



Thrift Savings Plan

Participant Behavior and Demographics



Analysis of 2008 – 2012

Introduction

This analysis of Thrift Savings Plan (TSP) participant demographics prepared by the Federal Retirement Thrift Investment Board is based on participant data enhanced with information from the Office of Personnel Management (OPM) database of Executive Branch and Postal Service employees. The analysis of calendar year 2012 data is similar to analysis of data conducted in previous years. The last report was issued in 2007 and covered plan years 2000 through 2005.

Unlike previous reports, the 2012 analysis will focus solely on participants in FERS, the Federal Employee Retirement System, as the participant population in the Civil Service Retirement System is a very small and declining segment of the TSP. Information from this analysis provides insight on demographics, investment behaviors, and how plan design changes may influence participation and contribution behaviors. Finally, this analysis helps us identify trends with the participant usage of benefit options.

Background

The Federal Retirement Thrift Investment Board is an independent Federal agency that was established to administer the Thrift Savings Plan (TSP) under the Federal Employees' Retirement System Act of 1986 (See 5 U.S.C. §§ 8351; 8401 et seq.). Similar to the type of savings and tax benefits that many private corporations offer their employees under I.R.C. §401(k) plans, the TSP provides Federal civilian employees and members of the uniformed services the opportunity to save for additional retirement security. The Agency's mission is to act solely in the interest of its participants and beneficiaries.

TSP participants can invest their employee and employer contributions in the following core funds:

- Government Securities Investment Fund (G Fund)
- Fixed Income Index Investment Fund (F Fund)
- Common Stock Index Investment Fund (C Fund)
- Small Cap Stock Index Investment Fund (S Fund)
- International Stock Index Investment Fund (I Fund)

In addition to these indexed core funds, participants may also invest in five Lifecycle Funds (L Funds). The L Funds are custom target-date funds invested exclusively in the G, F, C, S, and I Funds.

During this report period, the TSP underwent three major plan design changes: the implementation of immediate contributions occurred in June 2009, automatic enrollment began in August 2010, and the acceptance of Roth contributions commenced in May 2012. The first two plan design changes will be discussed later in this analysis. However, the report will not delve into participant behaviors associated with Roth contributions as there was not sufficient experience with Roth during this report period. Later versions of this report will include an examination of participant behaviors related to Roth contributions.

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 provided 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 added data on participants' annual salary, 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 2012, a total of nearly 2.7 million participants were identified by the TSP, 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 are incomplete. Additionally, since OPM does not collect data on employees of the Legislative and Judicial Branches, OPM is not able to match against those records. Finally, approximately 102,000 part-time or intermittent employees are identified in the data; however, they are excluded from the analysis because their hourly work schedule (and therefore their actual compensation) is not known. 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 the context of 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.

In summary, the analysis provided in this report is subject to the following 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; and
- Employees' actual deferral rates are not included in the 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

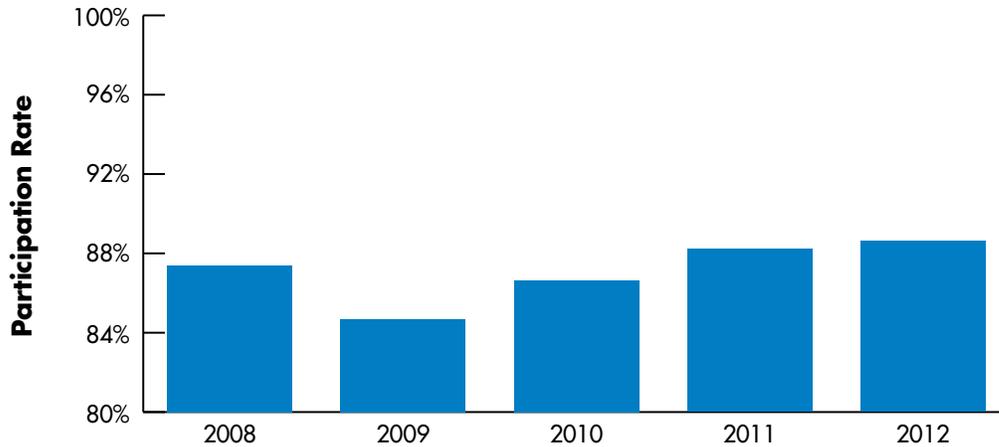
The following sections of this report examine the behaviors of FERS participants across a five-year timeframe ending December 31, 2012, and through the lens of three demographic filters: age, tenure, and salary. The exhibits and narratives display the relationships between these demographic factors and these participant behaviors: participation and automatic enrollment; contribution deferral rates; investment allocation and activity; and loan and hardship withdrawal usage.

