

# **REPORT TO THE CONGRESS**

## **Cost and Impact on Recruiting and Retention of Providing Thrift Savings Plan Matching Contributions**



**OFFICE OF THE SECRETARY OF DEFENSE**

February 2010

## Table of Contents

I.	Introduction.....	3
II.	Military Retirement System.....	3
III.	Analysis of Thrift Savings Plan Participation .....	6
IV.	Cost Estimate to Provide Matching Contributions.....	11
V.	Effect of TSP Matching Contributions on Recruiting and Retention .....	15
	A. RAND Analysis of the TSP Matching Funds Enlistment Incentive.....	16
	B. The Center for Naval Analyses Analysis of the Retention Effects of Matching Contributions to the TSP.....	17
VI.	Conclusion .....	19

## **I. Introduction**

This report responds to the requirement in the Federal Retirement Reform Act (Public Law 111-31, Division B), section 110(b). The Act requires the Department of Defense to report to Congress on the cost of providing a matching payment with respect to contributions made to the Thrift Savings Fund by members of the Armed Forces and the effect that requiring a matching payment would have on recruiting and retention.

### **SEC. 110. TREATMENT OF MEMBERS OF THE UNIFORMED SERVICES UNDER THE THRIFT SAVINGS PLAN.**

(a) Sense of Congress.--It is the sense of Congress that--

(1) members of the uniformed services should have a retirement system that is at least as generous as the one which is available to Federal civilian employees; and

(2) Federal civilian employees receive matching contributions from their employing agencies for their contributions to the Thrift Savings Fund, but the costs of requiring such a matching contribution from the Department of Defense could be significant.

(b) Reporting Requirement.--Not later than 180 days after the date of the enactment of this Act, the Secretary of Defense shall report to Congress on--

(1) the cost to the Department of Defense of providing a matching payment with respect to contributions made to the Thrift Savings Fund by members of the Armed Forces;

(2) the effect that requiring such a matching payment would have on recruitment and retention; and

(3) any other information that the Secretary of Defense considers appropriate.

This report contends that requiring the Department of Defense to provide matching contributions for military members contributing to the Thrift Savings Fund would be a significant burden with a cost estimate between \$840 million and \$2.8 billion annually. Furthermore, this additional cost would have minimal impact on recruiting and retention.

## **II. Military Retirement System**

The military retirement system is unusual and generous when compared with typical civilian plans. It is a noncontributory, defined-benefit plan which guarantees a specific, monthly payment upon retirement without any contribution by the member.

Comparatively, most civilian employers are trending toward defined contribution plans. As of the March 2009 Employee Benefits Survey by the US Department of Labor, Bureau of Labor and Statistics, approximately 67 percent of all private industry workers had access to a retirement plan. Of these, 21 percent had access to a defined-benefit plan, and 61 percent had access to a defined contribution plan.

Most civilian retirement plans vest in the employee between three and six years of service. The military retirement system, however, does not vest in a member until reaching twenty years of service, the point in time when the member becomes eligible to retire. As described, below, an active duty military member who retires at this point becomes eligible to receive retired pay immediately, rather than waiting until reaching a more typical retirement age at age 60 or later.

There are three types of retirement from military service. The nondisability retirement system, commonly referred to as the “military retirement system,” is available generally to members who retire from active military service and provides immediate monthly retired pay.

The nonregular service retirement system, commonly referred to as the “reserve retirement system,” is available generally to members who, after performing service in the Reserves or National Guard, meet the eligibility requirements to retire. These members receive monthly retired pay at a later date, generally upon reaching the age of 60.

The “disability retirement system” is available to members who separate from active service as a result of a physical disability.

An extensive history of the evolution and changes to each of these retirement systems is available in the Military Compensation Background Papers, published by the Office of the Secretary of Defense. This report will focus upon the nondisability retirement system (military retirement system).

The military retirement system provides an immediate, lifetime, monthly payment to members who retire after successfully completing a minimum of twenty years of active service. Statutory changes to the military retirement system over the last thirty years have resulted in three similar but slightly different formulas for calculating the payment. The calculation of the monthly payment depends upon when the individual became a member of a uniformed service, and for members who joined on or after August 1, 1986, whether the member accepted the \$30,000 Career Status Bonus upon completion of fifteen years of active service.

For members who joined prior to September 8, 1980, the amount of the payment is determined by the following formula: 2.5% multiplied by the number of years of service multiplied by the final, monthly basic pay upon retirement. The monthly payment is adjusted for inflation based upon the Consumer Price Index (“CPI”).

For members who joined after September 7, 1980 and before August 1, 1986, and for those who joined on or after August 1, 1986 and who have not accepted the Career Status Bonus, a second formula applies. For these members, the amount of the payment is determined by the following formula: 2.5% multiplied by the number of years of service multiplied by the average of the highest 36 months of monthly basic pay (“high three”). After retirement, the monthly payment is adjusted for inflation based upon the CPI.

For members who joined on or after August 1, 1986 and accepted the Career Status Bonus upon completion of 15 years of active service, the amount of the payment is determined by the following formula: 2.5% per year of service with that product reduced by 1% for each year under 30, multiplied by the average of the highest 36 months of basic pay. Upon reaching the age of 62, the percentage is recomputed to eliminate the 1% reduction for each year of service by which the member retired with fewer than 30 years of service. The monthly payment is adjusted for inflation based upon the increase in the CPI minus 1%. Upon reaching the age of 62, there is a one-time catch up using the full CPI with all subsequent increases using the CPI minus 1% rate.

