



FEDERAL RETIREMENT THRIFT INVESTMENT BOARD
1250 H Street, NW Washington, DC 20005

March 9, 2007

MEMORANDUM FOR BOARD MEMBERS SAUL, FINK, WHITING, SANCHEZ
AND DUFFY

FROM: GREG LONG, Director of Product Development

CC: THOMAS EMSWILER, Executive Director (Acting)

RE: **TSP Participant Behavior and Demographics**

Attached please find a report entitled TSP Participant Behavior and Demographics -- Analysis 2000-2005. The key findings of the report are:

- The TSP is now a mature program and participation rates have reached a plateau. However, we are pleased to see some improvement in the participation rates of the youngest and lowest paid Federal employees.
- Rates of salary deferral, aided by increases in contribution limits, have climbed substantially.
- Investment allocation activity is in-line with expectations, as age correlates to the amount of equity market exposure taken.

The FRTIB Communications team is currently typesetting this report and reformatting the charts so as to make it more suitable for public dissemination. Therefore, copies of this report distributed at the board meeting will look somewhat different, but the content will be unchanged.



THRIFT SAVINGS PLAN

Participant Behavior and Demographics

Analysis for 2000–2005



Introduction

The Thrift Savings Plan (TSP) was created by the Federal Employees' Retirement System Act of 1986 to provide retirement benefits for Federal employees. It is similar in most respects to 401(k) plans that are broadly available to private sector employees. The Federal Retirement Thrift Investment Board (FRTIB) is the independent Federal agency responsible for administering the TSP.

Since its formation, the TSP has grown substantially. At the end of 2006, the plan was the largest defined contribution plan in the world, serving 3.7 million current and former Federal employees and uniformed services members with \$206 billion in total assets. Civilian Federal employees that are eligible to participate in the TSP are generally covered by one of two distinct retirement programs, the Federal Employees' Retirement System (FERS), and the Civil Service Retirement System (CSRS). Beginning in 2002, members of the Uniformed Services also became eligible to make TSP contributions.

The TSP has been very successful in helping Federal employees and uniformed service members provide for their financial security. However, FRTIB continually seeks to improve TSP services and features that promote beneficial retirement savings behavior. In order to meet its objectives, the FRTIB initiates efforts to identify and understand TSP participant behavioral trends. This report on TSP participant behavior and demographics, prepared by the Office of Product Development within FRTIB, reflects that ongoing effort.

The facts below about the TSP affect the findings within this report:

- With limited exceptions, all employees of the Federal government are permitted to make salary deferral contributions to the TSP immediately after being hired. Employee contributions to the TSP are voluntary. Automatic enrollment, a feature growing in popularity among defined contribution plans, is not currently utilized.
- The amount of allowable employee contributions was limited by statute in the years covered by this report. These limits differed by retirement system. Starting in 2002, "catch-up" contributions for participants aged 50 and older were permitted. Tables describing employee contribution limits and amount of allowable employee catch-up contributions can be found in the Appendix.
- Only FERS employees receive agency contributions. Newly hired FERS employees become eligible for Agency contributions in June or December, depending on the month when they were hired. Generally, they become eligible between 6 and 12 months after they are hired. Agency contributions for FERS employees come in two forms, automatic contributions and matching contributions. All eligible FERS employees receive an automatic contribution equaling 1% of basic pay each pay period. A match is provided for those who make salary deferral contributions. The formula for matching contributions can be found in the Appendix.
- The TSP maintains records only on current and former Federal employees who made and/or received contributions to their TSP account. The TSP does not have records on CSRS employees that have not elected to contribute. However, the TSP does have records on FERS non-contributors once they become eligible to receive the agency automatic 1% contribution.

Executive Summary

This analysis of Thrift Savings Plan participant behavior and demographics was prepared during 2006 and 2007, using data from 2000 through 2005. Where appropriate, data from prior years is also referenced. This report looks only at full-time civilian Federal employees, meaning participants in both the FERS and CSRS retirement systems. Because members of the Uniformed Services were not eligible to participate during the full period covered by this report, they were not included in this analysis. FRTIB plans to produce similar reports on a biennial basis going forward and anticipates including participants from all three systems in future reports.

The TSP has grown substantially over the years, and data from 2000-2005 shows that it has now developed into a mature program. Participation rates, after climbing substantially through the 1990s, appear to have reached a plateau. However, rates of salary deferral, aided by increases in contribution limits, are continuing to climb. FRTIB views these trends as beneficial.

The FERS participation rate (a measure of current full-time FERS-covered employees making voluntary salary deferrals) stood at 88.8% in 2005, a slight increase from 88.4% in 2000. Participation among full-time FERS employees has been near 88% since 1997, after rising steadily for ten years from the plan's inception in 1987, when 44.1% participated.

The overall average salary deferral rate (the percentage of basic pay contributed to the TSP) for FERS contributors increased from 7.1% in 2000 to approximately 8.6% in 2005. This rate has increased every year since 1988, the first full year of plan operation, when it was 4.9%. The average salary deferral rate in 2005 for CSRS contributors was 7.5%, up from 4.4% in 2000. The significant increases in deferral rates are largely attributable to higher statutory maximum contribution limits. The maximum permitted deferral rates increased 1% each year from 2000, when they stood at 10% for FERS and 5% for CSRS. In 2005, the maximum permitted salary deferral was 15% for FERS participants and 10% for CSRS participants. Another contributing factor is the addition of "catch-up" contributions, which, starting in 2002, allowed TSP participants age 50 and older to make contributions above the statutory maximums.

The average year-end allocation of investments by FERS and CSRS participants shows that the two most popular investment options at all age groups are the Government Securities Investment (G) Fund, which invests in short term non-marketable U.S. Treasury securities, and the Common Stock Index Investment (C) Fund, which invests in a Standard & Poor's 500 stock index fund. As expected, the rate of exposure to the equity markets is higher among younger participants.

Data Collection and Methodology

This report is based on data extracted from the TSP recordkeeping system, which was enhanced with information from the Office of Personnel Management (OPM). In each year covered by this report, the TSP record keeper provided a computer tape containing extract data on the accounts of all TSP participants identified as active civilian Federal employees. OPM enhanced the data by comparing it to their database of Executive Branch and Postal Service employees and adding data on participants' annual salary rate, gender, length of Federal service, and employment (full-time vs. part-time) status.