Plan Participation

FERS participation was at a five-year high of 88.6% by the end of 2012. Figure 1 highlights three factors that influenced FERS participation rates during the five-year period of this report. In 2009, the participation rate experienced a decline of nearly 3% to 84.7% as rates dipped in conjunction with the economic downturn in 2008.

Figure 1

FERS Participation Rates



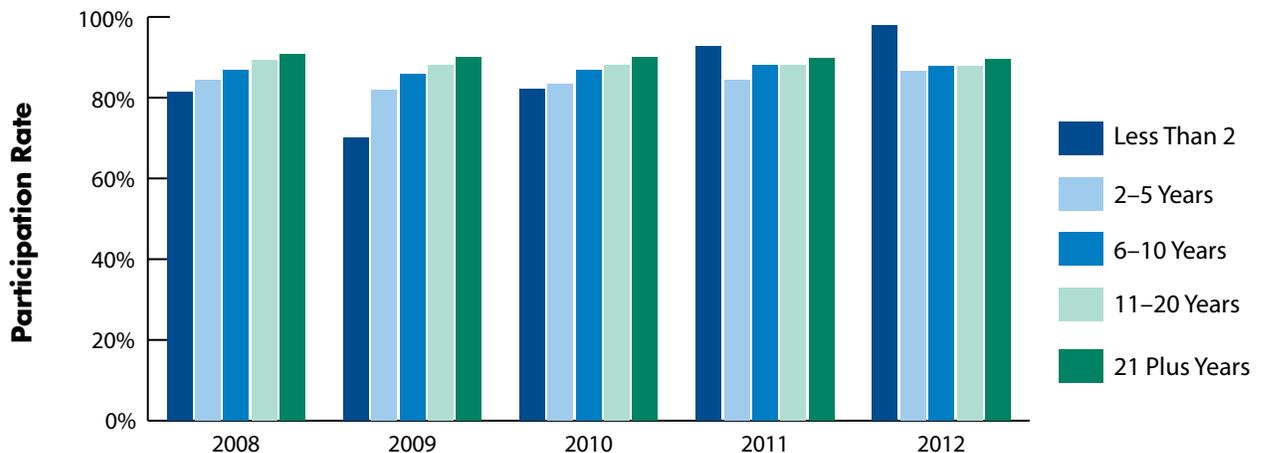
Another factor contributing to the participation decline was the implementation of immediate contributions in June 2009. Prior to 2009, new employees had to wait a period of six to twelve months before becoming eligible to receive agency 1% automatic and matching contributions. In June 2009, employees became eligible to receive these contributions immediately upon hire. As a result, this change increased the denominator (the number of employees who were eligible to participate in the TSP) but did not have a similar impact on the numerator — the number of individuals deferring into the Plan.

However, the decline in participation was mostly reversed with an almost 2% gain in overall participation in 2010 — the same year that automatic enrollment was instituted. Automatic enrollment provides that new employees automatically have 3% of their salary deferred into the G Fund unless there is an active election not to participate in the Plan. Automatic enrollment has meant that not only do participants immediately receive the Agency 1% contribution, but they also start deferrals and receive matching contributions immediately upon hire. Along with strengthening in the market, automatic enrollment has been a contributor to the rebound in participation rates.

When examining participation by tenure bands, the impact of immediate contributions and automatic enrollment become even more evident. The economic downturn translated to a participation dip among all tenure bands in 2009. However, the decline among those with less than two years of tenure was nearly 12% as compared to the 1%–3% drop among the other tenure bands (see Figure 2 below).

Figure 2

FERS Participation Rates By Tenure



Historically, participation has been lowest among the newest employees — those with two or less years of employment — with rates of participation gradually increased as the length of tenure increased. However, with the introduction of automatic enrollment in August 2010, this trend has strongly shifted and now the shortest-tenured employees have the highest participation rates. As shown in Figure 2, participation among the shortest-tenured was the lowest at 81.5% in 2008 while the longest-tenured participated at a rate of 90.8%. By 2012, those with less than two-years of tenure participated at a rate of 97.9% — the highest rate of participation among all tenure bands.