<u>Retirement System</u>	<u>Criteria to Receive</u>
Final Pay	Entry before September 8, 1980
High-3	Entry on or after September 8, 1980, but before August 1, 1986 <u>OR</u> Entered on or after August 1, 1986, and did not choose the Career Status Bonus and REDUX retirement system
CSB/Redux	Entered on or after August 1, 1986, AND elected to receive the Career Status Bonus

<u>Retirement System</u>	<u>Final Pay</u>	<u>High-3</u>	<u>CSB/REDUX</u>
<u>Basis</u>	Final basic pay	Average of highest 36 months of basic pay	Average of highest 36 months of basic pay
<u>Multiplier</u>	2.5% per year	2.5% per year	2.5% per year minus 1% for every year less than 30
<u>COLA</u>	CPI	CPI	CPI minus 1%
<u>Readjustment</u>	None	None	At age 62, recomputed to eliminate 1% reduction and COLA adjusted to full CPI for prior years, CPI minus 1% thereafter
<u>Bonus</u>	None	None	\$30,000 at 15th year - commitment to complete 20 years

<u>Pay Grade</u>	<u>Years of Service</u>	<u>Basic Pay at Retirement*</u>	<u>Basic Pay for Retirement Calculation</u>	<u>Monthly Payment Final Pay</u>	<u>Monthly Payment High-3</u>	<u>Monthly Payment CSB/REDUX</u>
O-6	30	\$ 9,716.70	\$ 9,716.70	\$ 7,287.53	\$ -	\$ -
O-5	24	\$ 7,928.70	\$ 7,572.60	\$ -	\$ 4,543.56	\$ 4,089.20
E-7	20	\$ 3,951.30	\$ 3,769.83	\$ -	\$ 1,884.91	\$ 1,507.93
* Retirement Date for all three scenarios is December 31, 2009.						

### **III. Analysis of Thrift Savings Plan Participation**

The Thrift Savings Plan (TSP) is a government sponsored retirement savings and investment plan. The TSP was established in the Federal Employees' Retirement System Act of 1986 for the purpose of providing retirement income. The five member Federal Retirement Thrift Investment Board (FRTIB) oversees and manages the TSP.

On October 30, 2000, the National Defense Authorization Act for 2001 extended participation in the TSP to members of the Uniformed Services. Participation by members of the Uniformed Services is optional, and members may retain their contributions even if they do not remain to qualify for a twenty-year military retirement.

The TSP is an integral and essential part of the retirement plan for all civilian employees in the Federal Employees Retirement System and provides important supplemental retirement savings for employees in the Civil Service Retirement System and members of the Uniformed Services.

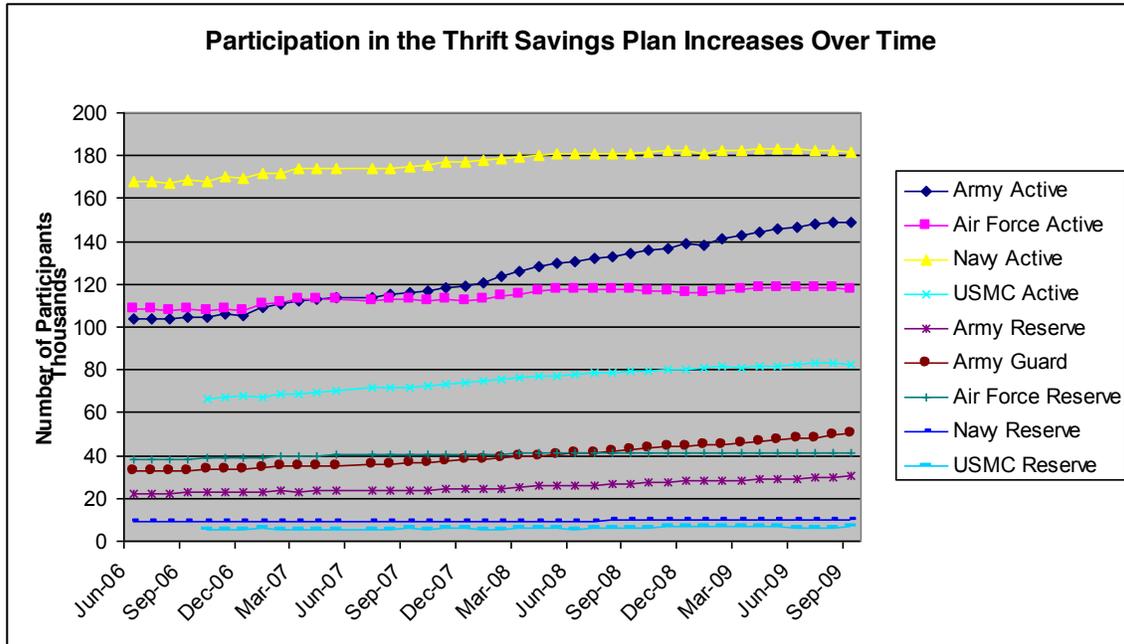
The TSP currently allows participants to make pre-tax contributions into several passively managed index funds of various risk levels as well as several funds targeted toward specific retirement dates. Earnings on funds invested in the TSP grow tax-deferred. Contributions and earnings are subject to income tax upon withdrawal.

Members of the Uniformed Services may specify any percentage of basic pay, special and incentive pays, or bonuses to contribute into the TSP up to the maximum amounts allowed per year. For 2009, the limit for contributions into the TSP is \$16,500 (additional \$5,500 contribution allowed in the year the participant reaches 50 years of age). For Uniformed Services members deployed to a combat zone, the limit for contributions into the TSP is \$49,000.

Members of the Uniformed Services currently do not receive matching contributions.

The Federal Retirement Reform Act recently authorized the creation of a Roth TSP account. This new type of account, when implemented, will allow participants to make after-tax contributions into the TSP. Neither earnings on these contributions nor withdrawals upon retirement will be subject to income tax.

