratively burdensome and distributionally inequitable. From this perspective, risk alone deserved recognition.

In 1963, Combat Pay, which had statutorily expired with the Korean armistice, was reauthorized as HFP. The legislative history of HFP indicated continuity in purpose and policy with its Korean War predecessor. As favored by the Army, eligibility would

be restricted to those serving at least six days with designated frontline “combat units,” effectively excluding most members of the Navy or Air Force. However, unlike Korean War Combat Pay, which codified eligibility criteria into law, the new authorization granted the DoD near-complete discretion over administration of HFP.

Initially, the Department followed narrow historical precedent, continuing the dual standard of “hazards and hardships” and the policy of unit-based eligibility. However, as a result of internal deliberations, likely stemming from the fluid combat environment in Southeast Asia, the Department reversed course in 1965 and replaced the practice of designating combat units with the policy of zonal eligibility for Vietnam. The six-day criterion was also rescinded.

Immediately upon implementation of the 1965 directive, the number of HFP recipients quintupled. Although the purpose of HFP remained recognition for risk, in spirit, the substance of combat pay policy had shifted dramatically. No longer was recognition reserved to those who endured the worst “hazards and hardships” but all within the designated area who faced any level of risk were entitled to recognition.

The decades after the Vietnam War saw the entrenchment of the policy of zonal eligibility and the perspective of demanding “recognition for risk.” In the absence of major conflict, the Department issued few new designations in the late 1970s and early 1980s. In 1983, the bombing of Marine barracks in Beirut and violence against servicemembers in El Salvador prompted the Department and the Congress to reevaluate combat pay policy. As HFP was traditionally reserved for the overt hazards of open warfare, existing policy struggled to recognize the latent risks of low-intensity conflicts, which characterized post-Vietnam military deployments. The Congress redressed the omission by authorizing a new special pay—IDP—recognizing the risk of “physical harm or imminent danger on the basis of civil insurrection, civil war, terrorism, or wartime conditions” short of open warfare. This change enhanced the relevance of combat pay to contemporary military deployments but once again lowered the risk threshold for pay eligibility.

Although the increasing number of low intensity designations for IDP corresponded to the risk environment of military deployments in the 1980s and 1990s, modern HFP/IDP may struggle to appropriately recognize the overt risks of the combat operations in Iraq and Afghanistan. Whereas previous decades featured either only high- or low-grade designations—Vietnam in the 1960–1970s, IDP designations thereafter—the coexistence of designations for open warfare and low intensity conflicts is a source of dissonance in modern combat pay policy. The status quo, wherein deployments in Afghanistan and Athens receive identical recognition despite vastly different hazards and hardships, is not explicable in terms of conventional notions of equity. The wide distribution of risks receiving special

pay may also dilute the impact of recognition on servicemember morale. In 2003, the Bush Administration grappled with this imbalance by proposing to extend a temporary raise in HFP/IDP (to \$225/month) only for members deployed to Iraq and Afghanistan (all others would receive HFP/IDP at \$150/month). Rather than limiting the increased HFP/IDP to members in Iraq and Afghanistan, the raise was made permanent for members in both low- and high-risk areas. This continues the misalignment between risk and reward.<sup>17</sup>

In summary, while combat pay has remained faithful to its broad historical purpose of risk recognition, the specific application of recognition has evolved considerably in response to new conflict environments and political coalitions. Originally intended to narrowly recognize only those enduring the worst “hazards and hardships” of frontline combat, modern combat pay now recognizes servicemembers exposed to widely varying degrees of risk, from those of front-line combat to those similar to duty in CONUS.

## **B. Combat Zone Tax Exclusion**

The tax exclusion was originally established in World War I (WWI) to alleviate the burden of war finance from those who fought in the nation’s conflicts. Military personnel were covered regardless of where they served. This persisted in WWII. The income tax exclusion during the Korean War was justified as compensation for members exposed to wartime risks. It was not targeted on specific units or occupations but was limited to clearly identifiable areas of risk. This philosophy has persisted since then but its application has changed over time.

Early combat zones were time-limited by statute, but benefits still outlived the combat conditions. WWI benefits continued until 1921, and WWII benefits continued until 1949. Korean War benefits were curtailed soon after combat operations ended.

The Vietnam Combat Zone<sup>18</sup> continued long after combat operations concluded. The rationale for not terminating the combat zone was to ensure that possible prisoners of war (POW) or members missing in action (MIA) who may have still been alive would continue to receive the CZTE benefit, but the combat zone continued until 1996, long after any known living POWs were released.<sup>19</sup> During the two decades that the Vietnam Combat Zone continued after the war, only a small number of military members were present in Vietnam and usually for only a short duration.

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17. Although the nominal value of HFP/IDP has not changed since 2003, its real value has decreased through inflation. \$225 in 2003 is equivalent to \$190 in 2010 after adjusting for inflation.

18. Executive Order 11216, April 24, 1965, established the Vietnam Combat Zone effective January 1, 1964.

19. Executive Order 13002, May 13, 1996, terminated the Vietnam Combat Zone effective June 30, 1996.

The Persian Gulf Combat Zone, established in 1991,<sup>20</sup> was not terminated and now covers the current Iraq War. However, because the entire Gulf region was designated as a combat zone,<sup>21</sup> members are eligible for the CZTE benefit in high-risk areas with ongoing combat operations (Iraq) as well as low-risk areas in other parts of the Gulf region where members are not engaged in combat. In 1993, the Department of Defense terminated HFP/IDP in many low-risk areas in the Gulf region, but throughout the remainder of the 1990s, 7,000 to 16,000 servicemembers per year continued to receive CZTE benefits.

The Balkans presented a unique situation, with U.S. participation in a large-scale North Atlantic Treaty Organization (NATO) peacekeeping operation. There was political reluctance to establishing a combat zone, yet there was concern that large numbers of U.S. servicemembers might become engaged in combat-like and combat support operations. In 1995, the Congress established in statute the concept of a Qualified Hazardous Duty Area (QHDA) and established Bosnia and Herzegovina, Croatia, and Macedonia as a QHDA.<sup>22</sup>

The QHDA provided the same benefit to members as a combat zone (e.g., CZTE), but the benefit was dependent on receipt of HFP/IDP. While the Balkan QHDA is still in statute today, the CZTE benefits were curtailed in 2007 when the DoD terminated HFP/IDP in the QHDA countries. Nonetheless, CZTE benefits could be reinstated by isolated event-based eligibility for HFP/IDP. In fact, there were 20 military deaths (and only one recorded hostile fatality) in the Balkans from 1996 to 2007.

The Kosovo Combat Zone was established in 1999,<sup>23</sup> covering Serbia, Montenegro, Albania, the Adriatic Sea, and the Ionian Sea north of the 39th parallel. It remains in effect today. Servicemembers on Mediterranean-based ships that enter the northern Ionian or Adriatic Seas today receive the CZTE benefit, long after cessation of hostilities and risk.

The concept of Direct Support to operations in a combat zone was established during the Vietnam War to provide CZTE benefits to servicemembers supporting the war while in Cambodia, Laos, and Thailand. So long as the members were

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20. Executive Order 12744, January 21, 1991, established the Persian Gulf Combat Zone effective January 17, 1991.

21. The Persian Gulf Combat Zone consists of the Persian Gulf, Red Sea, Gulf of Oman, Arabian Sea (north of 10 degrees North latitude, west of 68 degrees East longitude), Gulf of Aden, Iraq, Kuwait, Saudi Arabia, Oman, Bahrain, Qatar, and United Arab Emirates.

22. Public Law 104-117, November 21, 1995.

23. Executive Order 13119, April 13, 1999, established the Federal Republic of Yugoslavia (Serbia and Montenegro), Albania, Adriatic Sea, and the Ionian Sea north of the 39th parallel as the Kosovo Combat Zone, effective March 24, 1999.

directly supporting the operations in the combat zone and were receiving HFP/IDP for danger related to the combat zone, they were eligible for the CZTE benefit.<sup>24</sup> Direct Support was not used again in a significant way until the Global War on Terror and the establishment of the Afghanistan Combat Zone.

The Afghanistan Combat Zone was established in 2001<sup>25</sup> and supports the continuing combat operations in Afghanistan today. Unlike the Persian Gulf Combat Zone, the Afghanistan Combat Zone did not include surrounding countries, where combat or combat support operations were likely to be conducted. Instead, CZTE benefits were established outside of Afghanistan through DoD designation of Direct Support to operations in the combat zone. Servicemembers in countries surrounding Afghanistan such as Pakistan, Tajikistan, Kyrgyzstan, and Uzbekistan were designated in Direct Support of the combat zone.

Direct Support was also used for members engaged in the Global War on Terror in countries distant from Afghanistan, but where the threat was related to Al Qaeda terrorist operations. For example, the Philippines (members with orders referencing Operation Enduring Freedom), Yemen, and Djibouti were designated as Direct Support in 2002, and Somalia was designated as Direct Support in 2004.

A Direct Support designation provides the DoD the flexibility to not only establish CZTE benefits for areas outside a specific combat zone, but also to terminate those benefits in a timely manner when the threat or circumstances change. Even though the Persian Gulf Combat Zone was in place at the beginning of the Iraq War, Turkey, Jordan, Egypt, and the Mediterranean Sea east of 30 degrees East longitude were designated in Direct Support of the combat zone in 2003. As the war evolved and hostilities were limited to Iraq proper, the Department terminated the designations for Egypt and the region of the Mediterranean Sea later in 2003. The designation for Turkey was terminated in 2005. Nonetheless, many other countries in the region where there are no combat operations continue to receive CZTE benefits because they are included in the broadly defined Persian Gulf Combat Zone. This substantially weakens the link between risk and reward.

For most of the history of the CZTE all enlisted pay has been exempt from tax while officer pay up to the level of a relatively junior member of the highest enlisted rank has been exempt. In 1996 the officer exclusion was modified to include pay up to the level of the most senior enlisted personnel, the Senior Enlisted Advisors,

24. Treasury Department (TD) 7066, November 10, 1970, amended Treasury Regulation 1.112-1, providing that service in direct support of a combat zone that qualifies for HFP/IDP is deemed to be service in a combat zone.

25. Executive Order 13239, December 12, 2001, established the Afghanistan Combat Zone, effective September 19, 2001.

whose pay is 56 percent higher than that of an E-9 with ten years of service, the prior standard.<sup>26</sup> This has benefited field-grade officers considerably.

### C. Conclusion

While the CZTE was first established in WWI to free those fighting the war from the burden of war finance, for most of their history, eligibility for both the CZTE and HFP/IDP were recognition pays clearly related to risk. Under pressure from various interest groups and the pressure of events, combat-related pays have expanded to a point that substantially weakens their connection to risk, their stated rationale.

## 6. Reasons for Variation in Combat Compensation

As was shown in Section 4, within designated combat zones, geographic variation in the amount of combat compensation received is uncorrelated with risk. This section will examine the reasons combat compensation varies among individuals.