Not all records for participants on the TSP extract can be matched with OPM data. In 2005, a total of 2.4 million participants were identified on the tape from the TSP record keeper, and OPM returned data on approximately 2.3 million employees. A similar ratio of total records extracted to records matched was seen in other years covered by this report. The inability to match some TSP records to OPM data occurs when OPM or TSP data is incomplete. Additionally, since OPM does not collect data on employees of the Legislative and Judicial Branches, OPM cannot match such records. Finally, approximately 172,000 part-time or intermittent employees are identified in the data, but they are excluded from the analyses because their hourly work schedule (and therefore their actual compensation) is not known.

For purposes of this study, a "FERS contributor" is defined as an employee who contributed his or her own money (i.e., an employee contribution) at any time during the year. An "active FERS participant" is one who received at least one employee or employer contribution during the year. While the TSP maintains records for a large number of retired or otherwise separated participants, such participants are not active and are therefore not considered within this report.

In this report, ages are broken down into 10-year increments. However, as CSRS was closed to new entrants after 1983, there were only insignificant numbers of CSRS participants younger than age 30 in any of the years covered within this report.

In this report, salaries are shown in quintiles. The first quintile represents the 20% of all records showing the lowest annual salary; the fifth quintile represents the 20% of records showing the highest paid participants. Data with respect to the dollar-denominated salary ranges for the quintiles in each year can be found in the Appendix.

The analysis provided is subject to some limitations:

- The exclusion of TSP accounts for employees of the Legislative and Judicial Branches may modestly distort the findings.
- The exclusion of TSP accounts that cannot be matched with OPM data may modestly distort the findings.
- The exclusion of TSP accounts for part-time and intermittent workers is likely to have a more meaningful impact on the findings. Since this group is likely to participate and contribute at lower rates than full-time employees, the findings may marginally overestimate the rates of participation and deferral of the total TSP participant base.
- Employees' actual deferral rates are not included in TSP or OPM databases. Therefore an approximation of annualized deferral rate is calculated by comparing the total employee contributions to the annual salary rate for each calendar year.

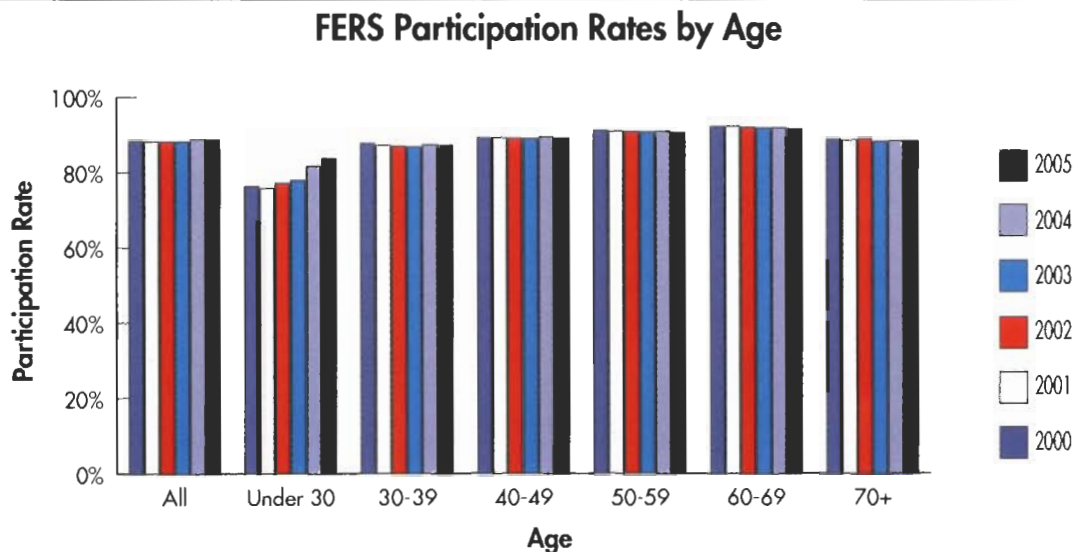
Analysis

The following sections address TSP population characteristics. The exhibits and narratives display, over time, the relationships between participation rates and age and salary, and between deferral rates and age and salary.

Age, Salary, Participation Rates, and Deferral Rates of FERS Participants

Figure 1 shows FERS participation rates (the number of FERS participants who made voluntary employee contributions, expressed as a percent of the number of active FERS participants) by age.

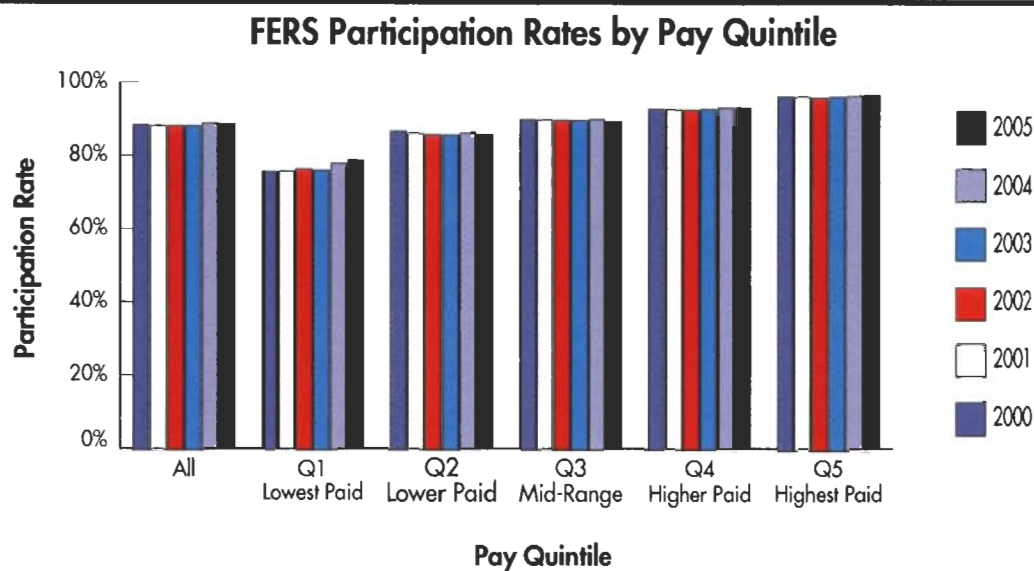
Figure 1



FERS participation rates modestly increase based on age, except in the case of participants over 70, who participate at a slightly lower rate than those in the age 60–69 category. In 2005, the overall FERS participation rate was 88.8% and ranged from 83.8% in the youngest age group to 91.7% in the 60–69 age group. In looking at changes from 2000 through 2005, most groups show little variation. The exception is among the youngest age group, where the average participation rate among the youngest participants has increased from 76.3% in 2000 to 83.8% in 2005. Participation in defined contribution plans among younger, and generally lower paid, employees is typically lower than average. The trend of increasing participation among the youngest Federal employees is therefore particularly encouraging.