Since October 2000 when military members were authorized to begin contributing to the TSP, participation has steadily increased. Currently over 600,000 active, reserve and National Guard members participate in the TSP.



Participation within each Service continues to increase but still lags the participation rates of the civil service workforce. For comparison, civil service TSP participation rates as of September 2009 are as follows: FERS – 82.1%, CSRS – 65.5%.<sup>1</sup>

	Participation Percentage (as of August 2009)			
	Army	Navy	Air Force	Marine Corps
Active Duty – Officer	39.5%	49.4%	48.3%	47.7%
Active Duty – Enlisted	21.8%	52.4%	30.6%	36.2%
Reserve/National Guard Officer	21.4% / 28.2%	13.8%	29.5%	31.7%
Reserve/National Guard Enlisted	10.8% / 13.3%	11.5%	23.7%	26.6%

The Navy has the highest participation rate of all the Services with approximately half of all active duty members, officer and enlisted, contributing to the Thrift Savings Plan. Participation by active duty Army members has increased the most over the past three years and, due to its size and relatively low participation rates, the Army has the greatest potential for continued growth in participation.

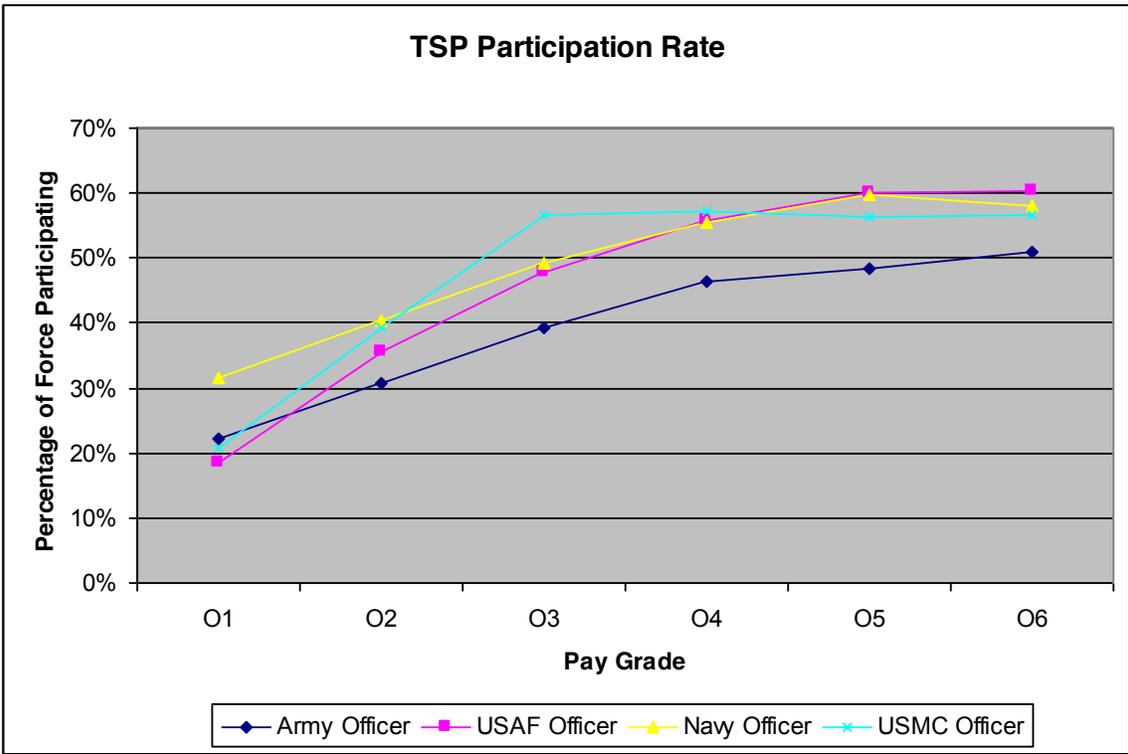
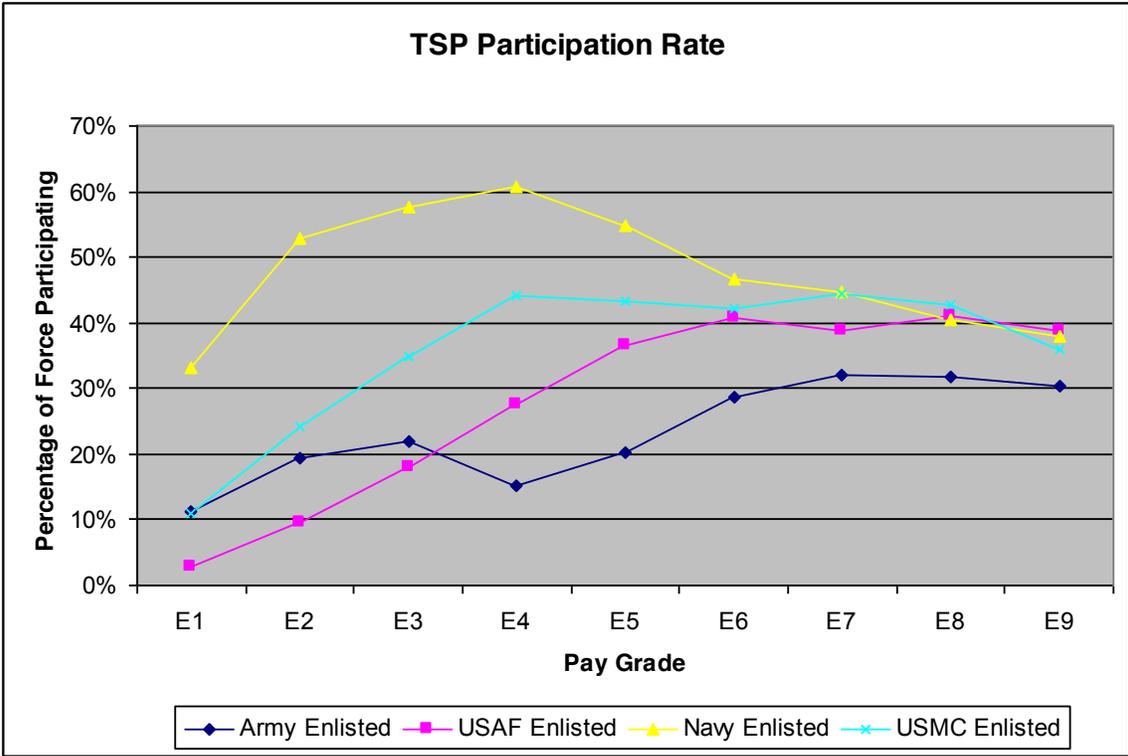
<sup>1</sup> Information provided by Federal Retirement Thrift Investment Board at October 19, 2009 Board meeting.