The two components of combat compensation, HFP/IDP and CZTE, are distributed very differently among servicemembers. While HFP/IDP is a constant amount a servicemember receives, regardless of pay grade, for any month or part of a month for which the member is deployed to a combat zone, the distribution of the CZTE benefit is much more complex.

For every month (or part of a month) that a member is deployed to a combat zone, that servicemember is eligible to exclude from federal income tax calculations the total income received, if he or she is an enlisted member, or up to \$7,714.80 per month (2011), the maximum enlisted pay plus HFP/IDP, if that member is an officer. Table 10 provides an example of the calculated benefit of being deployed to a combat zone for an E-4 with over 4 YoS, married with two children, and an E-6 with 10 YoS, married with one child. We assume the E-4 and E-6 are deployed to a combat zone for 6 months in the 2010 tax year.<sup>27</sup>

The bottom line in the table is the CZTE benefit. For the E-4, the benefit consists of the \$428 in income taxes that he or she avoids plus the additional \$1,856 in EIC, for a total of \$2,284.<sup>28</sup> The E-6 saves \$5,112—\$2,062 in income taxes that he or she no longer has to pay plus \$3,050 in EIC that the member is now eligible for.

26. 142 Cong. Rec. H1670 (daily ed. March 5, 1996).

27. Both cases assume no spousal income, members take the standard deduction, and there are no other sources of additional income or credits. A member's total deployment could still be 12 months extending over two tax years.

28. The Earned Income Credit is a federal program designed to assist low wage earners by providing a refundable tax credit based upon earnings.



**Table 10. Examples of the Calculation of CZTE**

	E-4 over 4 YoS, 2 Children		E-6 over 10 YoS, 1 Child	
	Not in CZ	In CZ	Not in CZ	In CZ
Annual Basic Pay + HFP/IDP	30,299	30,299	41,678	41,678
Annual – CZTE Excluded Pay	0	15,149	0	20,839
Adjusted Gross Income	30,299	15,149	41,678	20,839
Std Ded and Exemptions	26,000	26,000	22,350	22,350
Taxable Income	4,299	0	19,328	0
Tax (Negative #)	(428)	0	2,062	0
EIC	3,180	5,036	0	3,050
<b>CZTE Benefit</b>	<b>0</b>	<b>2,284</b>	<b>0</b>	<b>5,112</b>

Source: Internal Revenue Service 2010.

The actual value to an individual member of being deployed to a combat zone depends upon a number of factors:

- ❖ Income – Since our income tax system is progressive, higher incomes push people into higher marginal tax rates. Marginal tax rates vary from the lowest rate of 10 percent to the highest current rate of 35 percent. The greater the family income, including spousal income, the greater should be the value of CZTE to the individual.
- ❖ Family Size – The larger the family, the greater are the number of personal exemptions to be subtracted from Adjusted Gross Income. Additionally, depending upon a number of conditions including the age of the children, the family would become eligible for a variety of income tax deductions and credits. For example, there is both a Child Tax Credit and a Child Care Deduction. Since larger families, because of deductions and credits, would tend to have lower marginal tax rates than otherwise similarly situated families, the value of the CZTE is expected to be lower for them.
- ❖ Deductions, additional income, and other income tax variables – Any factor that would change net taxable income, deductions, and/or tax credits would change the individual's income tax liability and hence, the value of the CZTE benefit.
- ❖ Time spent deployed – The greater the number of months deployed, the greater tends to be the CZTE benefit, since each additional month for an enlisted member (and most officers) increases the amount of income that

can be excluded. However, this is not always the case, primarily due to the structure of the EIC.<sup>29</sup>

- ❖ Distribution of deployment time across years – Because of the structure of the EIC, benefits can vary with the distribution of a fixed number of months of deployment across tax years. At the lowest income levels, increasing income raises the EIC benefit. Benefits reach a maximum based upon family size and remain constant over some range of income. After maximum specified income is reached, benefits phase out gradually.

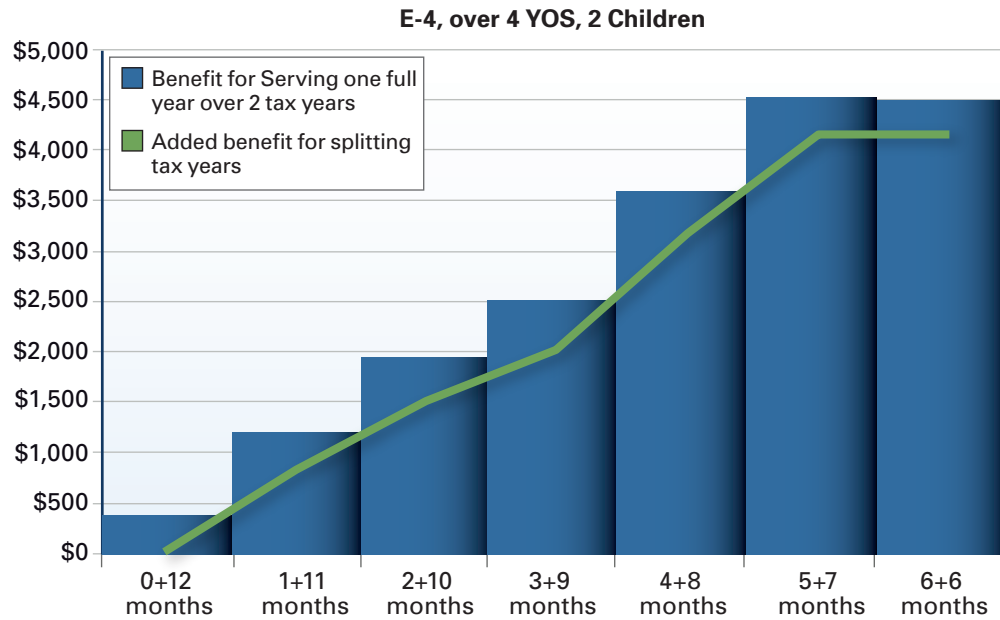
To discern the effect of the timing of deployment on an individual member, we simulated the effect of various distributions for the E-4, over 4 YoS. We assume that all deployments are 12 months in length, but not necessarily in one tax year, there is no spousal income, all members take the standard deduction, and the member has two children and no other source of income. The results of our simulation are illustrated in Figure 7. The bars show the savings due to the CZTE as a function of the distribution of the deployment across two adjacent years. The first bar shows a \$428 savings if all of the deployment is in a single year.<sup>30</sup> Note that the benefit for six months of service (Table 10) was \$2,284, while the benefit for an entire calendar year is \$428. This is a striking example of how provisions of the tax code distort the compensation of those who serve in combat zones.

Why does this occur? Up to a point, the gain in EIC increases as more income is sheltered by the CZTE. The increase in EIC complements the reduction in income tax producing an even greater total benefit. The maximum EIC benefit (\$5,036 for two children) can only be received if income is greater than \$12,590 or less than \$21,450. Incomes greater than \$21,450 or less than \$12,590 result in a loss of benefit.<sup>31</sup> As the deployment in a given tax year increases, that is, as further income is sheltered, the EIC benefit falls and beyond some point there is no additional reduction in the member's income tax. In this situation, the service member must elect either to base the EIC on the member's gross income or on the net taxable income. For the married E-4 with at least two years of service and two children, serving 12 months in any calendar year in the combat zone will result in the least benefit. The largest benefit accrues to this individual if he or she is deployed 5, 6, or 7 months in one year and the remainder in the next tax year. Over the two tax years, this member, deployed 6 months in one year and 6 months in the next, would have a total CZTE benefit of \$4,596, more than ten times the savings received by

29. Appendix E provides information on average deployment time per year.

30. See Appendix F for a hypothetical tax return that was used in the simulation.

31. See Figure 9 for an illustration of the relationship between EIC benefit and income.



**Figure 7. Distribution of Time in Combat Zone across Adjacent Years**

his or her counterpart, deployed 12 months in a single tax year. The source of the difference is the EIC calculation rather than the tax liability.

The optimal distribution of deployment varies by grade and all of the other factors that relate to income tax calculations and tax credits. While 6 months in year one and 6 months in year two, 5 months in year one and 7 months in year two, or 7 months in year one and 5 months in year two is advantageous for this E-4, a 12-month deployment all in one year (0+12), for example, may be beneficial for an O-6.

We were able to acquire the actual distribution of CZTE benefits from the Department of Treasury, Division of Tax Analysis. The W-2 form for members

**Table 11. Distribution of CZTE Benefit**

Year	1%	5%	25%	Median	75%	95%	99%	Mean
2005	\$250	\$1,460	\$2,500	\$3,950	\$6,610	\$12,600	\$19,380	\$5,130
2006	\$410	\$1,570	\$2,680	\$4,150	\$7,040	\$13,390	\$20,590	\$5,470
2007	\$520	\$1,690	\$2,890	\$4,540	\$7,690	\$14,680	\$22,070	\$5,960
2008	\$350	\$1,630	\$2,960	\$4,670	\$7,830	\$14,770	\$22,270	\$6,030
2009	\$280	\$1,480	\$3,000	\$4,600	\$7,770	\$14,720	\$22,430	\$5,990

Source: Department of the Treasury, Office of Tax Analysis, April 15, 2011.

who have been deployed in the combat zone includes a box containing data on the amount of income that has been excluded. The Division of Tax Analysis was able to recalculate income tax liability with the excluded income added. It should be noted that both the actual and recalculated tax liability include income from all sources—spousal, interest, dividends, etc. Similarly, the tax liability depends upon any deductions or credits taken as well as number of dependents. Eligibility for tax credits like EIC were also recalculated. We then defined the CZTE benefit as being the difference between the total tax burden (tax liability minus tax credits) as reported by the member for each tax year and the total tax burden the individual would face if all excluded income were included.<sup>32</sup> Actual benefits are shown in Table 11. The table provides the distribution of benefits by percentile for each of the tax years 2005–2009. CZTE benefits over the 5-year period ranged from a few hundred dollars to well over \$20,000. The median benefit was under \$4,700 and the average benefit was between \$5,130 and \$6,030.

Table 12 presents the average CZTE benefit by pay grade and component for 2009. As is shown in the table, CZTE benefits increase with increases in pay grade. Benefits also appear to increase with increased number of dependents. The cause of this result is the structure of EIC benefits. The greater the number of children, the higher the maximum benefit. Additional information on the distribution of tax savings during the period 2005–2009 is provided in Appendix G and Appendix H.

Figure 8 compares average CZTE benefit by pay grade and number of dependents (2007). Benefits are higher with increased pay grade. In general, benefits for the E-1–E-3 group are about one-quarter of the benefits received by the O-4–O-6 group. While these amounts represent average benefits, there is considerable variation within each category and, furthermore, the amount of benefit is generally unknown—either to the recipient or to the DoD. The benefit is essentially determined outside of the DoD and is driven by the specific provisions of the Internal Revenue Code.