Figure 2 shows FERS participation rates (the number of FERS participants who made voluntary employee contributions, expressed as a percent of the number of active FERS participants) by pay quintile.

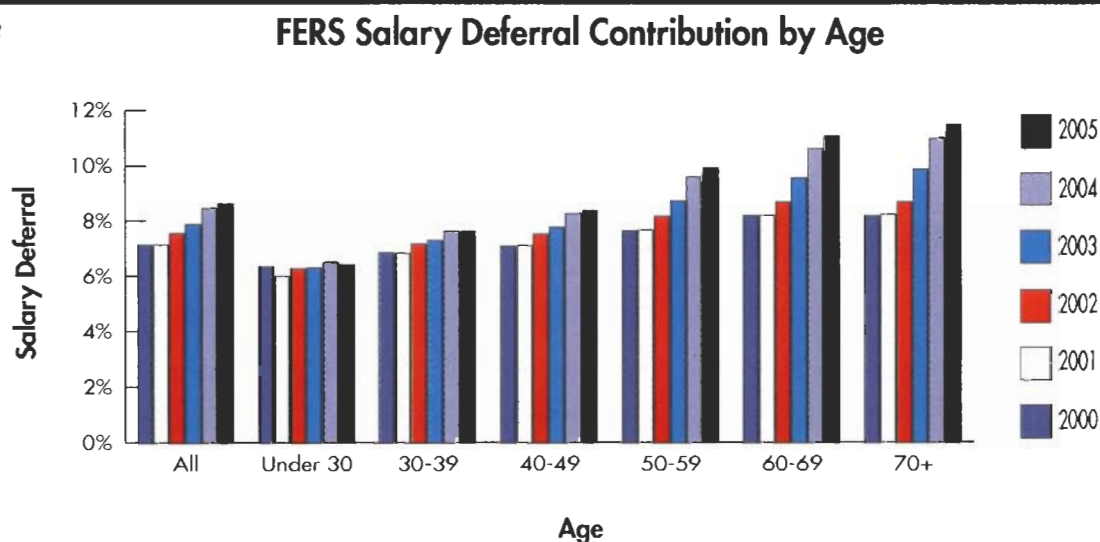
Figure 2



Not surprisingly, FERS participation rates increase with pay. However, participation rates in all pay groups are strong relative to average rates typically seen in private sector defined contribution plans. In 2005, the overall FERS participation rate was 88.8% and ranged from 78.8% in the lowest paid group (Q1) to 96.7% in the highest paid group (Q5). As reflected in the changes from 2000 through 2005, most groups show little variation. The exception is among the lowest paid group (Q1), where average participation is trending upward and has increased from 75.7% in 2000 to 78.8% in 2005. Again, since participation among lower paid employees is typically weaker than average, the trend of increasing participation among the lower paid Federal employees is encouraging.

Figure 3 shows deferral contribution rates (percentages of basic pay contributed to the TSP) for FERS contributors by age.

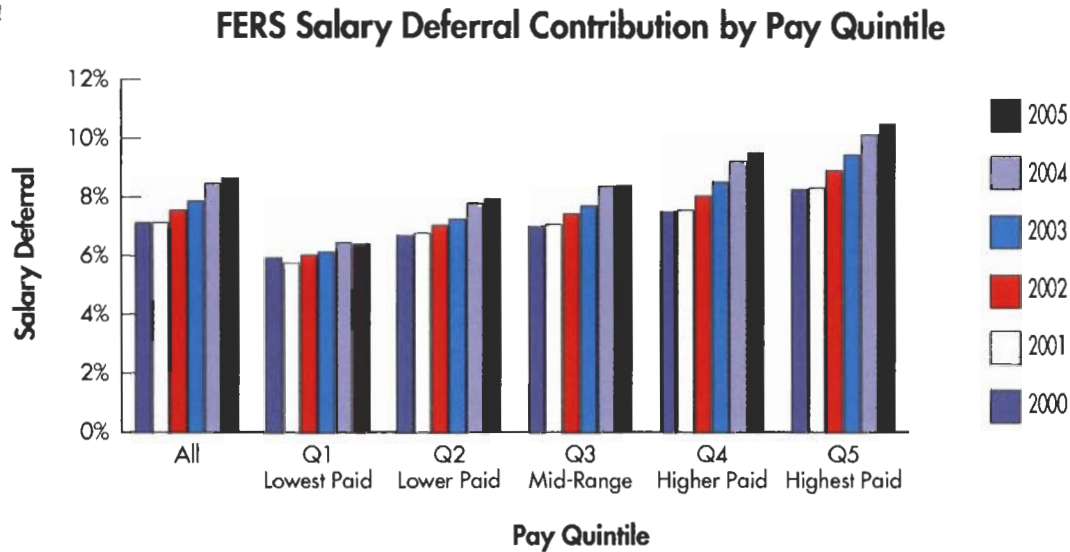
Figure 3



The data show a clear correlation between FERS contribution rates and participant age. In 2005, the average contribution rate among all FERS contributors was 8.6% of pay and ranged from a low of 6.4% among the youngest group to over 11% among the older groups of contributors. In looking at changes from 2000 to 2005, most groups show significant increases over the period. The largest increases are found in the groups age 50 or older, where the impact of catch-up contributions (first made available in 2002) combined with increases in the maximum contribution allowed, has led to dramatic increases in average contribution rates.

Figure 4 shows contribution rates for FERS contributors by pay quintile.