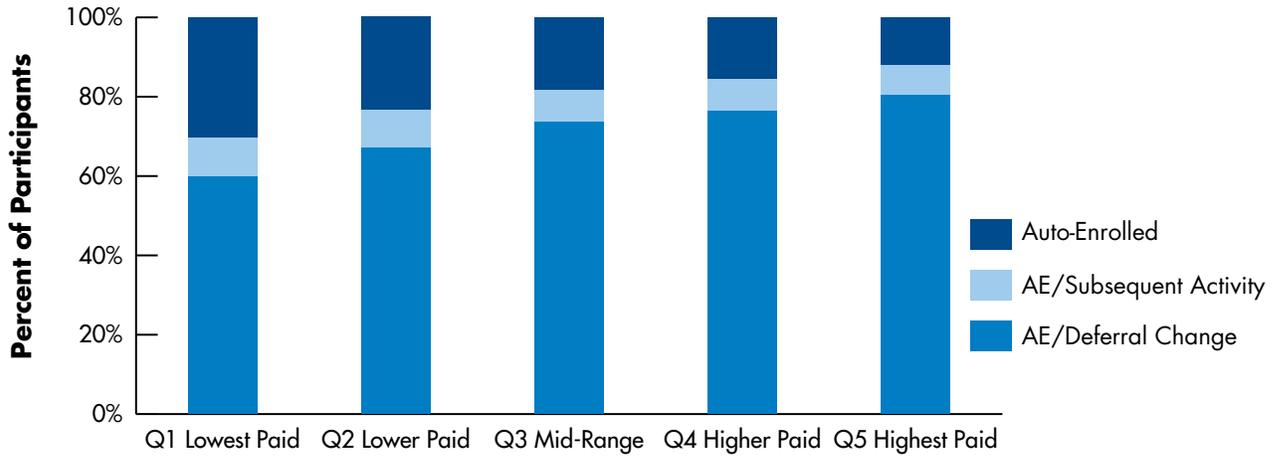
It appears that automatic enrollment may have had a similar but not as strong an impact on the youngest and lowest-paid participants as it did on the shortest-tenured participants. In 2008, the participation rate for the under age 29 cohort was the lowest among all age cohorts at 84.3%, while the age 60–69 cohort had the highest participation at 89.8%. By 2012, the youngest cohort had surpassed all other age cohorts and had the highest rate of participation at 90.6%. Between 2008 and 2010, participation rates among the lowest-paid quintile trailed that of the highest paid by approximately 20%. By 2012, the difference between the two quintiles was reduced to less than 15% (see Table 1 below).

Table 1

Annual FERS Participation Rates by Age, Tenure, and Salary Quintile					
	2008	2009	2010	2011	2012
Age					
< = 29	84.3%	78.0%	83.9%	89.1%	90.6%
30–39	86.4%	83.3%	85.7%	88.2%	89.0%
40–49	87.5%	84.9%	86.1%	87.1%	87.3%
50–59	88.8%	87.1%	88.0%	88.5%	88.5%
60–69	89.8%	88.4%	89.0%	89.1%	89.0%
70+	87.6%	86.6%	87.1%	87.3%	87.4%
Tenure					
Less than 2 years	81.5%	70.0%	82.1%	92.6%	97.9%
2–5 years	84.5%	81.9%	83.3%	84.2%	86.5%
6–10 years	86.9%	85.9%	86.8%	88.0%	87.8%
11–20 years	89.3%	88.1%	88.0%	88.2%	87.8%
21 + years	90.8%	90.0%	89.9%	89.7%	89.6%
Salary Quintile					
Q1 Lowest Paid	77.0%	71.1%	76.2%	80.6%	81.0%
Q2 Lower Paid	84.4%	82.3%	83.4%	83.8%	83.4%
Q3 Mid-Range	88.4%	86.5%	87.3%	88.3%	89.0%
Q4 Higher Paid	92.2%	89.9%	91.3%	92.4%	92.8%
Q5 Highest Paid	95.9%	94.4%	95.1%	95.4%	95.6%

While automatic enrollment has significantly increased participation among the newly hired, it has not, thus far, resulted in a significant increase in the number of participants who remain “unengaged” or otherwise make no investment/deferral election. The vast majority of auto-enrolled participants are remaining in the Plan and of this population, 68% are actively making deferral changes, while another portion are showing signs of life with other activity, such as interfund transfers. However, as shown in Figure 3, those who remain in the auto-enrolled status (no deferral change or investment activity) are mostly in the lowest salary quintiles.