Income exclusion as a result of deployment to a combat zone not only affects the individual's income tax liability, it also has a direct impact on eligibility for a variety of federal and state programs that have eligibility or benefit levels tied to income. The major benefit program for military members is the EIC.

As discussed above, the EIC plays a major role in determining the value of the CZTE benefit. First enacted in 1975, the EIC has been expanded by tax legislation numerous times since its enactment to become the nation's foremost anti-poverty

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32. It should be noted that this "income included" amount is not the liability the individual would have from a CONUS deployment because of the \$325 per month in HFP/IDP and Hardship Duty Pay the member receives in a combat zone.

**Table 12. Distribution of CZTE Benefit by Pay Grade, Number of Dependents, and Component**

Distribution of CZTE Benefit						
Active						
Pay Grade Group	0 Dependents	1 Dependent	2 Dependents	3 Dependents	4 Dependents	Overall
E1–E4	\$2,812	\$3,543	\$4,154	\$4,505	\$4,741	\$3,260
E5–E6	\$4,287	\$5,310	\$6,138	\$6,908	\$7,240	\$5,710
E7–E9	\$7,573	\$8,414	\$8,547	\$9,165	\$9,335	\$8,862
O1–O3	\$7,539	\$9,768	\$10,443	\$11,410	\$11,887	\$9,251
O4–O6	\$13,102	\$14,448	\$13,950	\$14,583	\$15,086	\$14,468
Guard						
E1–E4	\$2,965	\$4,291	\$4,904	\$5,370	\$5,579	\$3,599
E5–E6	\$4,496	\$6,461	\$7,065	\$7,725	\$7,844	\$6,200
E7–E9	\$7,299	\$9,267	\$9,498	\$9,957	\$9,874	\$9,386
O1–O3	\$7,452	\$10,751	\$11,170	\$12,225	\$12,239	\$10,006
O4–O6	\$12,754	\$15,509	\$15,391	\$16,501	\$16,501	\$15,775
Reserves						
E1–E4	\$2,687	\$3,584	\$4,315	\$4,885	\$5,330	\$3,130
E5–E6	\$4,156	\$5,772	\$6,461	\$7,377	\$7,667	\$5,694
E7–E9	\$7,405	\$9,002	\$9,326	\$10,139	\$10,250	\$9,401
O1–O3	\$7,671	\$9,585	\$10,154	\$10,785	\$10,887	\$9,376
O4–O6	\$12,865	\$14,557	\$14,559	\$15,137	\$15,910	\$14,830

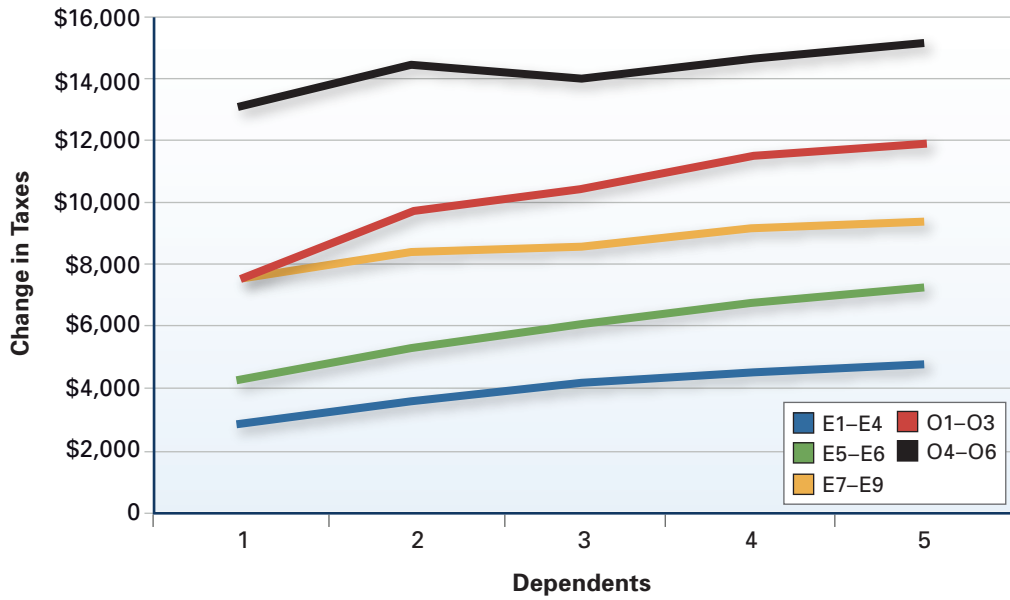
Source: Department of the Treasury, Office of Tax Analysis, April 15, 2011.

tool. The EIC was created to supplement the income of low-income households by creating a refundable tax credit that varies with number of dependents and income.

Figure 9 illustrates the structure of the EIC program. The EIC has three component parts—a phase-in that increases with increased income, a plateau where benefit levels are constant as income increases, a phase-out that decreases benefits with increased income and a maximum amount where benefits are exhausted. Four different relationships are shown in Figure 9 ranging from No Children to 3 or More Children. Increasing family size (up to family size 5) increases the benefit and the phase-in and phase-out levels.

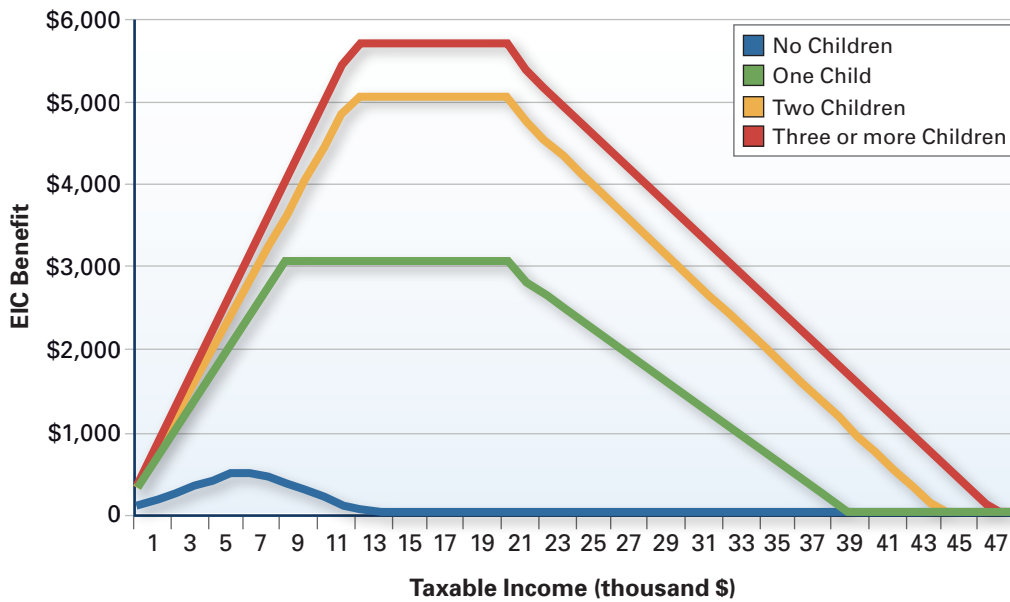
Present policy allows members to decide whether or not to count income received in a combat zone.<sup>33</sup> Consider an E-4 with over 4 years of service with two children serving in a combat zone for 6 months. Monthly pay for this E-4 is approximately \$2,200 per month. Assuming no spousal income, this E-4's monthly pay, plus \$325 per month in HFP/IDP and Hardship Duty Pay, results in an annual total of

33. This is an all or nothing decision. Members cannot choose to count a portion of their income.



Source: Department of the Treasury, Office of Tax Analysis, April 15, 2011.

**Figure 8. Combat Zone Tax Savings (2007 Active Duty)**



Source: Department of the Treasury, Internal Revenue Service.

**Figure 9. EIC Benefit and Income**

\$30,300.<sup>34</sup> EIC for this family would be \$3,160. With CZTE, the member can opt to not count \$15,150 in income earned while deployed to a combat zone. This reduces the member's income by half and increases EIC to the maximum of \$5,036.<sup>35</sup>

Now consider an O-6 with two children and over 20 YoS. The O-6's annual basic pay, HFP/IDP, and Hardship Duty Pay is \$113,048. Adding to this average non-taxable housing and subsistence allowances, annual income for an average O-6 is \$144,704. If this O-6 is deployed 12 months to a combat zone, he can elect to not count \$92,532 of his income towards EIC. Because allowances are not taxable, the O-6's net income is reduced to \$20,516 and, consequently, he becomes entitled to the maximum EIC payment of \$5,036.<sup>36</sup> The O-6, whose total compensation is about five times that of the E-4, can receive more in EIC than an E-4 stationed in the United States. This is incongruous because the EIC is supposed to be a social program to assist low-wage earners.

Using data provided by the Internal Revenue Service (IRS), the number of EIC recipients by pay grade and the average benefit they receive (shown in Table 13) were tabulated. The Division of Tax Analysis then recalculated each EIC recipient's income tax return including the income that was excluded because of deployment to a combat zone. The difference between the number of personnel receiving EIC with and without counting the income excluded because of deployment to a combat zone is provided in Table 14.

As can be seen in Table 14, the total increase in EIC recipients due to the CZTE was almost 90,000 in 2005. Almost half of this increase is in grades E-5 and E-6. Increases in the E-7–E-9 and O-4–O-6 ranges (i.e., senior enlisted and field-grade officer) amount to almost 5,400, or 6 percent of the total. The average RMC for an E-8 is \$85,000; the average for an O-5 is \$134,000.

The goals of combat compensation are to compensate for higher levels of risk, reward service, improve morale, and recognize the importance of combat service. To achieve these goals, at the very least, members should have an idea as to their combat compensation. While HFP/IDP is readily known and clearly transparent, the same cannot be said for CZTE. As we have shown, there is considerable variation in the CZTE benefit that is totally unrelated to risk. Furthermore, the complexity of the CZTE benefit calculated from an income tax return reduces the likelihood that an individual can compare the risks and rewards of combat.

34. This E-4 would also receive \$18,514.44 in housing and subsistence allowances as part of his or her Regular Military Compensation (RMC) of \$47,218.66 per year.

35. Actual EIC benefit is based upon family income. EIC benefits could increase or decrease based upon income exclusion and spousal income.

36. The relationship between time deployed and CZTE benefit for an O-6 is similar to the previous discussion for the E-4 for Figure 7 on page 30.

**Table 13. Average EIC Benefit by Pay Grade of Members Receiving EIC**

Pay Grade	2005	2006	2007	2008	2009
E-01 to E-03	2,135.14	2,216.99	2,309.42	2,373.68	2,681.18
E-04	1,948.85	1,996.95	2,055.53	2,179.44	2,515.92
E-05	1,944.58	2,045.01	2,115.72	2,216.28	2,555.22
E-06	1,942.66	2,020.20	2,202.55	2,313.30	2,641.83
E-07	1,856.66	1,999.83	2,139.84	2,277.55	2,621.64
E-08 to E-09	1,771.87	1,948.06	2,082.16	2,169.64	2,429.56
W-01 to W-03	1,896.80	2,153.54	2,243.98	2,328.13	2,609.47
O-01 to O-03	1,529.75	1,611.97	1,663.99	1,677.20	2,073.95
O-04 to O-06	1,899.43	1,981.92	2,094.53	2,128.91	2,454.04

Source: Department of the Treasury, Office of Tax Analysis, April 15, 2011.