Figure 4



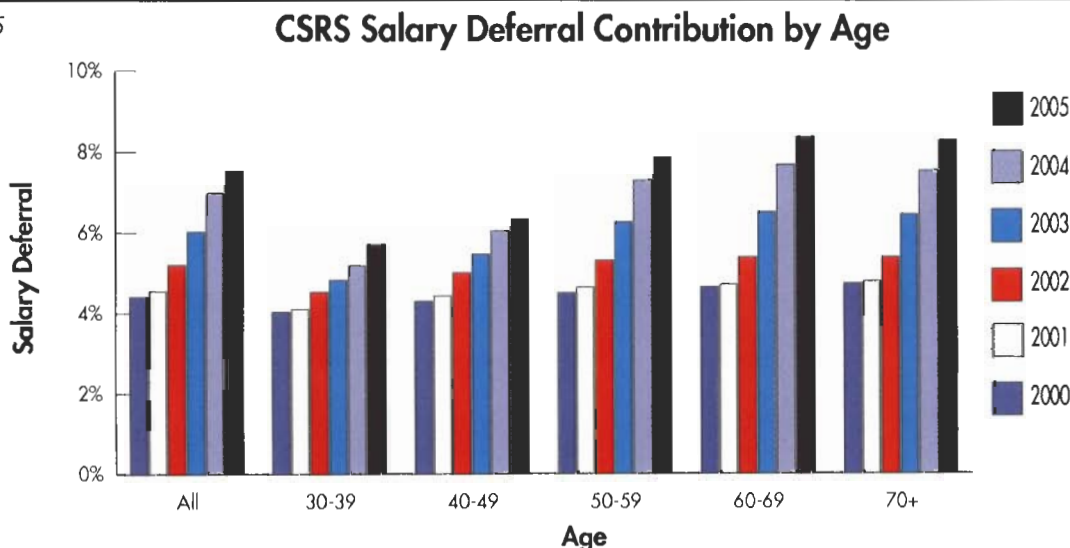
The data show that FERS contribution rates increase with participant pay. In 2005, the average contribution rate among all FERS contributors was 8.6% of pay and ranged from a low of 6.4% among the lowest paid group (Q1) to 10.5% among the highest paid group (Q5) of contributors. In looking at changes from 2000 to 2005, all groups show increases over the period. The largest increases are found among the higher paid groups (Q4 and Q5), where the impact of catch-up contributions (first made available in 2002), combined with increases in the maximum contribution allowed, has led to significant increases in average contribution rates.

Age, Salary, and Deferral Rates of CSRS Participants

Participation rates for CSRS employees classified by age and salary are not shown because data regarding these factors is not available for non-participating CSRS employees. However, using OPM data on the total number of active CSRS employees, we are able to estimate the overall CSRS participation rate. The estimated CSRS participation rate in 2005 was 67%, compared with approximately 65% in 2000. The CSRS participation rate in 1988, the first full year of the TSP, was approximately 20%.

Deferral rates by age for CSRS participants who are contributing to the TSP are shown in Figure 5.

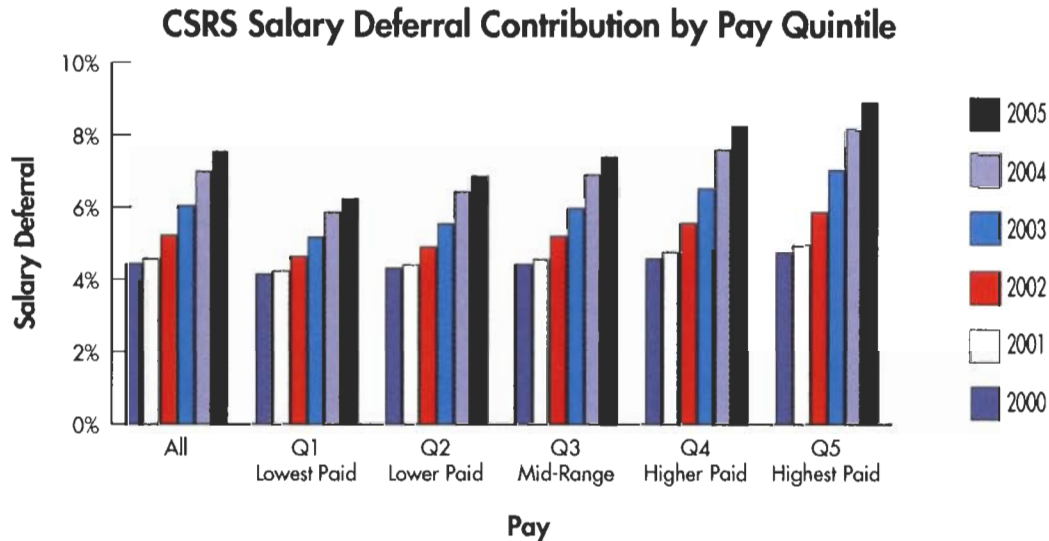
Figure 5



The data reflect consistently increasing rates of deferral as age increases and increasing rates of deferral over time. The average deferral in 2005 ranged from 5.7% in the youngest age group to 8.3% in the older groups. As reflected in changes from 2000 through 2005, all groups show significant increases over the period. The largest increases are found in the groups age 50 or older, where the impact of catch-up contributions combined with increases in the maximum allowed contribution has led to dramatic increases in average contribution rates.

Deferral rates by pay quintile for CSRS contributors to the TSP are shown in Figure 6.

Figure 6

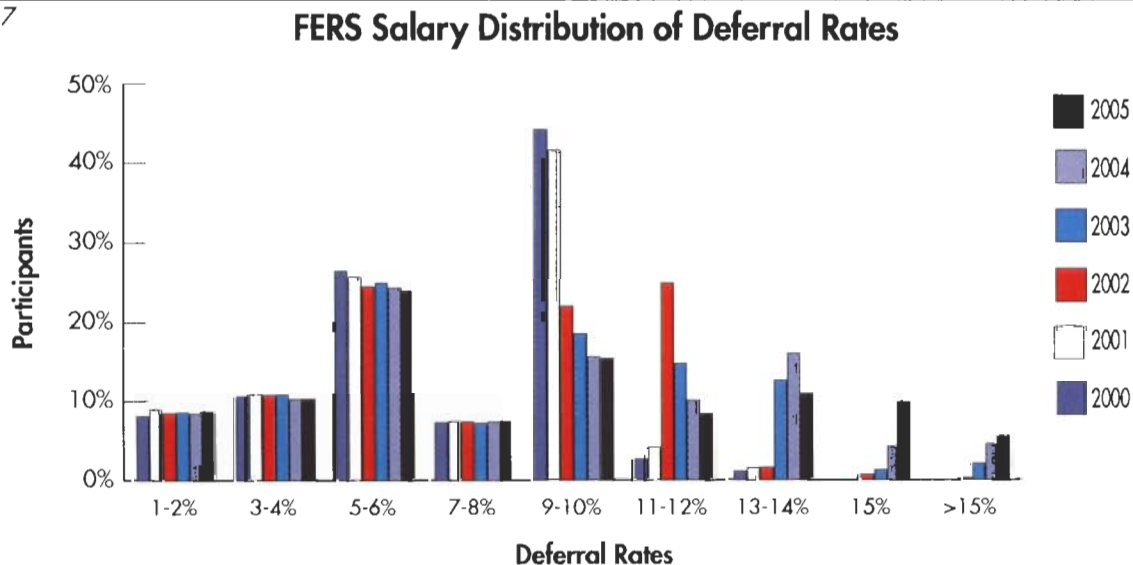


The data show that CSRS contribution rates increase significantly with participant pay. In 2005, the average contribution among all CSRS contributors was 7.5% of pay and ranged from a low of 6.2% among the lowest paid group (Q1) to 8.9% among the highest paid group (Q2) of contributors. The data also show that from 2000 through 2005, CSRS deferral rates increased markedly in all pay quintiles. The increases in the average deferral rates are the result of many participants electing to contribute at the higher statutory maximum contribution rates.