Figure 3 FERS Automatic Enrollment Status by Salary Quintile (as of 12/31/2012)



Contribution Deferral Rates

The FERS contribution deferral rate rose to 8.5% in 2012 after experiencing a downward trend in 2009 and 2010 as shown in Figure 4. While the decline may be attributed to the economic downturn, at least a portion is likely the result of auto-enrolled participants remaining at the default deferral rate of 3%. While the deferral rate has not returned to 2008 levels, it has been strengthening since the 2010 low point.

Figure 4 FERS Deferral Rates

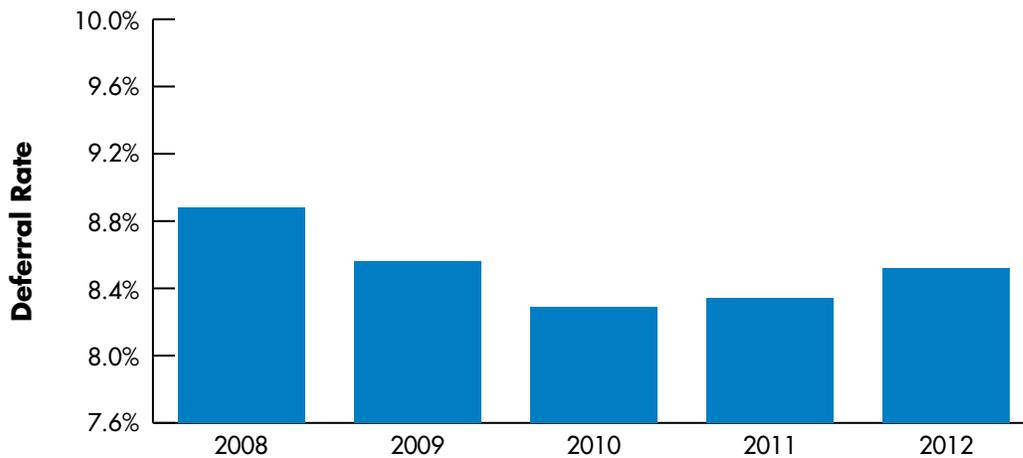
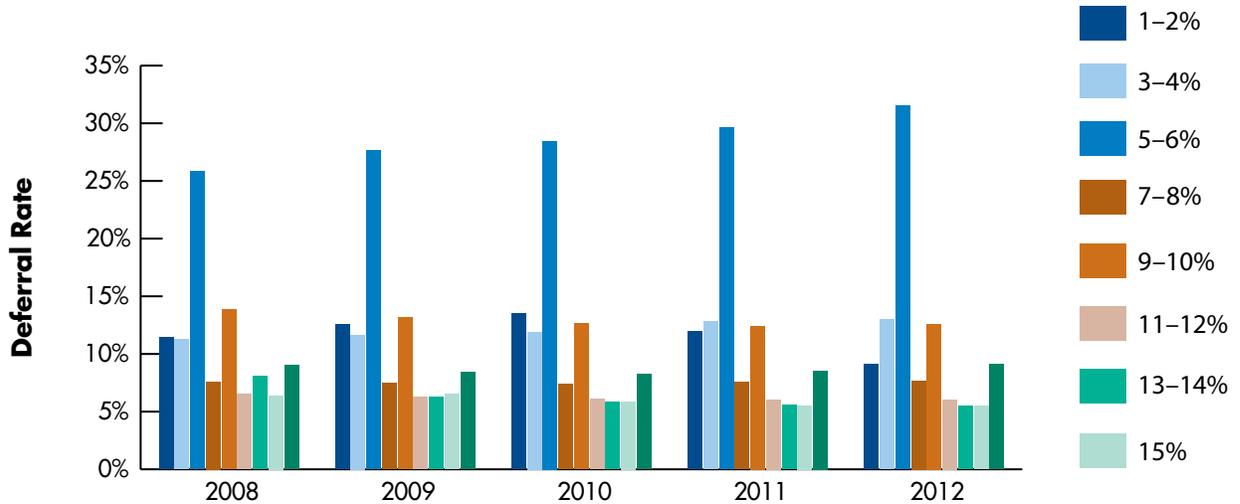