Note: Average amounts are in nominal dollars.

**Table 14. Change in Number of Military Personnel Receiving EIC Because of Ability to Exclude Combat-Zone Income (2005)**

Pay Grade	Regular U.S. Army and Marines	Regular U.S. Air Force and Navy	National Guard and Reserves— All Services	Total
E-01 to E-03	1,710	825	636	3,171
E-04	6,999	1,835	7,780	16,614
E-05	9,910	3,345	9,835	23,090
E-06	9,737	4,544	6,510	20,791
E-07	6,042	2,580	2,987	11,609
E-08 to E-09	1,769	441	886	3,096
O-01 to O-03	1,281	356	4,832	6,469
O-04 to O-06	973	153	1,061	2,187
W-01 to W-03	582	40	1,687	2,309
<b>Total</b>	<b>39,003</b>	<b>14,119</b>	<b>36,214</b>	<b>89,336</b>

Source: Department of the Treasury, Office of Tax Analysis, April 15, 2011.



## 7. Potential Changes to Combat Compensation

The present-day divergence between the risks that military members face when deployed and the associated compensation can be brought into better alignment in a number of ways. Declared combat zones include areas where there is no combat, combat hostilities, or the threat of hostilities. As a consequence, members exposed to virtually no more risk in these areas than in CONUS and members actually engaged in combat are eligible for the same set of benefits. Furthermore, given the grade distribution in risky and non-risky areas within the combat zone, there can be an inverse relationship between risk and reward. Proposals for change include facilitating the initiation and termination of combat zones, modifying the CZTE benefit, and, introducing more risk-related compensation.

### A. Administering Combat Zones

The process for initiating a combat zone may take considerable time and may result in a period during which members are conducting combat operations but are not yet eligible for CZTE benefits, though there may be a retroactive designation. Sometimes, as in Somalia in 1993 and 1994, a combat zone is not designated despite combat operations.

Currently, termination of a combat zone requires an Executive Order or a provision of law. This requirement could be altered to make termination easier to accomplish by including a sunset provision in the combat zone establishment order. These combat zones would automatically terminate at a specific end-date, perhaps the end of every fiscal year, unless positive action was taken to renew them.

An option for administering combat zone benefits more efficiently could be a distinction drawn between termination of the combat zone and termination of combat zone benefits. CZTE and combat zone benefits could be made contingent on the receipt of HFP/IDP in a manner similar to QHDAs. Since receipt of HFP/IDP is subject to the authority of the Secretary of Defense, the DoD could terminate CZTE benefits without actually terminating the combat zone. By not relying on the issuance of an Executive Order, the termination of combat zone benefits could be more timely and coincident with combat conditions. Once combat zone benefits are terminated, the process of terminating the combat zone should be easier to accomplish.

Initiation and termination decisions can involve considerable sums of money. Measures that facilitate the termination process could have an impact on the initiation process as well, making it, too, more responsive to combat conditions.

## B. Distribution of CZTE Benefits

In terms of magnitude, the greatest source of variation in combat compensation is due to the CZTE. Income exclusion generally yields greater federal income tax savings for those with higher incomes. Junior members, especially those with larger families, have little in the way of taxable income and thus pay little in income taxes; therefore, income exclusion confers little benefit on these members. More senior enlisted personnel and warrant officers can exclude all their income and receive a tax benefit. Officers are able to exclude up to \$7,714.80 a month for each month or part of the month that they are deployed to a combat zone. This exclusion, historically high relative to enlisted pay, results in the greatest benefit accruing to more highly ranked individuals.

An additional major source of variation is the relationship between income exclusion and eligibility for EIC—a refundable tax credit intended to supplement the incomes of low-wage earners and their families. Income exclusion allows members to qualify for EIC who otherwise would not be eligible. It can also change the EIC benefit for members who would otherwise qualify—and not necessarily to their advantage.

As we have shown, a compounding factor in the relationship between income exclusion, tax savings, and EIC is the spread of the deployment over tax years. Depending upon the member's family income and family size, a distribution of this deployment over adjacent tax years may significantly increase the total benefit in terms of income tax avoidance and EIC (as well as other tax credits and deductions).

Instead of excluding income and having the benefit of this exclusion dependent upon family income, family size, and the panoply of deductions and credits of the tax code, a simple refundable tax credit could be substituted. For example, if the average CZTE benefit were \$6,000 per year, with an average deployment of 7 months, a refundable tax credit of \$850 per month could replace current policy at no additional cost. This amount would be available to all members—junior enlisted to senior officers—and the value of the benefit would be independent of all of the factors causing present day differences. Similarly, the benefit would not be different whether the member's deployment was spread out over two years or confined to a single year. The total cost of combat zone benefits would not change, but the distribution of these benefits among the various grades and family sizes would.

This proposal would be consistent with notions of fairness for many military members. Survey responses from officers and enlisted members call into question the fairness of the current system. Only 27 percent of enlisted members surveyed,

compared with 50 percent of officers, believe it is fair that higher income members reap a greater benefit from income exclusion.<sup>37</sup>

Present policy allows officers to deduct the maximum enlisted pay, that of the SEA. In 2011, SEA pay was \$7,489.80. SEA pay is higher than the pay level of an O-5 with over 14 years of service and considerably higher than E-9 levels. It is also considerably higher than the historical relationship defining the maximum excluded income for officers. In the absence of a shift to a fixed tax credit per month of deployment, changing the officer exclusion to the pay level of an E-9 with over 26 years of service would be closer to the historical relationship and would reduce the benefit accruing to the most senior officers.

### **C. Income Exclusion and EIC**

Income exclusion resulting from deployment to a combat zone can reduce taxable income by more than \$91,000 per year. An O-6 with 26 years of service and two children, for example, would have his taxable income reduced to about \$7,000 and therefore qualify for \$2,800 in EIC. If he or she were deployed for 11 months rather than a full year, the EIC benefit would increase to \$5,036.

A simple solution to this problem is to require that all members treat basic pay as earned income for purposes of EIC eligibility. This would effectively remove the 2,000 officers with RMC in excess of \$100,000 from eligibility for the EIC program.

### **D. Varying Combat Compensation with Risk**

To establish a closer relationship between risk and compensation, the DoD could add a “true” combat pay for members actually in a combat environment. This combat pay could be a supplement to the CZTE or an alternative.<sup>38</sup>

If a refundable tax credit were to replace the current income exclusion, combat compensation could be introduced as a tiered benefit within this framework. For example, for members exposed to combat, a refundable tax credit of \$850 per month could be established as a benefit. For members with minimal exposure to risk, but within a combat zone, the benefit would be a percentage of the full benefit—for example, \$425 per month.

37. Defense Manpower Data Center, January 2011 Status of Forces Survey. For active duty members, question 164 c, d, and e. For Reserves, question 233 c, d, and e.

38. 37 U.S.C. §351 could be a vehicle for increasing HFP and turning it into a combat pay.

## E. Concluding Comment

Combat-related compensation today does not reflect the goal of providing more money to those who face more risk. The two main reasons for this are (1) that individuals in areas with low risk are eligible for HFP/IDP and the CZTE, and (2) that the rules that govern the value of the CZTE provide considerable benefit to those who face little risk. The proposals presented here could move DoD toward a more risk-related combat compensation system.

## Appendix A. Current Combat Zones

**Table A-1. Current Combat Zones**

Executive Order (EO)	Combat Zone
EO 12744 (1/17/91)	Persian Gulf, Red Sea, Gulf of Oman, Part of Arabian Sea (N of 10°lat, W of 68°E long), Gulf of Aden, Iraq, Kuwait, Saudi Arabia, Oman, Bahrain, Qatar and UAE.
EO 13119 (3/24/99), also by PL 106-21	Fed Rep of Yugoslavia, Albania, Adriatic Sea and Ionian Sea north of 39th parallel. Congress also designated several Balkan locations as Qualified Hazardous Duty Areas (QHDA) - Bosnia and Herzegovina, Croatia and Macedonia - PL 104-117 (11/21/1995).
EO 13239 (9/19/01)	Afghanistan

## Appendix B. Combat Compensation for Selected Countries

**Table B-1. Combat Compensation for Selected Countries**

Category	Japan	Germany	UK	Australia	France
Monthly Combat Pay (Iraq)	\$8,988	--	\$1,473	\$5,003	1.5x pay
Monthly Combat Pay (Afghanistan)	--	\$4,975	\$1,473	\$6,670	1.5x pay
Tax Exclusion?	N/A	N/A	Some	YES	YES
Risk-Based?	YES	YES	NO	YES	NO

## Appendix C. Number of Members Deployed by Country 2005

**Table C-1. Number of Members Deployed by Country 2005**

Country	Man-Years Deployed
Iraq	228777
Kuwait	160252
Afghanistan	138428
Qatar	7411
Bahrain	1511
Djibouti	1341
United Arab Emirates	1100
Saudi Arabia	234
Ethiopia	92
Somalia	82
Oman	56
Egypt	49
Jordan	43
Yemen	17
Sudan	9
Lebanon	5
Turkey	1

Source: Defense Manpower Data Center.



Source: Defense Manpower Data Center.

**Figure C-1. Number of Members Deployed by Country 2005**

## Appendix D. Casualty Rates and HFP/IDP

Another way to gauge the relationship between combat risk and combat compensation is to calculate the fraction of combat compensation that has been received by personnel in combat zones that account for the greatest number of casualties. Individual-level data on the number of individuals on active duty killed or seriously wounded for the period FY 2003–2009 were totaled up for each country in which at least 25 service members served and which was designated to be a combat zone during some part of that period. Data were also available on compensation. The data contained information for all individuals ever deployed to a combat zone and included basic pay, total pay, total bonuses, IDP, and other components of compensation by calendar year for the period FY 2003–2009.

Data on combat casualties and combat compensation by country of deployment are seen in Table D-1. The data have been ranked from high to low by the number of personnel KIA. During this period, there were 4,012 KIA and 9,754 KIA or seriously wounded (KSW). Iraq accounted for 3,078 KIA, or 76.7 percent of the total, and for 6,048 KSW, about 75.7 percent of the total. Notice that individuals deployed to Iraq received just 44.2 percent of the total of about \$2.5 billion in IDP over the period. Individuals deployed to Afghanistan accounted for 857 KIA and 1687 KSW, about 21 percent of the total, but received only about 11 percent of the IDP payments.

A convenient way to view the data is to examine the relationship between the cumulative percentages of casualties and IDP at each point in the data. For example, Iraq accounts for about 77 percent of total KIA and Afghanistan for another 21 percent, so the two countries combined account for 98 percent of all personnel KIA and about 55.2 percent of total IDP. The resulting relationships are seen for personnel KIA in Figure D-1 and for personnel KSW in Figure D-2.