Distribution of Deferral Rates

The distributions of FERS contributors' deferral rates are shown in Figure 7.

Figure 7



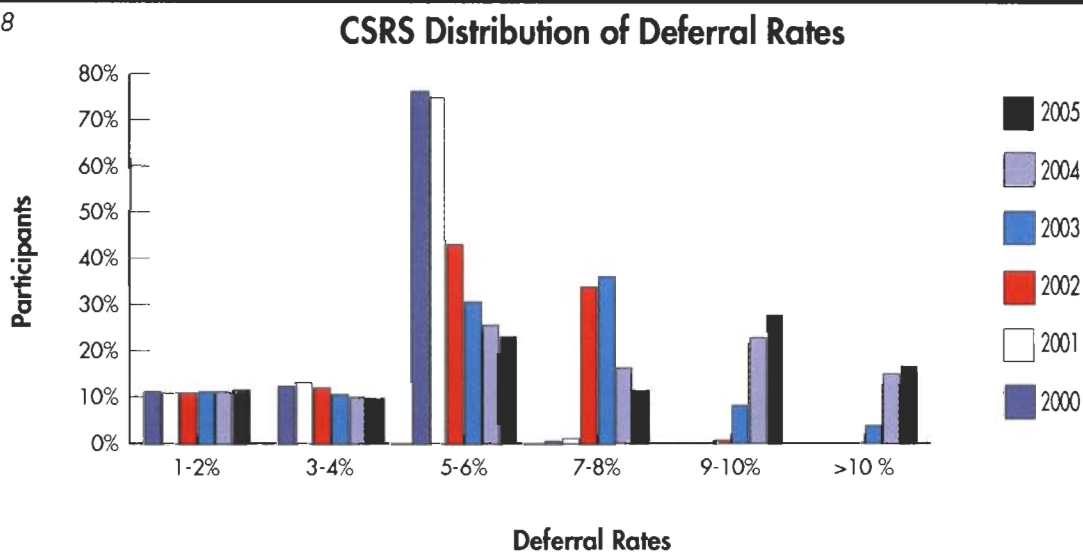
The chart above shows the significant impact that two key plan design elements have on the behavior of FERS participants. The key elements are: 1) the level of agency matching contributions and 2) the statutory maximum contribution limits.

FERS participants receive matching contributions on their deferrals up to 5% of pay. This matching level has remained constant throughout the existence of the TSP. The data show that there is a significant group of participants who contribute only to the level (i.e., 5%) that is matched by the agencies. This group has stayed relatively constant in size over the period 2000-2005, sliding modestly from 26% to 23% of all contributors.

The statutory maximum contribution limits have increased annually in 1% increments, from 10% in 2000 to 15% in 2005. The data show that 44% of participants were contributing at the statutory maximum in 2000. As the maximum contribution amount was increased, the concentration around the 9-10% bracket dissipated as significant portions of these participants reached for newly allowable higher contribution amounts. However, not all participants could afford to contribute at the highest levels. So increasingly smaller groups of participants reached maximum contribution levels in each successive year. We also note that contributions above 15% are generally attributable to FERS participants age 50 or older who utilize catch-up contributions. The data show that in 2005, approximately 5% of FERS contributors fell into this category.

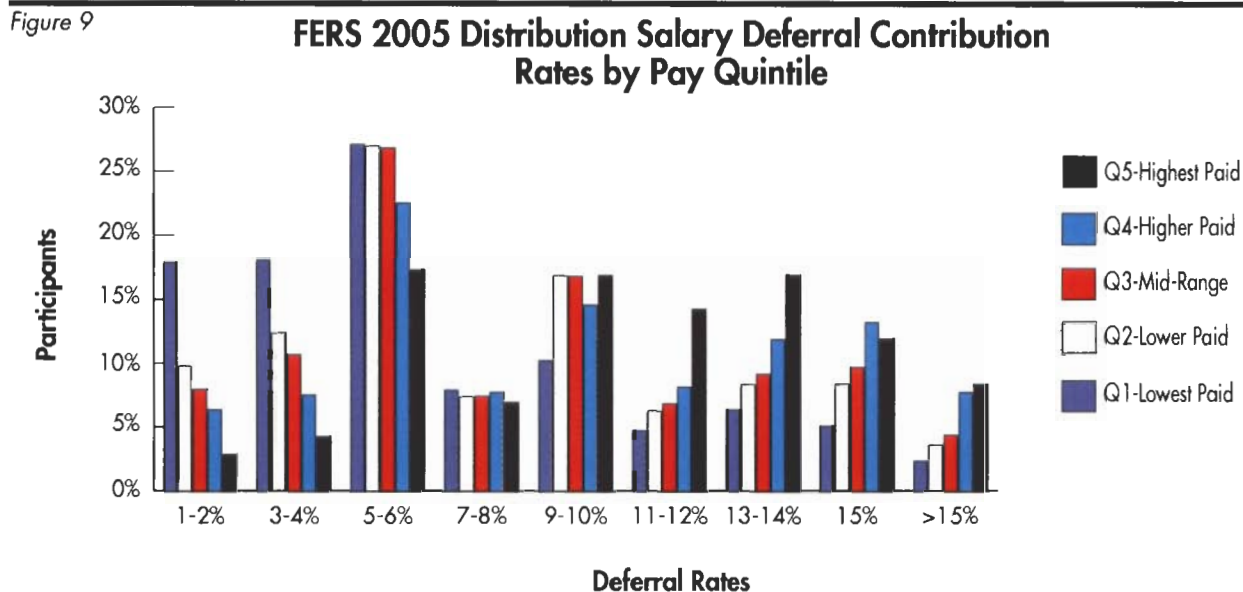
The distributions of CSRS contributors' deferral rates are shown in Figure 8.