Figure 5 illustrates the power of plan design on participant behavior. FERS participants receive dollar-for-dollar matching contributions on the first 3% of pay and 50 cents on the dollar on the next 2%. The full match is achieved with a 5% contribution. Consequently, deferral rates aggregate in the 5–6% range, with 31.5% of TSP contributors being in this range in 2012. Of significant note, 22% of participants are not receiving the full matching contribution as they are contributing less than 5%.

Figure 5

Distribution of FERS Deferral Rates



As expected, the lowest-paid participants are deferring the least — approximately 4% less than the highest paid. However, Table 2 below also shows that deferral rates for the two lowest-paid quintiles have demonstrated some strengthening in the last two years. These are the only two salary quintiles that are at or above their 2008 deferral rates. Also as expected, the youngest and shortest-tenured participants have the lowest deferral rates. Yet, both of these participant cohorts have rates above their 2008 deferral rates unlike the other age and tenure cohorts. The 2012 deferral rate of 5.2% for participants with less than two years of tenure is nearly one percent above the 2008 rate and marks that for the first time in five years, the average participant in the 2 year of less tenure band is receiving the full matching contribution.

Table 2

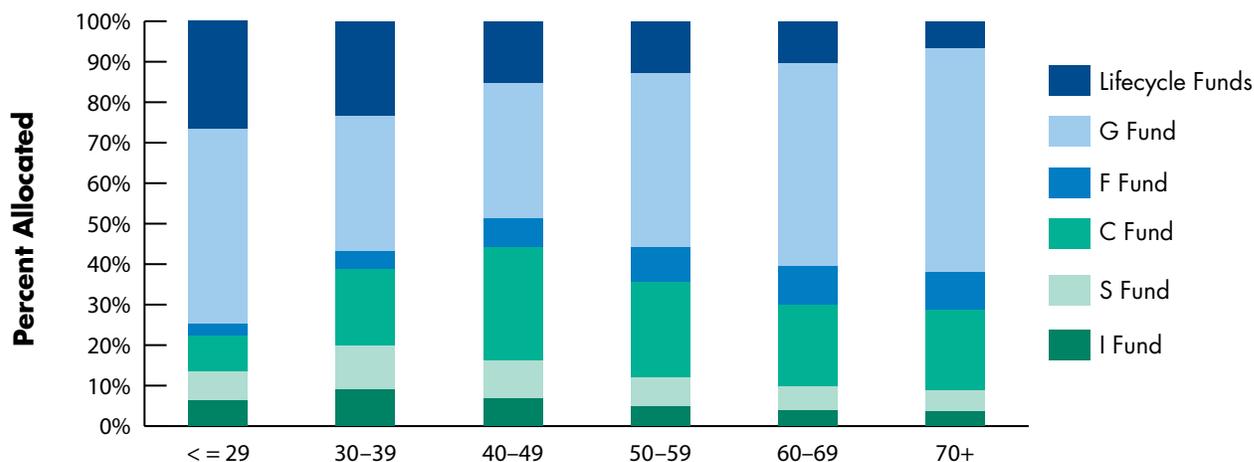
Annual FERS Deferral Rates by Age, Tenure, and Salary Quintile