With the exception of a noticeable increase in participation among the Navy’s mid-grade enlisted force, participation in the TSP by junior members is relatively low. As the table, below, shows, participation rates in TSP generally increase with increases in pay grades across both the officer and enlisted ranks.

**Percentage of the Active Force Participating in the TSP by Pay Grade**

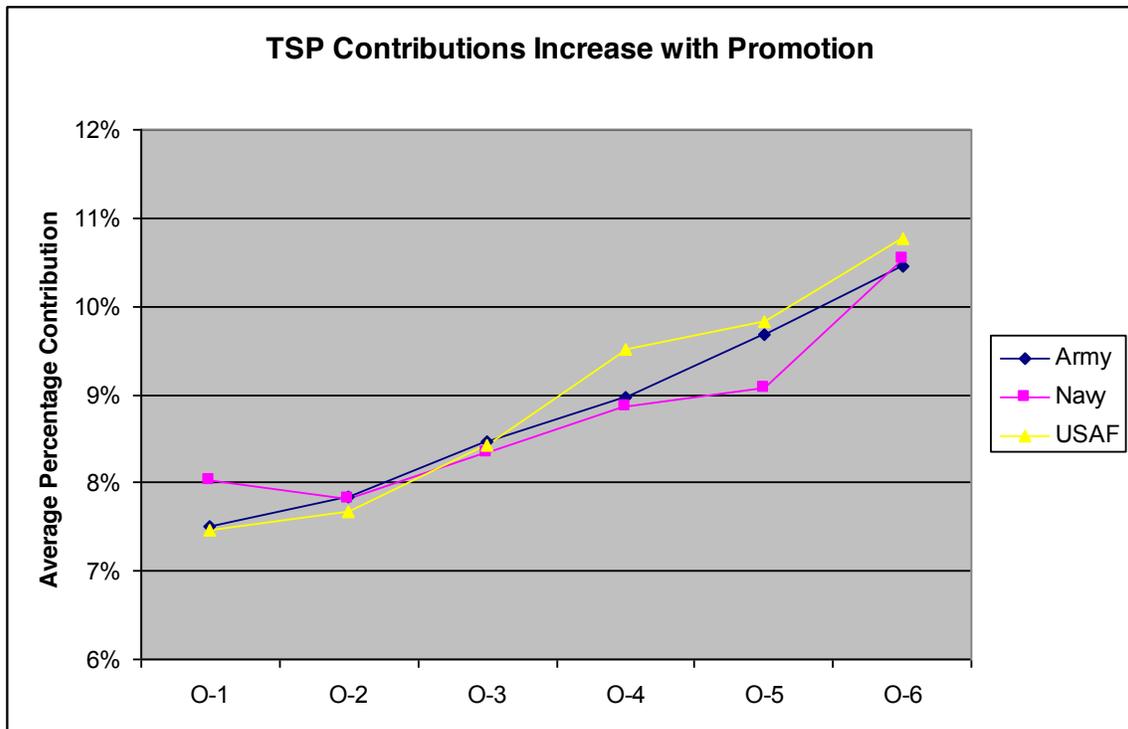
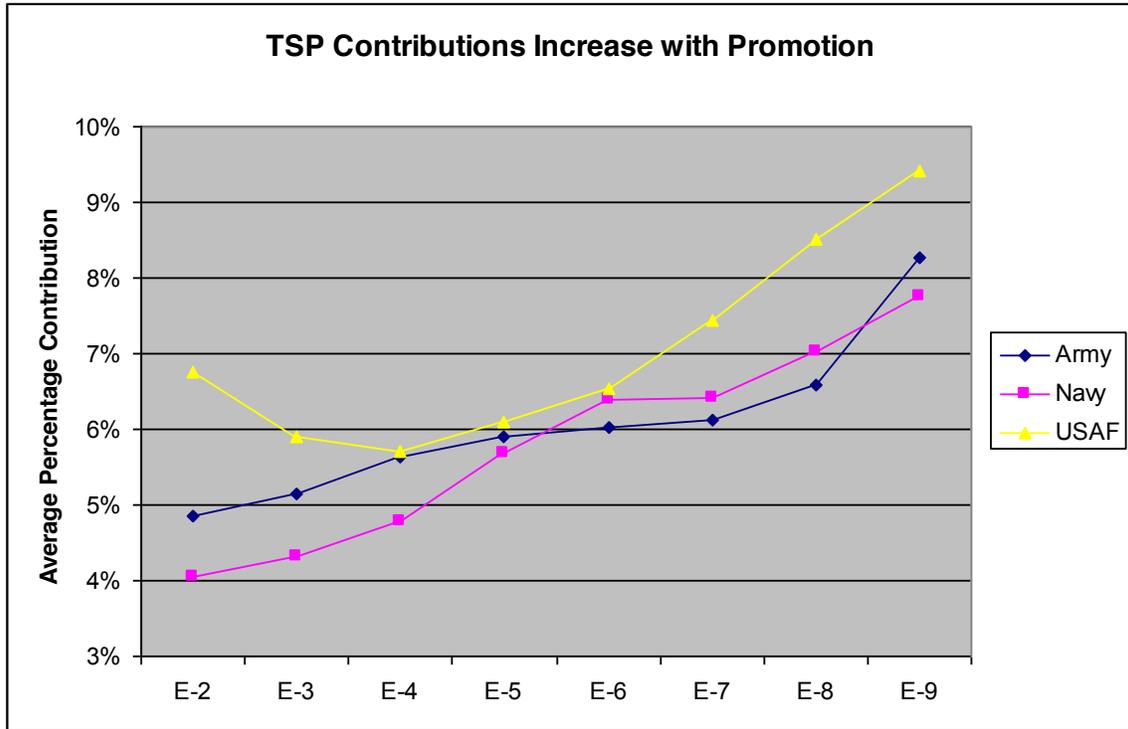
	<u>Army Enlisted</u>	<u>USAF Enlisted</u>	<u>Navy Enlisted</u>	<u>USMC Enlisted</u>
E1	11.3%	2.8%	33.3%	11.0%
E2	19.5%	9.6%	52.8%	24.1%
E3	22.0%	18.1%	57.5%	34.9%
E4	15.3%	27.4%	60.8%	44.0%
E5	20.1%	36.6%	54.8%	43.2%
E6	28.6%	40.8%	46.7%	42.3%
E7	32.1%	38.7%	44.6%	44.5%
E8	31.8%	41.0%	40.4%	42.7%
E9	30.5%	38.9%	38.1%	36.0%