Table D-1. Casualty Rates and IDP FY 2003–2009

Country	Person Years Served	KIA	KIA or Seriously Wounded	IDP	KIA (1% of total)	KIA or Seriously Wounded (% of total)	IDP (% of total)
Iraq	1,448,846	3,078	6,048	1,105,284,184	0.767	0.757	0.442
Afghanistan	313,635	857	1,687	275,152,623	0.214	0.211	0.110
Kuwait	1,058,267	27	127	848,912,487	0.007	0.016	0.339
Phillippines	20,009	14	15	13,572,975	0.003	0.002	0.005
Pakistan	4,516	11	14	3,456,937	0.003	0.002	0.001
Bahrain	57,811	10	25	50,277,169	0.002	0.003	0.020
United Arab Emirates	34,394	5	13	25,602,071	0.001	0.002	0.010
Qatar	130,847	4	24	99,027,019	0.001	0.003	0.040
Kenya	184	2	4	121,029	0.000	0.001	0.000
Uzbekistan	7,677	1	3	4,863,729	0.000	0.000	0.002
Cuba	364	1	3	16,225	0.000	0.000	0.000
Saudi Arabia	17,462	1	6	14,860,696	0.000	0.001	0.006
Djibouti	21,799	1	10	13,518,915	0.000	0.001	0.005
Israel	892	0	0	862,743	0.000	0.000	0.000
Somalia	940	0	0	647,164	0.000	0.000	0.000
Turkey	11,518	0	0	8,863,505	0.000	0.000	0.004
Oman	4,652	0	0	4,420,764	0.000	0.000	0.002
Kyrgyzstan	36,022	0	12	27,809,191	0.000	0.002	0.011
Algeria	199	0	0	15,525	0.000	0.000	0.000
Uganda	42	0	0	10,592	0.000	0.000	0.000
Jordan	2,827	0	0	2,865,120	0.000	0.000	0.001
Yemen	177	0	0	184,450	0.000	0.000	0.000
Ethiopia	112	0	0	83,475	0.000	0.000	0.000
Tajikistan	108	0	0	79,251	0.000	0.000	0.000

*Note:* Casualty data refer to FY 2003-2009 and IDP data to CY 2003-2009. Data are shown for combat zone countries with at least 25 personnel-years served.

Looking first at Figure D-1, there is a fairly tight relationship between the cumulative percentages of personnel KIA and IDP. The countries of Iraq, Afghanistan, Kuwait, and the Philippines account for 99 percent of all KIA. Looking at Figure D-2, they account for 98.55 percent of all KSW. The same four countries also

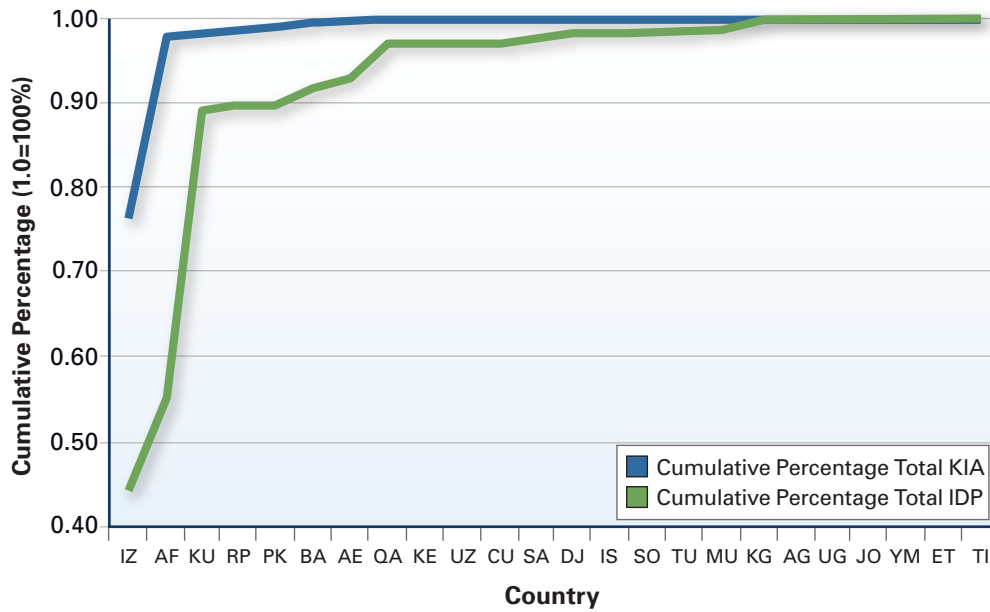


Figure D-1. Cumulative Percentages KIA and IDP

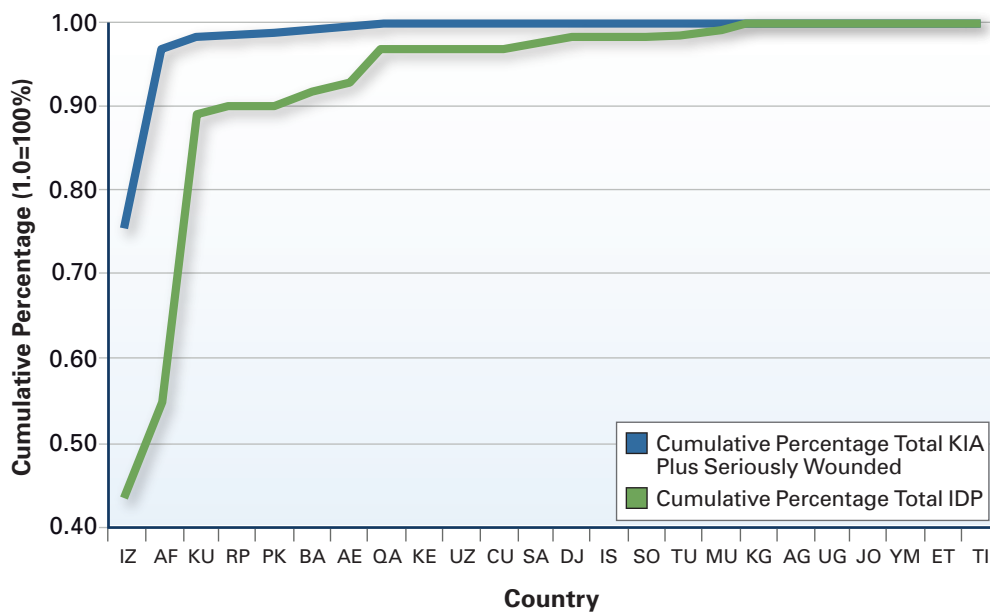


Figure D-2. Cumulative Percentages KSW and IDP

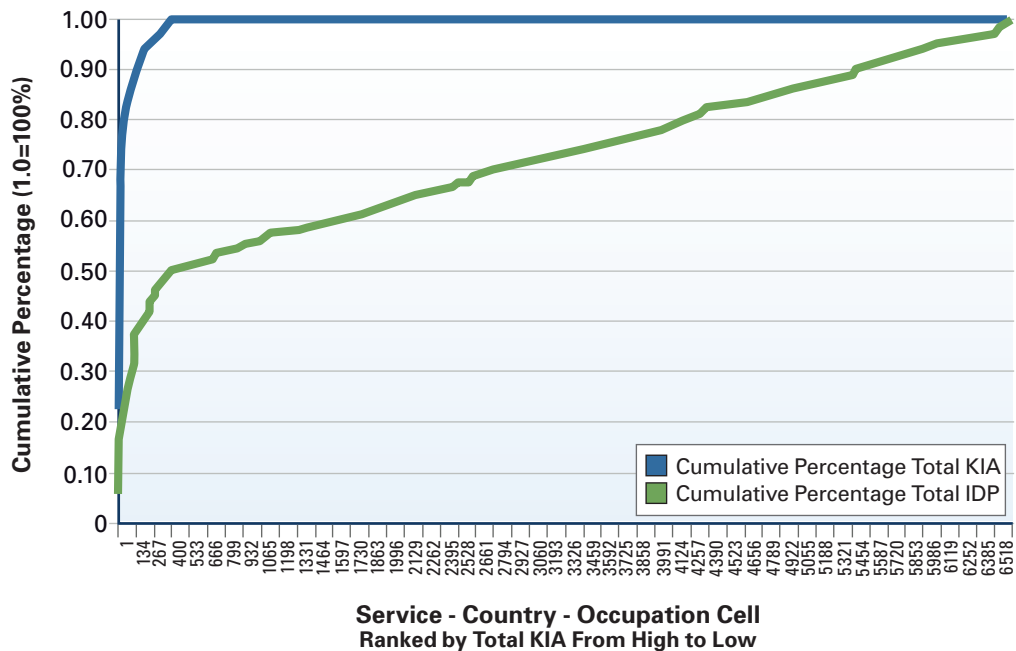


account for 89.7 percent of all IDP and (not shown in the table or figures to reduce clutter) for 90.3 percent of all CZTE months.

If IDP and CZTE for individuals in countries other than Iraq, Afghanistan, Kuwait, and the Philippines were eliminated, IDP and CZTE benefits would fall by 10 percent. These four countries account for \$2.24 billion of the \$2.5 billion in IDP, resulting in a savings in IDP over the 7-year period of about \$360 million.

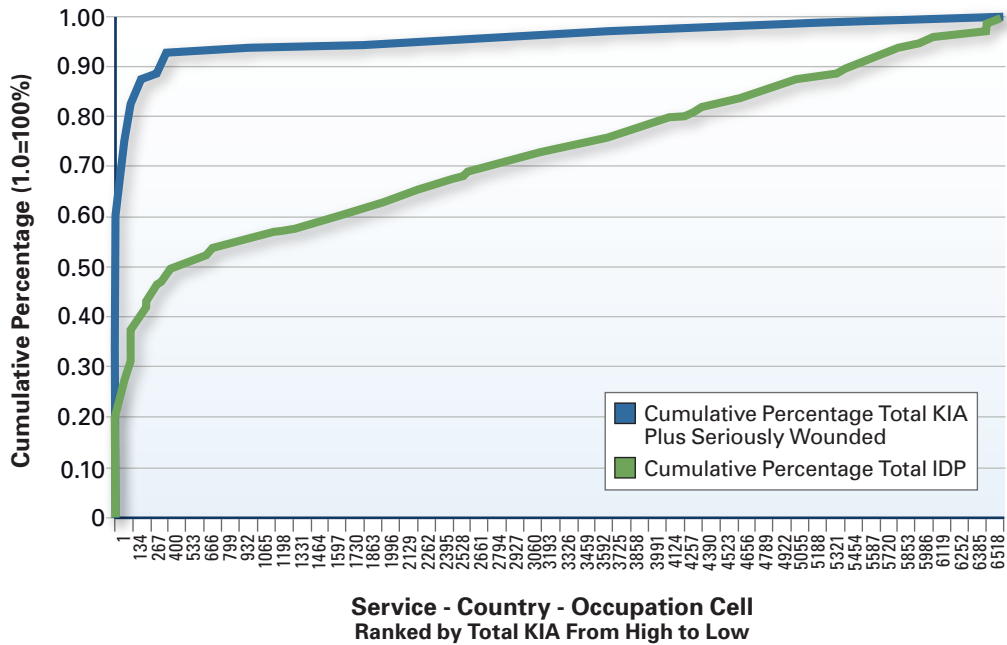
Because not all individuals within a country are at equal risk of becoming a fatality, it is informative to examine the same cumulative relationships when the data are broken out by service and occupation as well as by country. The data are limited to country-service-occupation cells with at least 10 personnel-years served over the FY 2003–2009 period. Figure D-3 shows the cumulative percentages of personnel KIA and IDP.