Figure 8



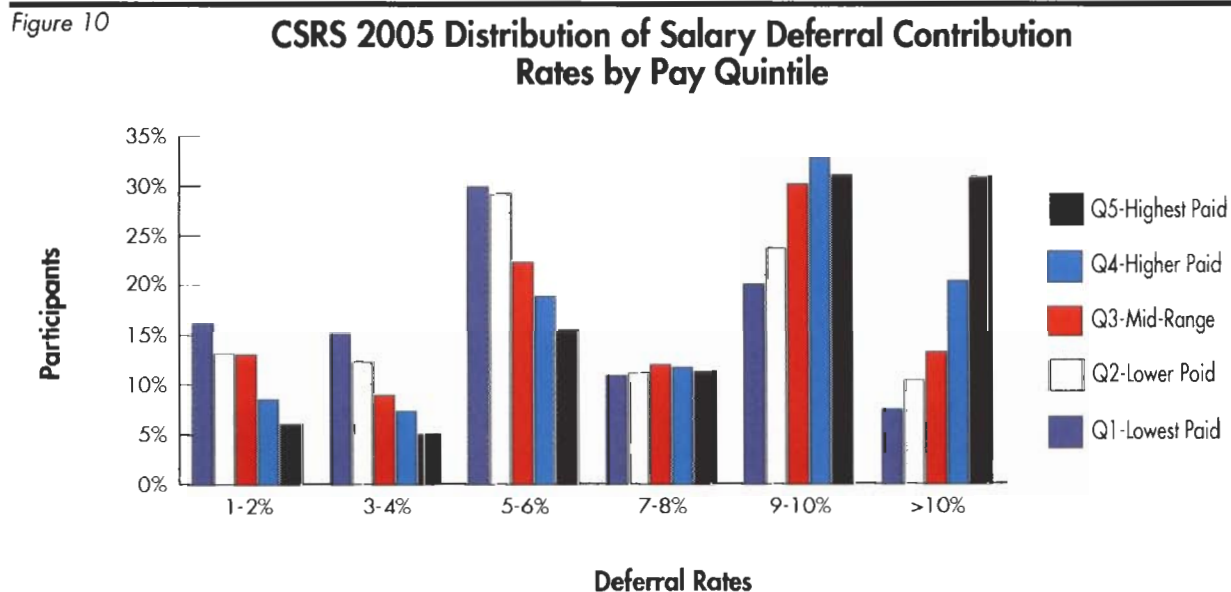
The chart above shows the significant impact that changes to the statutory maximum contribution limits had on the behavior of CSRS participants. The statutory maximum contribution limits for CSRS increased annually in 1% increments, from 5% in 2000 to 10% in 2005. In 2000, 76% of CSRS contributors were contributing at the maximum level of 5%. As the maximum contribution amount was increased, the concentration of contribution rates at 5-6% dissipated as significant portions of CSRS participants reached for newly allowable higher contribution amounts. As with the FERS participants, not all CSRS participants could afford to contribute at the highest levels. So increasingly smaller groups of participants reached maximum contribution rates. We also note that contributions above 10% are generally attributable to participants age 50 or older who utilize catch-up contributions. The data show that in 2005, approximately 17% of CSRS contributors fall into this category. While the number of catch-up contribution users is significantly larger in the CSRS group than the FERS group, this is expected, given that a significantly larger percentage of CSRS employees fall into the 50 or older age group.

Figure 9 illustrates FERS deferral rates in 2005 within selected pay quintiles.



The distribution of deferral rates in 2005 varied considerably at different pay levels. Among contributing FERS participants in the lowest of the five pay groups (Q1), 63% deferred 6% of salary or less, and less than 13% deferred above 12% of pay. Among FERS contributors in the mid-range pay group (Q3), 46% deferred 6% of salary or less, while 23% deferred above 12% of pay. The trend towards higher deferral rates at higher salary levels continues in the highest paid group (Q5), with approximately 25% deferring 6% of pay or less, and 37% deferring above 12% of pay. The biggest grouping for all pay groups, except the highest paid group (Q5), is at the 5-6% level where the agency matching contribution ceiling is reached.

Figure 10 illustrates CSRS deferral rates in 2005 within selected pay quintiles.



CSRS participants exhibit a similar trend of higher deferral rates among higher salary brackets. Among contributing CSRS participants in the lowest of the five pay groups (Q1), 61% deferred 6% of salary or less, and 28% deferred 9% or more of pay. Among CSRS contributors in the mid-range pay group (Q3), 44% deferred 6% of salary or less, while 44% also deferred 9% of pay or more. The trend towards higher deferral rates at higher salary levels continues in the highest paid group (Q5), with approximately 27% deferring 6% of pay or less, and 62% deferring 9% of pay or more.

Participant Investments

In 2005, the TSP provided five individual investment fund choices and five lifecycle options for participants: the Government Securities Investment (G) Fund, which invests in short term non-marketable U.S. Treasury securities; the Fixed Income Index Investment (F) Fund, which invests in a Lehman Brothers Aggregate bond index fund; the Common Stock Index Investment (C) Fund, which invests in a Standard & Poor's 500 stock index fund; the Small Capitalization Stock Index Investment (S) Fund, which invests in a Wilshire 4500 stock index fund; and the International Stock Index Investment (I) Fund, which invests in a Morgan Stanley Capital International EAFE (Europe, Australasia, Far East) stock index fund. The Lifecycle (L) Funds are asset allocation portfolios, which are constructed from the five individual funds. The L Funds first became available in August of 2005.

The investment allocations of FERS and CSRS participants, as indicated by their 2005 year-end balances in the respective investment funds, are presented in Figures 11 and 12.