	<u>Army Officer</u>	<u>USAF Officer</u>	<u>Navy Officer</u>	<u>USMC Officer</u>
O1	22.2%	18.6%	31.5%	20.9%
O2	30.8%	35.7%	40.3%	39.2%
O3	39.2%	47.9%	49.1%	56.5%
O4	46.4%	55.8%	55.5%	57.1%
O5	48.3%	60.0%	59.6%	56.4%
O6	51.1%	60.4%	58.1%	56.6%

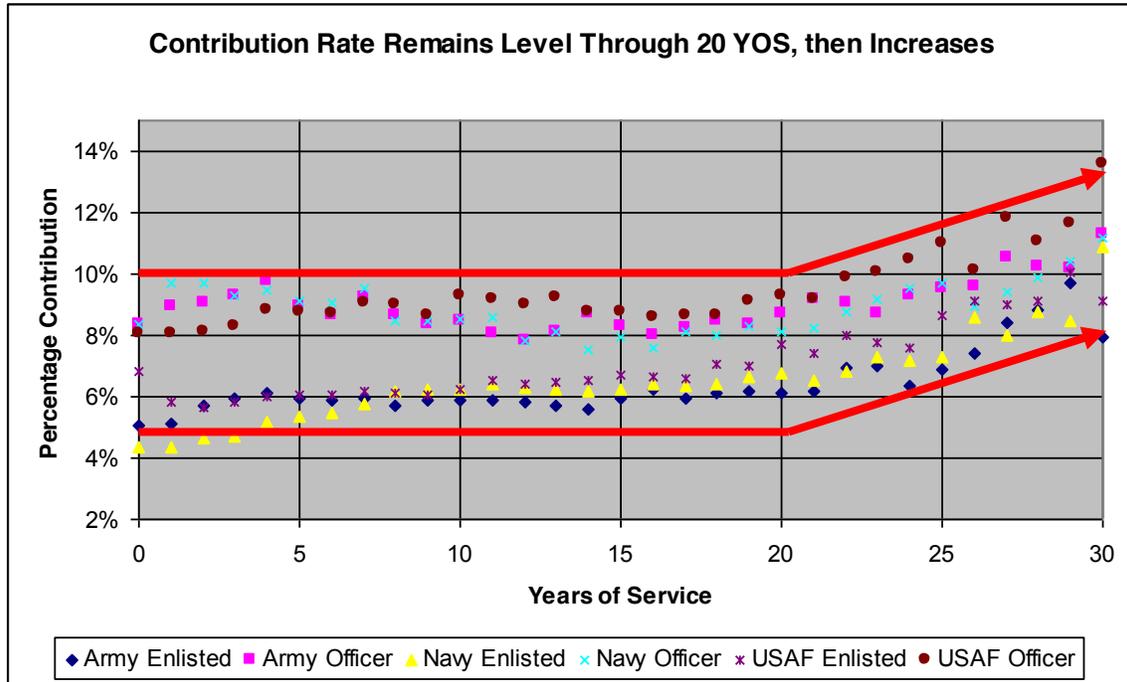


In addition to a correlation between pay grade and the percentage of the force participating in the Thrift Savings Plan, there appears to be a similar correlation between

pay grade and the percentage of basic pay a member contributes to the TSP. Members at higher pay grades tend to contribute a greater percentage of basic pay into the TSP.



Although increases in pay grade tend to result in greater percentage contributions to the TSP, when analyzing solely length of service and the percentage of basic pay contributed by a member, the trend is less clear. Except for the Navy's enlisted force, which shows a slight and continued increase in percentage of basic pay contributed with increased length of service, the remaining segments of the active forces show little change in the contribution rate over the period from zero to twenty years of service. In all cases, including the Navy's enlisted force, the contribution rate increases at a significantly greater rate during the period between 21 and 30 years of service.