There are 6,606 country-service-occupation cells. As before, the data are sorted by active KIA from low to high. Because cells with fewer than 10 personnel years have been omitted—as they are not important in a qualitative sense—there are 3,468 total KIA. The first 419 country-service-occupation cells account for this entire total, but just 51.5 percent of all IDP. In other words, just under 50 percent of all IDP paid out over the 2003–2009 period went to individuals in country-service-occupation cells in which no one died.



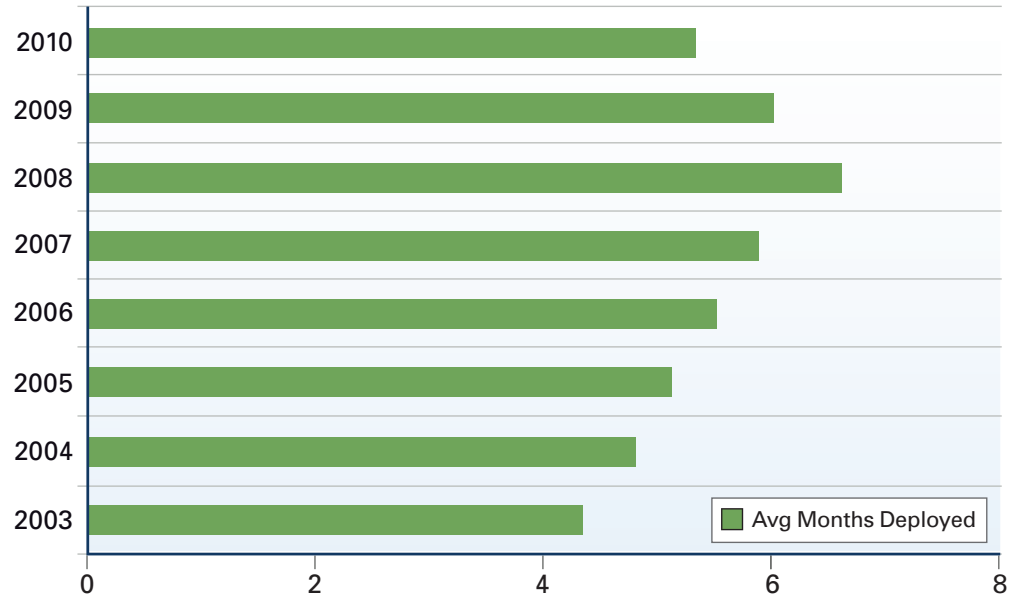
**Figure D-3. Cumulative Percentages KIA and IDP by Country, Service, and Occupation**

Figure D-4 shows the same relationship for KSW. The difference in the cumulative distributions is much less pronounced than for KIA, as can be seen by the fact that the cumulative distribution of KSW is upward sloping throughout. About 50 percent of IDP was paid out to individuals in cells that accounted for less than 10 percent of total casualties, and about 25 percent of IDP was paid out to individuals in cells that accounted for 3.5 percent of casualties.



**Figure D-4. Cumulative Percentages KSW and IDP by Country, Service, and Occupation**

## Appendix E. Average Months Deployed by Year



Source: Defense Manpower Data Center.

**Figure E 1. Average Months Deployed by Year**

# Appendix F. Hypothetical Tax Return for E-4

Enduring Freedom

Form **1040** Department of the Treasury - Internal Revenue Service  
**U.S. Individual Income Tax Return 2010** (99) IRS Use Only-Do not write or staple in this space.

For the year Jan. 1-Dec. 31, 2010, or other tax year beginning 2010, ending 20 OMB No. 1545-0074

**Label** (See instructions) **Name** Spouse's Name (if Joint Return) **Home Address** City, State, and ZIP Code **Your social security number**  
 GI Joe 827-99-2368  
**Use the IRS label.** **Name** Spouse's Name (if Joint Return) **Home Address** City, State, and ZIP Code **Your social security number**  
 Melissa Joe 828-99-2368  
 121 W East St  
 ARLINGTON VA 22222

**Presidential Election Campaign** Check here if you, or your spouse if filing jointly, want \$3 to go to this fund (see instructions)  **You**  **Spouse**

**Filing Status** 1  Single 4  Head of household (with qualifying person). (See instructions.)  
 2  Married filing jointly (even if only one had income) If the qualifying person is a child but not your dependent, enter this child's name here. ▶  
 3  Married filing separately. Enter spouse's SSN above and full name here. ▶  
 5  Qualifying widow(er) with dependent child (see instructions)

**Exemptions** 6a  Yourself. If someone can claim you as a dependent, do not check box 6a. **Boxes checked on 6a and 6b** 2  
 b  Spouse  
 c **Dependents:** (1) First name Last name (2) Dependent's social security no. (3) Dependent's relationship to you (4)  if qualifying child (see inst.)  
 if more than four dependents, see instr. and check here ▶  
 Aaron Joe 829-99-2368 SON   
 Kimberly Joe 830-99-2368 DAUGHTER   
 Add numbers on lines above ▶ 4  
 d Total number of exemptions claimed

**Income** 7 Wages, salaries, tips, etc. Attach Form(s) W-2 7 29,900.  
 8a **Taxable interest.** Attach Schedule B if required 8a  
 b **Tax-exempt interest.** Do not include on line 8a 8b  
 9a **Ordinary dividends.** Attach Schedule B if required 9a  
 b **Qualified dividends** (see instructions) 9b  
 10 Taxable refunds, credits, or offsets of state and local income taxes (see instructions) 10  
 11 Alimony received 11  
 12 Business income or (loss). Attach Schedule C or C-EZ 12  
 13 Capital gain or (loss). Attach Schedule D if required. If not required, check here ▶  13  
 14 Other gains or (losses). Attach Form 4797 14  
 15a **IRA distributions** 15a b **Taxable amount** (see inst.) 15b  
 16a **Pensions and annuities** 16a b **Taxable amount** (see inst.) 16b  
 17 Rental real estate, royalties, partnerships, S corporations, trusts, etc. Attach Schedule E 17  
 18 Farm income or (loss). Attach Schedule F 18  
 19 Unemployment compensation (see instructions) 19  
 20a **Social security benefits** 20a b **Taxable amount** (see inst.) 20b  
 21 Other income. List type and amount (see instr.) 21  
 22 **Combine the amounts in the far right column for lines 7 through 21. This is your total income** ▶ 22 29,900.

**Adjusted Gross Income** 23 Educator expenses 23  
 24 Certain business expenses of reservists, performing artists, and fee-basis gov. officials. Attach Form 2106 or 2106-EZ 24  
 25 Health savings account deduction. Attach Form 8889 25  
 26 Moving expenses. Attach Form 3903 26  
 27 One-half of self-employment tax. Attach Schedule SE 27  
 28 Self-employed SEP, SIMPLE, and qualified plans 28  
 29 Self-employed health insurance deduction (see instr.) 29  
 30 Penalty on early withdrawal of savings 30  
 31a Alimony paid b Recipient's SSN ▶ 31a  
 32 IRA deduction (see instructions) 32  
 33 Student loan interest deduction (see instructions) 33  
 34 Tuition and fees. Attach Form 8917 34  
 35 Domestic production activities deduction. Attach Form 8903 35  
 36 Add lines 23 through 31a and 32 through 35 36  
 37 Subtract line 36 from line 22. This is your adjusted gross income ▶ 37 29,900.

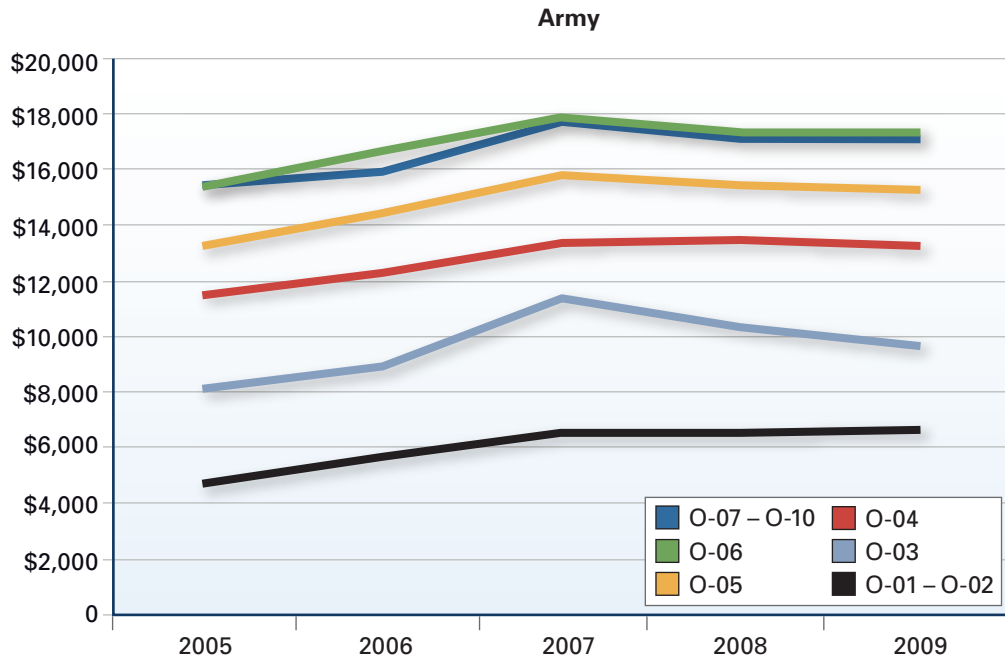
For Disclosure, Privacy Act, and Paperwork Reduction Act Notice, see instructions. Form **1040** (2010)  
 BCA US1040S1