Figure 11

FERS Investment Allocation by Age (as of 12/31/2005)

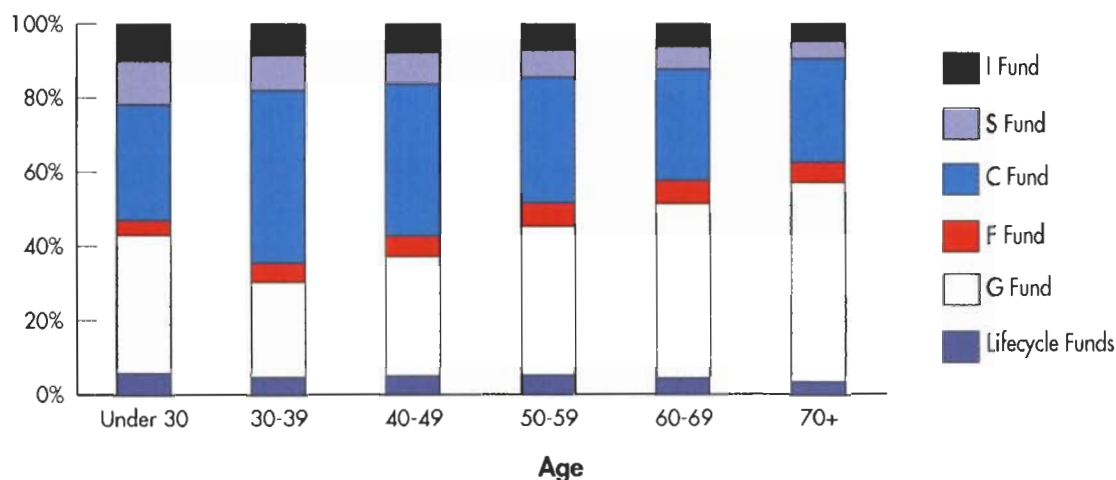
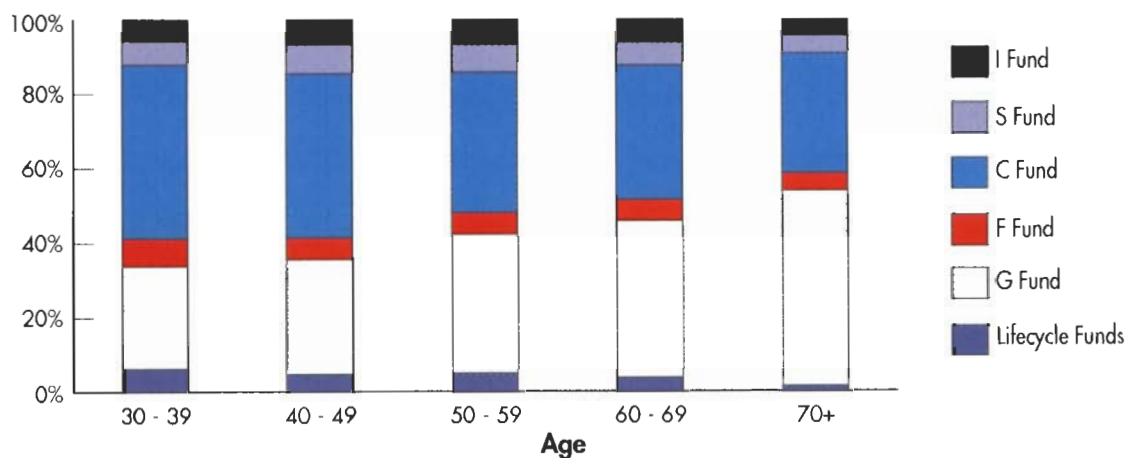


Figure 12

CSRS Investment Allocation by Age (as of 12/31/2005)



Figures 11 and 12 show that, in general, participants are exposing themselves to market risk in inverse proportion to their age. Exposure to the risk-free G Fund is significant within all age groups, but it grows proportionally larger with older age groups. Likewise, exposure to equity market risk shrinks with older age groups. However, one area where

this trend is broken is with FERS participants under 30 years old. These participants hold a larger proportion of the G Fund than their counterparts in their 30s and 40s. This is likely due to the fact that when participants do not give the TSP direction on where to invest their contributions, their money is defaulted to the G Fund. Participants under 30 are also more likely to be new to the TSP and therefore have small accounts. These factors suggest that a lack of participant engagement, paired with the G Fund default policy, are the drivers behind this anomaly.

Figures 13 and 14 look only at participants who had money invested in the L Funds and at how that money was allocated among the L Funds at the end of 2005. The five L Funds are the L 2040 Fund, L 2030 Fund, L 2020 Fund, L 2010 Fund, and L Income Fund. Participants are instructed to select the L Fund with the date that most closely matches the date when they expect to start drawing retirement income.

Figure 13

FERS Life Fund Investment Allocation By Age (as of 12/31/2005)

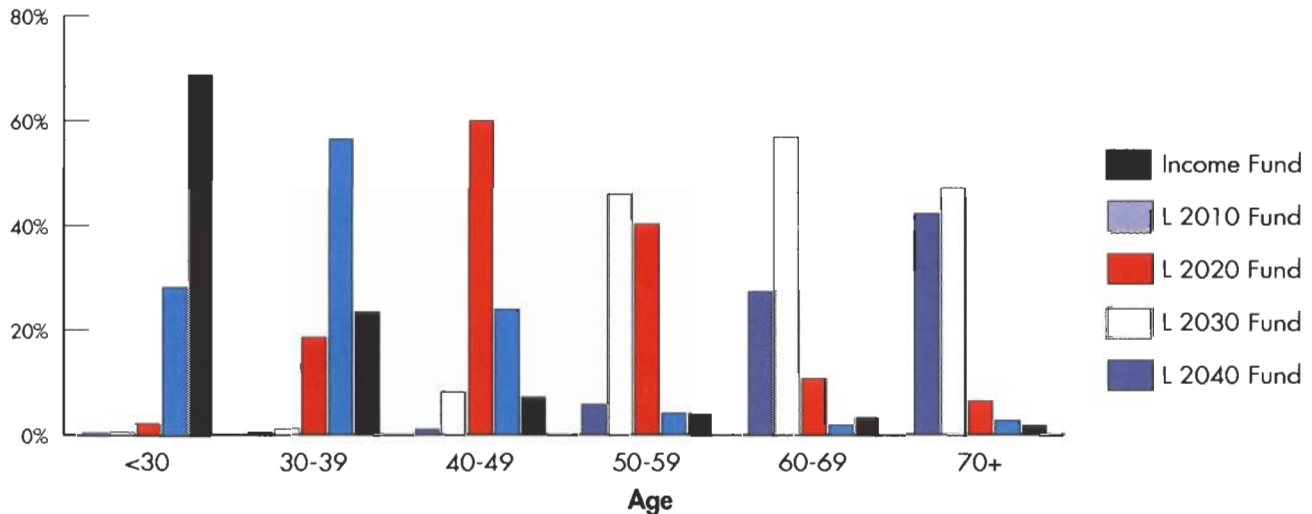
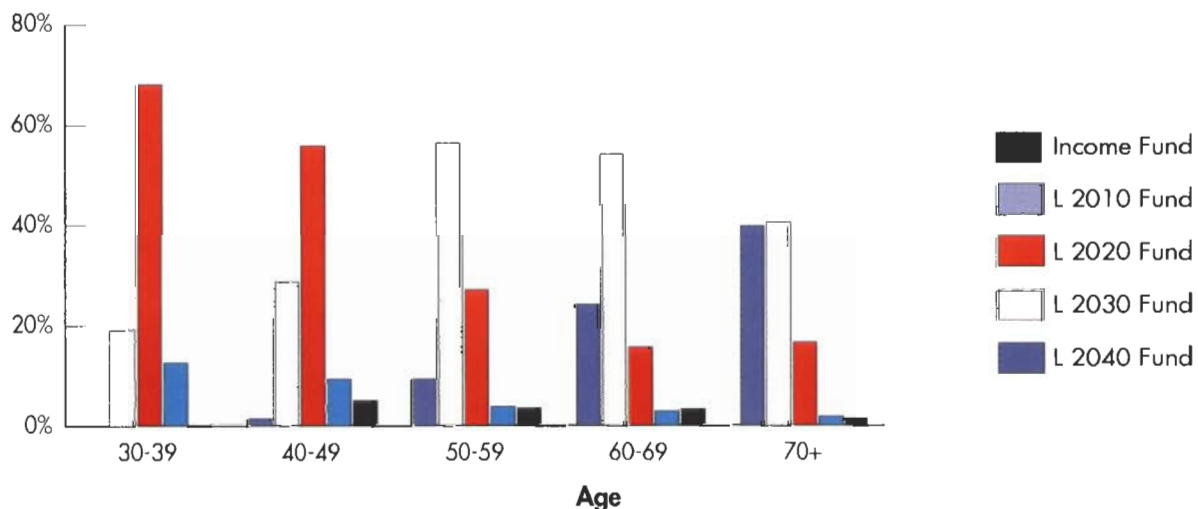