#### IV. Cost Estimate to Provide Matching Contributions

The Federal Retirement Reform Act, section 110(b)(1) requires an estimate of the costs of providing a matching payment with respect to contributions made to the Thrift Savings Fund by members of the Armed Forces.

The government provides matching contributions for civilian employees covered by the Federal Employee Retirement System who contribute to the TSP. An automatic contribution calculated as 1% of the employee's salary is made by the government into an employee's TSP account, regardless of whether the employee contributes to the TSP. If an employee chooses to contribute, the government matches 100% of the first 3% of the employee's salary the employee contributes. For the next 2% the employee contributes, the government matches 50% of the employee contribution. Thus, an employee contributing 5% would receive a match of 5%.

Section 211(d) of Title 37, United States Code, grants the Secretary concerned the authority to provide matching contributions for retention in critical specialties and first-time enlistees. This provision allows the Department to provide matching contributions using the same formula as authorized for the Federal Employee Retirement System, except the initial 1% automatic contribution is specifically not authorized. Thus, under the formula to provide matching contributions to this limited subset of the military, the Department has the authority to match 100% of the first 3% of the basic pay the member contributes. For the next 2% the member contributes, the Department has the authority to match 50% of the member's contribution. Thus, a member contributing 5% could receive a match of 4%.

A precise cost estimate of providing matching contributions is difficult because providing matching contributions incentivizes additional members to participate in the TSP. This can also incentivize an increase in contributions by those members who otherwise would contribute less than is required to obtain the full match. The additional participation and contributions would increase the cost of providing matching contributions. The exact impact of providing the matching contributions is unknown, but the directional impact (i.e., an increase) is assumed.

To calculate the cost of providing matching contributions to the Armed Forces, we obtained a report of contributions from basic pay during the month of August 2009 providing the specific contribution percentage of each TSP participant for the active and reserve components for the Army, Navy, and Air Force. For the US Marine Corps, whose data is maintained on a separate system, we obtained summary information by grade and percentage contributed.

We then applied the formula for calculating matching contributions to the population contributing to the TSP during the month of August 2009. Assuming this population was at a steady state, the cost of providing matching contributions by Service would appear as in the table, below.

<b>Current Percentage of Members Contributing</b>	<u>Active Army</u>	<u>Active Air Force</u>	<u>Active Navy</u>	<u>Active USMC</u>
E1 to E4	17.3%	19.8%	55.5%	24.3%
E5 to E6	24.0%	38.5%	51.0%	28.9%
E7 to E9	32.4%	39.3%	43.0%	29.9%
W1 to W5	37.3%		43.4%	31.9%
O1 to O3	34.1%	40.1%	42.9%	32.0%
O4 to O6	47.7%	58.3%	57.8%	39.9%
O7 to O10	47.7%	63.0%	57.9%	33.0%
Matching Contribution Monthly Cost	\$ 17,507,000	\$ 14,867,000	\$ 18,011,000	\$ 9,929,000
Matching Contribution Annual Cost	\$ 210,084,000	\$ 178,404,000	\$ 216,132,000	\$ 119,148,000

Total - Active      \$ 723,768,000

<b>Current Percentage of Members Participating</b>	<u>Reserve and National Guard Army</u>	<u>Reserve and National Guard AF</u>	<u>Navy Reserve</u>	<u>USMC Reserve</u>
E1 to E4	9.1%	12.2%	6.0%	25.8%
E5 to E6	15.4%	26.5%	13.9%	31.8%
E7 to E9	24.6%	33.2%	22.4%	20.7%
W1 to W5	31.9%		20.0%	31.6%
O1 to O3	20.3%	28.5%	9.2%	44.4%
O4 to O6	27.7%	30.1%	16.9%	27.8%
O7 to O10	29.4%	29.0%	22.4%	50.0%
Matching Contribution Monthly Cost	\$ 6,216,000	\$ 2,749,000	\$ 298,000	\$ 476,000
Matching Contribution Annual Cost	\$ 74,592,000	\$ 32,988,000	\$ 3,576,000	\$ 5,712,000

Total – Reserve and National Guard      \$ 116,868,000

If the Department provided matching contributions to the existing population contributing to the TSP, the annual cost would be over \$840 million.

The 82.1% participation rate (September 2009) by civil service employees under the Federal Employees Retirement System is significantly greater than the participation rate by military members. In an attempt to define an upper bound for the cost of providing matching contributions to the TSP, we assumed a 100% participation rate by military members at a contribution rate of at least 5%, which would provide the full 4% matching contribution.

<b>100% Participation</b>	Active Army	Active Air Force	Active Navy	Active USMC
Matching Contribution Monthly Cost	\$ 68,410,000	\$ 41,935,000	\$ 38,525,000	\$ 29,625,000
Matching Contribution Annual Cost	\$ 820,920,000	\$ 503,220,000	\$ 462,300,000	\$ 355,500,000

Total \$2,141,940,000

<b>100% Participation</b>	Reserve and National Guard Army	Reserve and National Guard AF	Navy Reserve	USMC Reserve
Matching Contribution Monthly Cost	\$ 37,900,000	\$ 10,820,000	\$ 2,330,000	\$ 2,060,000
Matching Contribution Annual Cost	\$ 454,800,000	\$ 129,840,000	\$ 27,960,000	\$ 24,720,000

Total \$ 637,320,000

The total projected cost for providing matching contributions assuming a 100% participation rate with each employee receiving the full 4% match is almost \$2.8 billion.