Form 1040 (2010) **GI & Melissa Joe** 827-99-2368 Page 2

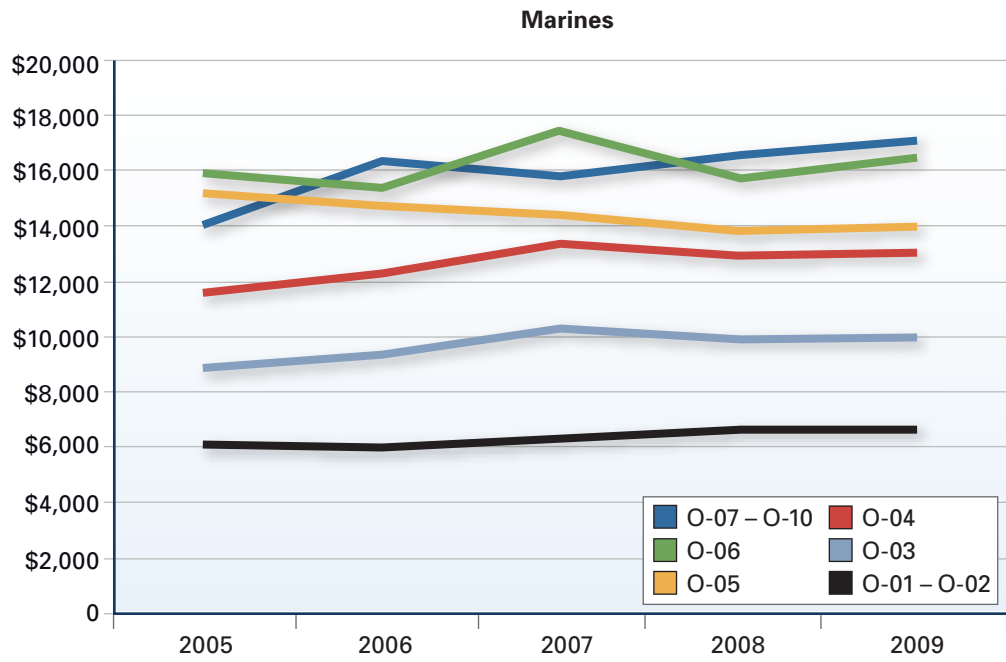
<b>38</b> Amount from line 37 (adjusted gross income) .....		<b>38</b>	29,900.
<b>Tax and Credits</b>	<b>39a</b> Check <input type="checkbox"/> You were born before Jan. 2, 1946, <input type="checkbox"/> Blind, <input type="checkbox"/> Spouse was born before Jan. 2, 1946, <input type="checkbox"/> Blind. <b>Total boxes checked</b> <input type="checkbox"/> <b>39a</b> <input type="checkbox"/>		
	<b>b</b> If your spouse itemizes on a separate return or you were a dual-status alien, see instructions and check here .....	<b>39b</b> <input type="checkbox"/>	
	<b>40</b> Itemized deductions (from Schedule A) or your standard deduction (see instructions) .....	<b>40a</b>	11,400.
	<b>41</b> Subtract line 40a from line 38 .....	<b>41</b>	18,500.
	<b>42</b> Exemptions. Multiply \$3,650 by the number on line 6d .....	<b>42</b>	14,600.
	<b>43</b> Taxable income. Subtract line 42 from line 41. If line 42 is more than line 41, enter -0- .....	<b>43</b>	3,900.
	<b>44</b> Tax (see instructions). Check if any tax is from: <b>a</b> <input type="checkbox"/> Form(s) 8814 <b>b</b> <input type="checkbox"/> Form 4972 .....	<b>44</b>	393.
	<b>45</b> Alternative minimum tax (see instructions). Attach Form 6251 .....	<b>45</b>	
	<b>46</b> Add lines 44 and 45 .....	<b>46</b>	393.
	<b>47</b> Foreign tax credit. Attach Form 1116 if required .....	<b>47</b>	
<b>48</b> Credit for child and dependent care expenses. Attach Form 2441 .....	<b>48</b>		
<b>49</b> Education credits from Form 8863, line 23 .....	<b>49</b>		
<b>50</b> Retirement savings contributions credit. Attach Form 8880 .....	<b>50</b>		
<b>51</b> Child tax credit (see instructions) .....	<b>51</b>	393.	
<b>52</b> Residential energy credits. Attach Form 5695 .....	<b>52</b>		
<b>53</b> Other credits from Form: <b>a</b> <input type="checkbox"/> 3800 <b>b</b> <input type="checkbox"/> 8801 <b>c</b> <input type="checkbox"/> .....	<b>53</b>		
<b>54</b> Add lines 47 through 53. These are your total credits .....	<b>54</b>	393.	
<b>55</b> Subtract line 54 from line 46. If line 54 is more than line 46, enter -0- .....	<b>55</b>		
<b>56</b> Self-employment tax. Attach Schedule SE .....	<b>56</b>		
<b>57</b> Unreported social security and Medicare tax from Form: <b>a</b> <input type="checkbox"/> 4137 <b>b</b> <input type="checkbox"/> 8919 .....	<b>57</b>		
<b>58</b> Additional tax on IRAs, other qualified retirement plans, etc. Attach Form 5329 if required .....	<b>58</b>		
<b>59</b> <b>a</b> <input type="checkbox"/> Form(s) W-2, box 9 <b>b</b> <input type="checkbox"/> Schedule H <b>c</b> <input type="checkbox"/> Form 5405, line 16 .....	<b>59</b>		
<b>60</b> Add lines 55 through 59. This is your total tax .....	<b>60</b>		
<b>Payments</b>	<b>61</b> Federal income tax withheld from Forms W-2 and 1099 .....	<b>61</b>	
	<b>62</b> 2010 estimated tax payments and amount applied from 2009 return .....	<b>62</b>	
	<b>63</b> Making work pay and government retiree credits. Attach Schedule M .....	<b>63</b>	800.
	<b>64 a</b> Earned income credit (EIC) .....	<b>64a</b>	3,253.
	<b>b</b> Nontaxable combat pay election .....	<b>64b</b>	
	<b>65</b> Additional child tax credit. Attach Form 8812 .....	<b>65</b>	1,607.
	<b>66</b> American opportunity credit from Form 8863, line 14 .....	<b>66</b>	
	<b>67</b> First-time homebuyer credit from Form 5405, line 10 .....	<b>67</b>	
	<b>68</b> Amount paid with request for extension to file (see inst.) .....	<b>68</b>	
	<b>69</b> Excess social security and tier 1 RRTA tax withheld (see inst.) .....	<b>69</b>	
<b>70</b> Credit for federal tax on fuels. Attach Form 4136 .....	<b>70</b>		
<b>71</b> Credits from Form: <b>a</b> <input type="checkbox"/> 2439 <b>b</b> <input type="checkbox"/> 8839 <b>c</b> <input type="checkbox"/> 8801 <b>d</b> <input type="checkbox"/> 8885 .....	<b>71</b>		
<b>72</b> Add lines 61, 62, 63, 64a and 65 through 71. These are your total payments .....	<b>72</b>	5,660.	
<b>73</b> If line 72 is more than line 60, subtract line 60 from line 72. This is the amount you overpaid .....	<b>73</b>	5,660.	
<b>74 a</b> Amount of line 73 you want refunded to you. If Form 8888 is attached, check here <input type="checkbox"/> .....	<b>74a</b>	5,660.	
<b>b</b> Routing number .....			
<b>c</b> Type: <input type="checkbox"/> Checking <input type="checkbox"/> Savings .....			
<b>d</b> Account number .....			
Amount of line 73 you want applied to your 2011 estimated tax .....	<b>75</b>		
<b>76</b> Amount you owe. Subtract line 72 from line 60. For details on how to pay, see inst. ....	<b>76</b>		
<b>77</b> Estimated tax penalty (see instructions) .....	<b>77</b>		
<b>Third Party Designee</b> Do you want to allow another person to discuss this return with the IRS (see instructions)? <input type="checkbox"/> Yes. Complete the following. <input checked="" type="checkbox"/> No	Designee's name .....	Phone no. .....	Personal identification number (PIN) .....
<b>Sign Here</b> Joint return? See instr. Keep a copy for your records. <b>Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief, they are true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.</b>	Your signature .....	Date .....	Your occupation US Military
Spouse's signature. If a joint return, both must sign. ....	Date .....	Spouse's occupation Housewife	Daytime phone number 571-555-3456
<b>Paid Preparer's Use Only</b>	Print/Type preparer's name .....	Preparer's signature .....	Date .....
	Firm's name <b>Falls Church Skillsource Ctr 1</b>		Check <input type="checkbox"/> if self-employed PTIN <b>S28012731</b>
	Firm's address <b>6245 Leesburg Pike N 315 FALLS CHURCH VA 22044</b>		Firm's EIN .....
			Phone no. ....

## Appendix G. Distribution of Tax Savings for Officers by Service, Pay Grade, and Year

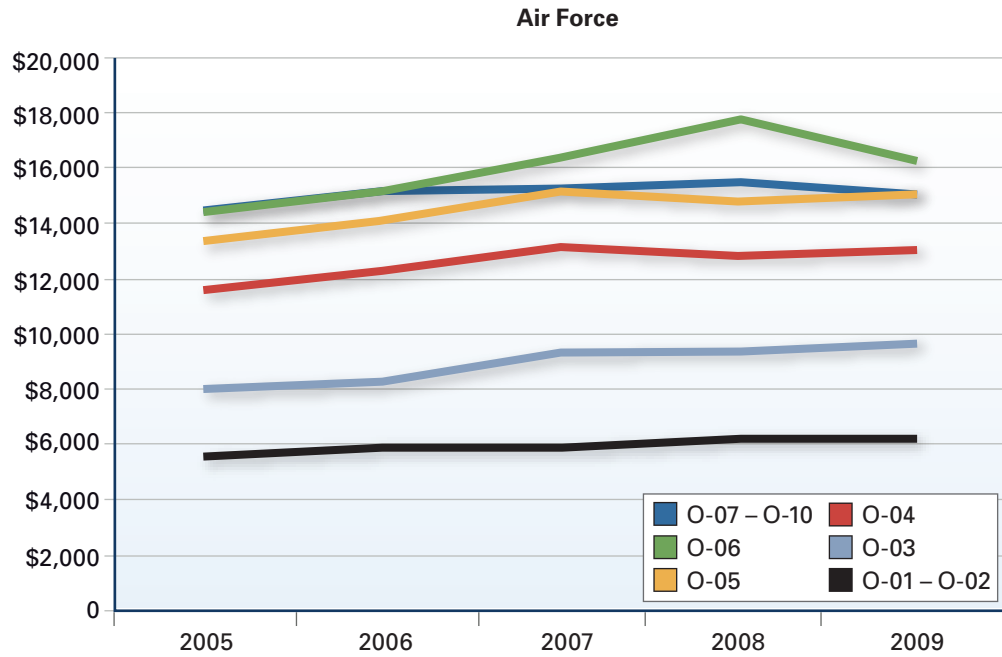
The source for all data in this appendix is Department of Treasury, Office of Tax Analysis, April 15, 2011.