Figure 14

CSRS Life Fund Investment Allocation by Age (as of 12/31/2005)



The L Funds were introduced to TSP participants in August of 2005. Therefore, the participants had only five months within 2005 to direct contributions and transfers to these funds. However, the data show participants are generally using the L Funds as we would expect, with younger employees more heavily allocated to the L 2030 and L 2040 Funds, and older participants more heavily allocated to the L 2010 and L Income Fund. While some anomalies do exist, the data suggests that participants, in general, understand the purpose of the L Funds.

Appendix

Contribution limits by year and retirement system:

Maximum allowed contributions as a percent of pay		
Year	FERS	CSRS
2005	15%	10%
2004	14%	9%
2003	13%	8%
2002	12%	7%

Catch-up contributions for participants age 50 or older were permitted, starting in 2002. Catch-up contribution limits by year:

Maximum catch-up contributions	
Year	Applicable to both FERS and CSRS
2005	\$5,000
2004	\$4,000
2003	\$3,000
2002	\$2,000

A match is provided for those FERS participants who make salary deferral contributions. The matching schedule is as follows:

Participant Contribution	Match Percentage
First 3% of pay	100%
4% to 5% of pay	50%
Above 5% of pay	None

Salary Quintiles

Group		Number of Participants	Quintile 1 Lowest Paid		Quintile 2 Lower Paid		Quintile 3 Mid-Range		Quintile 4 Higher Paid		Quintile 5 Highest Paid	
			Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top
2005 FERS	EE Count	1,620,176	1	324,035	324,036	648,070	648,071	972,106	972,107	1,296,141	1,296,142	1,620,176
	Salary		\$10,000	40,216	40,216	45,269	45,269	53,040	53,040	73,492	73,492	\$200,000
2005 CSRS	EE Count	430,454	1	86,091	86,092	172,182	172,183	258,272	258,273	344,363	344,364	430,454
	Salary		15,000	46,340	46,340	55,595	55,595	73,364	73,364	93,886	93,886	200,000
2004 FERS	EE Count	1,561,426	1	312,285	312,286	624,570	624,571	936,856	936,857	1,249,141	1,249,142	1,561,426
	Salary		10,000	38,531	38,531	43,872	43,872	50,578	50,578	70,237	70,237	200,000
2004 CSRS	EE Count	469,022	1	93,804	93,805	187,609	187,610	281,413	281,414	375,218	375,219	469,022
	Salary		13,487	44,935	44,935	53,236	53,236	70,396	70,396	90,692	90,692	200,000
2003 FERS	EE Count	1,512,790	1	302,558	302,559	605,116	605,117	907,674	907,675	1,210,232	1,210,233	1,512,790
	Salary		10,000	36,385	36,385	42,470	42,470	47,714	47,714	65,930	65,930	200,000
2003 CSRS	EE Count	507,215	1	101,443	101,444	202,886	202,887	304,329	304,330	405,772	405,773	507,215
	Salary		15,000	42,971	42,971	50,723	50,723	67,132	67,132	86,005	86,005	200,000
2002 FERS	EE Count	1,446,077	1	289,215	289,216	578,431	578,432	867,646	867,647	1,156,862	1,156,863	1,446,077
	Salary		10,000	35,223	35,223	40,822	40,822	45,309	45,309	62,790	62,790	200,000
2002 CSRS	EE Count	557,553	1	111,511	111,512	223,021	223,022	334,532	334,533	446,042	446,043	557,553
	Salary		14,560	41,679	41,679	48,652	48,652	63,320	63,320	81,751	81,751	200,000
2001 FERS	EE Count	1,359,721	1	271,944	271,945	543,888	543,889	815,833	815,834	1,087,777	1,087,778	1,359,721
	Salary		10,140	33,430	33,430	39,443	39,443	43,326	43,326	58,848	58,848	200,000
2001 CSRS	EE Count	582,275	1	116,455	116,456	232,910	232,911	349,365	349,366	465,820	465,821	582,275
	Salary		13,771	40,472	40,472	46,214	46,214	60,242	60,242	77,303	77,303	200,000
2000 FERS	EE Count	1,256,979	1	251,396	251,397	502,792	502,793	754,187	754,188	1,005,583	1,005,584	1,256,979
	Salary		10,708	32,032	32,032	38,081	38,081	41,442	41,442	55,626	55,626	200,000
2000 CSRS	EE Count	583,679	1	116,736	116,737	233,472	233,473	350,207	350,208	466,943	466,944	583,679
	Salary		13,168	39,867	39,867	44,213	44,214	56,823	56,823	73,266	73,266	200,000