While the 100% participation rate assumption is greater than the historic participation rate by civil service employees, we anticipate the introduction of a Roth TSP option within the next two years will result in increases to participation in the TSP by civil service employees. We expect similar or greater increases in participation in the TSP by military members.

## **V. Effect of TSP Matching Contributions on Recruiting and Retention**

The Federal Retirement Reform Act, section 110(b)(2) requires an estimate of the effect on recruiting and retention of providing matching contributions to accounts held by members of the Armed Forces. Currently, members of the Armed Forces do not receive matching contributions.

To improve recruiting or retention, the Department has a number of tools available and typically targets these tools at a specific occupational series, specialty, year group, or population to meet the requirements of the desired military force structure. These tools include bonuses, incentive pays, specialty pays, and continuation pays. The dollar amount of these payments is specifically calculated to improve the retention rate of a narrowly defined group or to incentivize new accessions to choose critical or hard to fill specialties.

These tools are typically cash payments with a significant portion of the payment payable immediately or are structured to provide a series of payments over a defined period of time. In either case, the member typically has the ability to use the payments for immediate consumption.

Providing matching contributions to a member's TSP account is significantly different. First, in order for the member to receive the benefit of the matching contributions, the member must sacrifice part of the member's salary into an account that the member is currently unable to access (i.e., contribute to the member's TSP account). Thus, the member has to forego current consumption in exchange for a promise of greater future consumption.

Second, unlike a typical bank account, the member's TSP account is a tax deferred account. This means there are additional restrictions and administrative burdens placed upon the member in the form of income recognition, tax return filing requirements, and possibly tax penalties that must be satisfied if the member accesses the funds in the TSP account.

For the member, compared to receiving an upfront cash payment, the receipt of TSP matching contributions is likely a less desirable option. From the perspective of the Department, the form of the payment is largely irrelevant. The cost of the payment to influence the member's decision at a specific point in time is key.

Two studies summarized below and attached examined the impacts of providing TSP matching contributions. The Rand study evaluated an Army pilot program that used the offer of TSP matching contributions to induce new enlistees to choose longer enlistment periods and harder to fill specialties. The study by the Center for Naval Analyses investigated the impact providing TSP matching contributions would have upon reenlistment decisions. This study also analyzed the cost differences between providing an immediate payment or providing matching contributions. The studies show little or no

improvement in recruiting or retention through providing TSP matching contributions. Furthermore, it appears that providing TSP matching contributions would be more costly than using the existing recruiting and retention tools available to the Department.

## **A. RAND Analysis of the TSP Matching Funds Enlistment Incentive**

Section 606 of the National Defense Authorization Act for Fiscal Year 2006 (P.L. 109-163) (“2006 NDAA”) required the Secretary of the Army to implement a pilot program to explore the impact on recruiting of providing matching contributions to the Thrift Savings Fund for initial enlistments. The pilot program was implemented on April 3, 2006 and ended in December 2008.

### **SEC. 606. PILOT PROGRAM ON CONTRIBUTIONS TO THRIFT SAVINGS PLAN FOR INITIAL ENLISTEES IN THE ARMY.**

(a) Pilot Program Required- During fiscal year 2006, the Secretary of the Army shall use the authority provided by section 211(d)(1)(B) of title 10, United States Code, as amended by section 605, to carry out within the Army a pilot program in order to assess the extent to which contributions by the Secretary to the Thrift Savings Fund on behalf of members of the Army described in subsection (b) would--

- (1) assist the Army in recruiting efforts; and
- (2) assist such members in establishing habits of financial responsibility during their initial enlistment in the Armed Forces.

Participation in the pilot program was available to non-prior service Army recruits who agreed to enlist for at least five years into one of a specified group of military occupational specialties (“MOS”). These are MOS for which the Army has faced continuing challenges meeting its recruiting goals. Participants in the pilot program received matching contributions based upon the percentage the participant contributed to the TSP. The pilot program matched 100% of the first 3% contributed and 50% of the next 2% contributed to the TSP. Thus, for a member who contributed 5% into the TSP, the pilot program provided a 4% matching contribution.

The Army engaged the Rand Arroyo Center (“Rand”) to assess the impact of the pilot program on recruiting for the Report to Congress as required by section 606(d) of the 2006 NDAA. A copy of the analysis by Rand is enclosed.

(d) Report-

(1) IN GENERAL- Not later than February 1, 2007, the Secretary of Defense shall submit to the congressional defense committees a report on the pilot program under subsection (a).

(2) ELEMENTS- The report shall include the following:

(A) A description of the pilot program, including the number of members of the Army who participated in the pilot program and the contributions made by the Army to the Thrift Savings Fund on behalf of such members during the period of the pilot program.

(B) An assessment, based on the pilot program and taking into account the views of officers and senior enlisted personnel of the Army, and of field recruiters, of the extent to which contributions by the military departments to the Thrift Savings Fund on behalf of members of the Armed Forces similar to the participants in the pilot program--

- (i) would enhance the recruiting efforts of the Armed Forces; and
- (ii) would assist such members in establishing habits of financial responsibility during their initial enlistment in the Armed Forces.

In its analysis, Rand analyzed non-prior service active duty enlistment contracts for FY04 through FY07, periods prior to and during the pilot program. Rand attempted to determine whether the likelihood of selecting an MOS eligible for the pilot program was greater during the period of the pilot program. Rand also attempted to determine whether the likelihood of selecting a long-term contract (5 years or more) was greater for an MOS eligible for the pilot program as compared to an MOS not eligible for the pilot program.