**Figure G-1. Distribution of Tax Savings for Army Officers**



**Figure G-2. Distribution of Tax Savings for Marine Officers**



**Figure G-3. Distribution of Tax Savings for Air Force Officers**

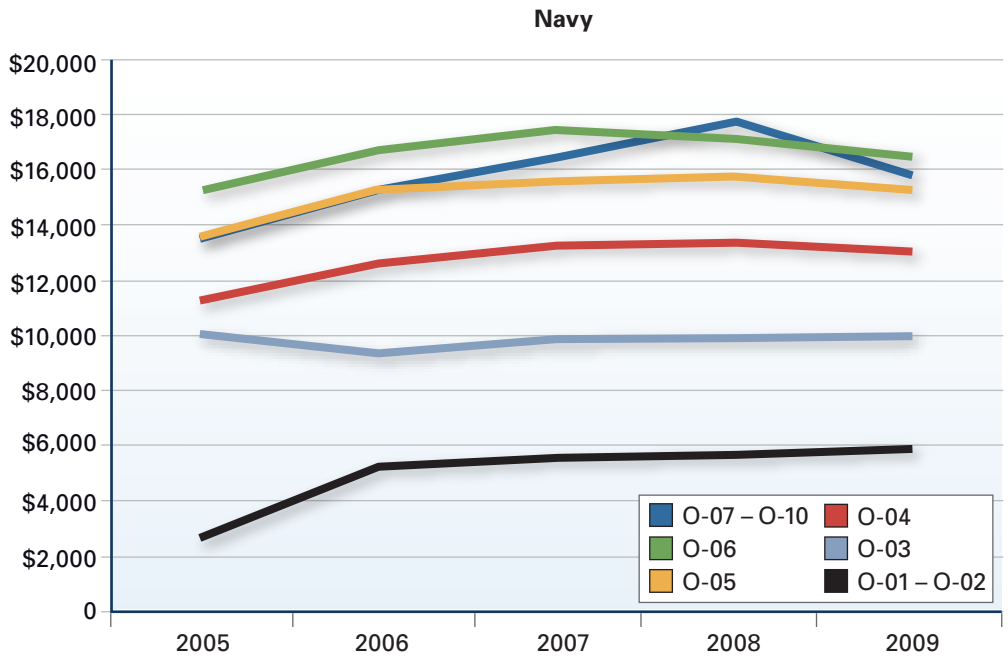


Figure G-4. Distribution of Tax Savings for Navy Officers



## Appendix H. Distribution of Tax Savings for Enlisted by Service, Pay Grade, and Year

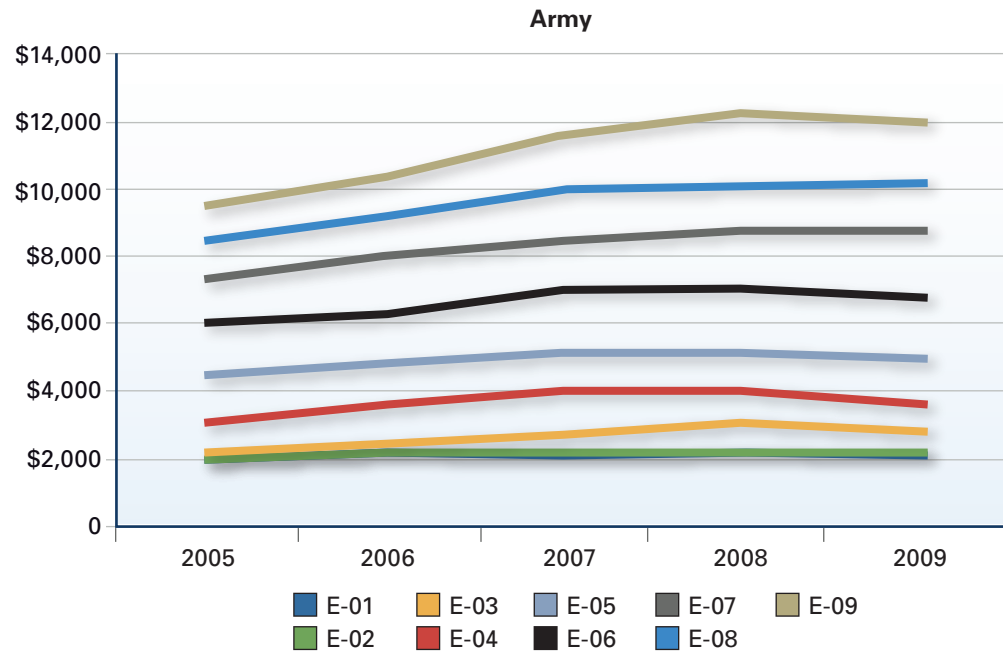


Figure H-1. Distribution of Tax Savings for Army Enlisted Personnel

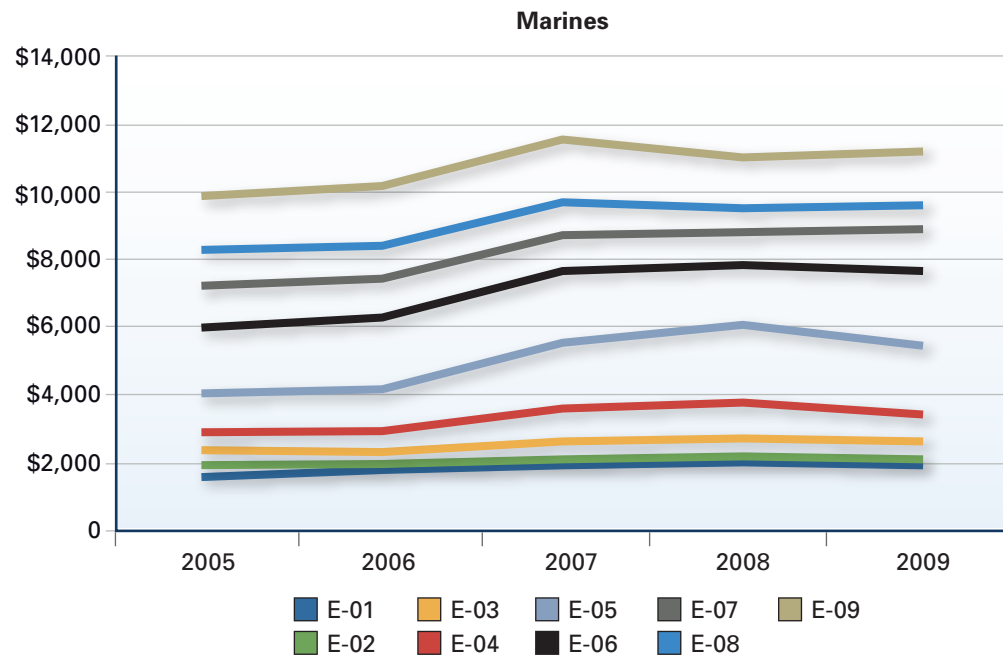


Figure H-2. Distribution of Tax Savings for Marine Enlisted Personnel

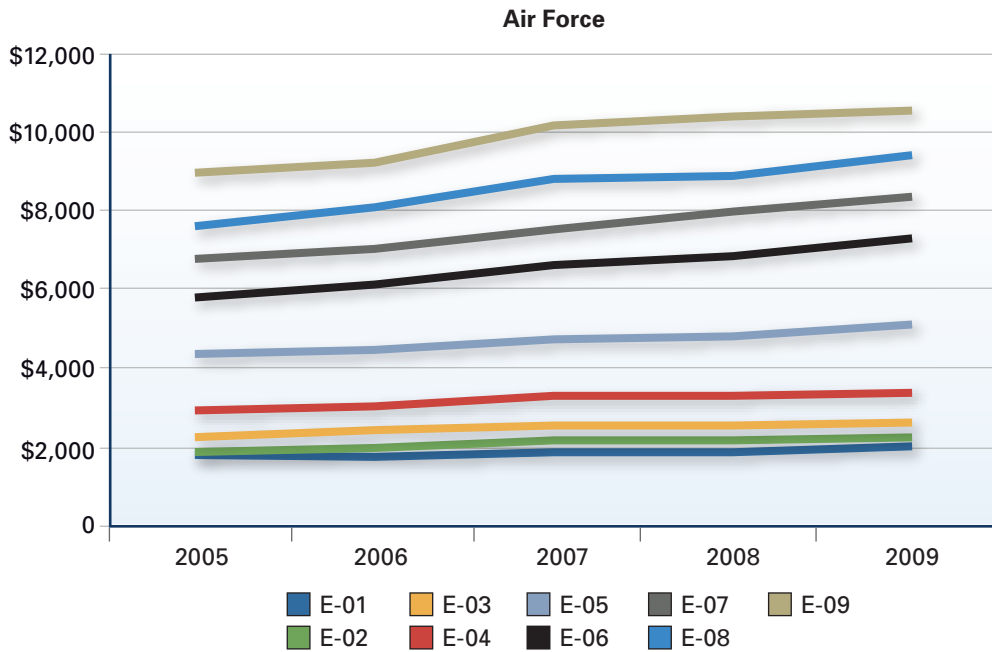


Figure H-3. Distribution of Tax Savings for Air Force Enlisted Personnel

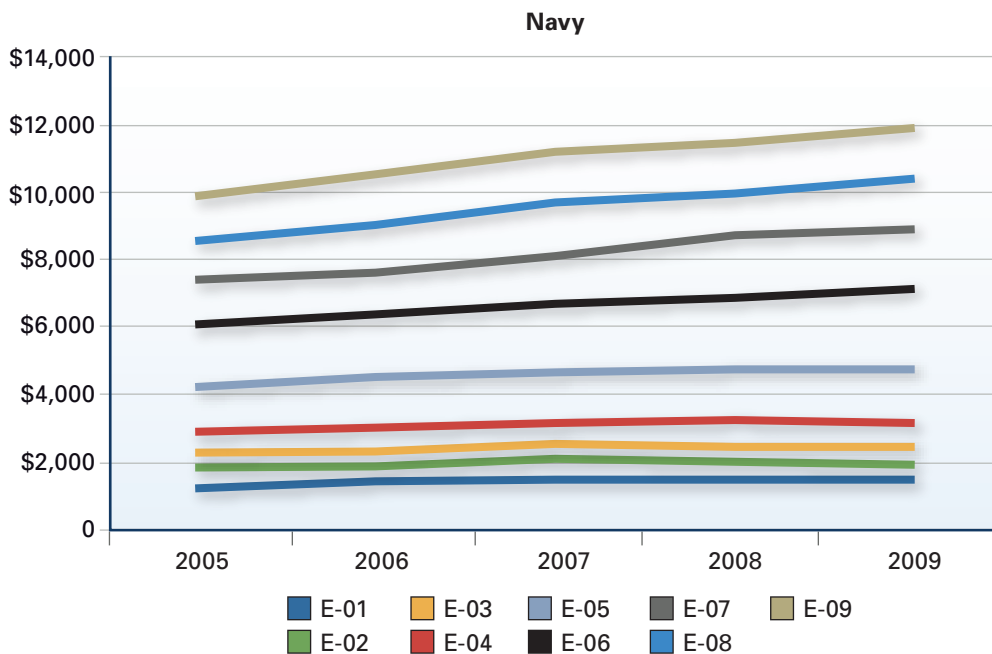


Figure H-4. Distribution of Tax Savings for Navy Enlisted Personnel

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