There was no significant statistical increase in the enlistment of soldiers who scored above the 50<sup>th</sup> percentile on the Armed Services Vocational Aptitude Battery (ASVAB) and only a slight increase in the enlistments of soldiers who scored below the 50<sup>th</sup> percentile on the ASVAB. There was little evidence that the availability of TSP matching contributions increased the likelihood that a soldier would select an MOS eligible for the pilot program as compared to an MOS not eligible for the pilot program. There was some evidence that suggested the availability of TSP matching contributions may have resulted in longer term enlistments, however, a number of other factors, such as larger enlistment bonuses easily could have accounted for this increase.

Overall, the pilot program achieved minimal success, and the cost to provide matching contributions as an incentive did not achieve the desired results.

## **B. The Center for Naval Analyses Analysis of the Retention Effects of Matching Contributions to the TSP**

In June of 2001, Navy staff requested the Center for Naval Analyses (CNA) conduct an analysis of the retention effects of providing TSP matching contributions. In December 2001, the CNA published a study titled, "Retention Effects of Matching Contributions to the Thrift Savings Plan (TSP)."

The study evaluated a hypothetical matching contribution program that would match 100% of the first 3% a member contributed to the TSP. The program would match 50%

of the next 2% a member contributed. Thus, if a member contributed 5%, the member would receive a 4% matching contribution into the TSP account. This study assumed the matching contributions were funded from reductions in funds available for the Navy's selective reenlistment bonus program.

The analysis uses a member's discount rate to predict the member's behavior. A discount rate is the rate of return a member would require to forego \$1 today in exchange for a payment one year from today. A member with a 15% discount rate would be indifferent between the choices of receiving \$1 today or receiving \$1.15 in one year. To incentivize this member to choose a deferred payment, the member would have to expect to receive at least \$1.16 in one year to forego the \$1 payment today.

An additional complication arises when using a member's discount rate to understand and predict behavior when the future alternative is a TSP matching contribution. A member can use \$1 received today for current consumption. A member cannot access the funds in the TSP for current consumption until the member separates from the military. As a result, an analysis of the retention effects of providing TSP matching contributions may show a slight downward bias because of the requirement to separate from the military in order to access the funds in the TSP.

Prior studies examining a member's discount rate conclude that a member facing a reenlistment decision has a discount rate of between 15% and 18%, although another study observed a discount rate as high as 30%.

A contribution of \$1 to the TSP, with a 100% match (\$1) and a 6% annual return, results in a rate of return of approximately 90% after one year (after paying the 10% penalty for early withdrawals and taxes). After six years, the average rate of return on the same dollar, after taxes and penalties, drops to 17%. After twenty years, the average rate of return drops to 9%.

Essentially, according to the study, a member with a 15% discount rate would be willing to contribute to the TSP as long as the member expected to separate from the military within six years (i.e., before the average rate of return drops to 15% or below) and access the funds in the TSP. A member who anticipated remaining in the military beyond six years would view the matching TSP contributions as less valuable than an equivalent, immediate cash payment. As a result, given the studies on members' discount rates, it is likely that a 9% expected rate of return would be insufficient and would motivate few members to respond to this incentive. For those that do respond (i.e., those with a predisposition toward long-term savings), the study estimates retention would increase slightly.

With an average 17% rate of return at the six-year mark, more members would choose to contribute if they had an expectation of being able to access the funds in the TSP at that point. Because one of the requirements to access the funds in the TSP is to separate from the military, the members who would respond to the incentive are those who do not plan to remain in the military and hold a shorter-term view towards saving. These members'

contributions to the TSP would not be made with the intent of building up retirement savings but would be made in anticipation of near term spending, possibly saving for a down payment on a house or car. The members who contributed with a shorter-term savings focus would be more inclined, not less, to leave the military when their enlistment term expires. They would have an incentive to leave the military at the expiration of their term, because they can receive a payout of their TSP contributions, matching contributions, and earnings. As a result, for this segment of the military population, while there might be an initial increase in retention, the overall change in retention is likely negative as more choose to separate and access the funds in the TSP.

In the current military population contributing to the TSP, even without matching contributions, a similar increase in the percentage contributed to TSP occurs in the final years of a career. After relatively little change in contribution percentages during years 0 through 20, a significant increase appears in years 21 through 30 and may also suggest a short-term saving motivation.

The study also points out that the matching incentive would appeal to the groups who are most likely to leave the military. A member who receives a poor performance report would be likely to save the maximum amount necessary to receive a full matching contribution in anticipation of leaving the military. Similarly, a member who believes he has strong skills and could receive higher wages in the private sector would be likely to participate and obtain the matching contributions. In both cases, the matching contributions are an incentive to those likely to leave the military rather than stay. Thus, the funds used to provide the TSP matching contributions are actually decreasing retention and are benefitting the opposite of the targeted segment of the military.

Finally, the study examined the cost of providing a selective reenlistment bonus (SRB) versus providing matching contributions. Largely due to the high average discount rate held by the military members, the SRB was more cost effective than an equivalent TSP matching contribution program. Furthermore, an SRB provided a greater impact toward retention and was easier to target narrowly and focus upon the specific segment of the military where additional retention was desired.

## **VI. Conclusion**

The cost of requiring the Department of Defense to provide matching contributions for military members contributing to the TSP would be significant. Based upon current contribution rates to the TSP, the current estimate is approximately \$840 million annually. If a greater percentage of members choose to contribute and the current participating members contribute a greater percentage into the TSP, the cost to provide matching contributions could rise to \$2.8 billion annually.

For this cost, however, there is little evidence that this added expense would contribute to meeting the recruiting or retention needs. Some studies even suggest the receipt of

matching contributions might even have a slightly negative effect on retention at certain longevity points during a career.

Overall, providing matching contributions as a tool to enhance recruiting and retention appears to be expensive and, to date, has shown limited success.