	2008	2009	2010	2011	2012
Age					
< = 29	5.2%	4.9%	4.7%	5.0%	5.6%
30-39	6.8%	6.4%	6.1%	6.2%	6.4%
40-49	8.1%	7.7%	7.4%	7.4%	7.5%
50-59	9.8%	9.4%	9.1%	9.2%	9.2%
60-69	11.1%	10.8%	10.5%	10.5%	10.5%
70+	12.3%	12.2%	11.9%	11.8%	11.9%
Tenure					
Less than 2 years	4.3%	4.2%	3.9%	4.2%	5.2%
2-5 years	7.2%	6.7%	6.4%	6.6%	6.5%
6-10 years	8.3%	8.0%	7.8%	7.9%	7.8%
11-20 years	9.1%	8.8%	8.6%	8.8%	8.7%
21 + years	9.7%	9.5%	9.4%	9.4%	9.4%
Salary Quintile					
Q1 Lowest Paid	5.7%	5.4%	5.1%	5.2%	5.8%
Q2 Lower Paid	7.7%	7.3%	7.3%	7.5%	7.7%
Q3 Mid-Range	8.3%	7.9%	7.6%	7.5%	7.6%
Q4 Higher Paid	9.3%	8.7%	8.4%	8.7%	8.9%
Q5 Highest Paid	10.2%	9.9%	9.7%	9.7%	9.9%

Investment Allocation and Inactivity

In viewing Figure 6, we note that allocations to the G Fund appropriately increase as the age of the TSP’s population increases. This behavior is consistent with the expectation that participants shift their investment allocation towards the relative safety of income producing assets as they approach retirement age. The noteworthy exception to this observation is in the grouping of participants aged 29 and under. In this age cohort, we note that participants invest a disproportionate percentage (48%) of their accounts in the G Fund.

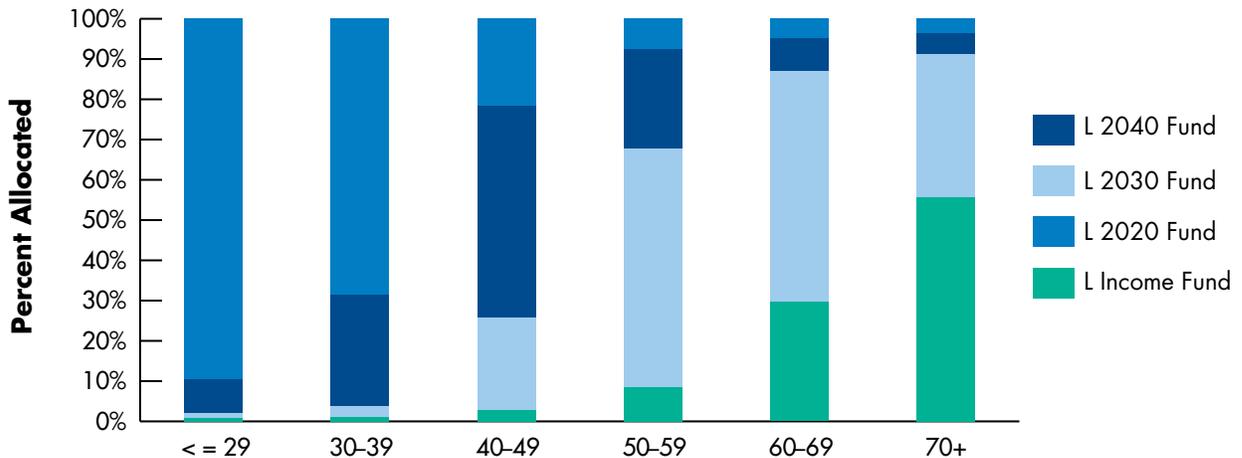
Figure 6 FERS Investment Allocation By Age (as of 12/31/2012)



We note that the shortest-tenured participants, those with less than two years of tenure, have the highest allocation to the G Fund, nearly 61%. Although we previously noted the majority of automatically enrolled participants changed their contribution deferral rate, this high concentration in the G Fund among this tenure cohort suggests that these participants are not shifting their investments away from the default allocation, the G Fund. Further, the lowest-paid participants have approximately 60% allocated to the G fund as compared to the highest paid who allocated 33% to the G Fund.

Of the participants utilizing the Lifecycle (L) Funds, the allocation is largely as we would hope. Those in the age 29 and under cohort were appropriately taking advantage of the L 2040 Fund. Participants who would likely retire between 2025 and 2035 (the 40–49 age group) were in L 2030 and L 2040. Participants aged 50–59 were solidly investing in the L 2020 Fund. The age 60–69 cohort was aggregated in the Income and L 2020 Fund, while those 70 and over were mostly in the L Income Fund (see Figure 7).

Figure 7 FERS Lifecycle Investment Allocation By Age (as of 12/31/12)



We also want to note that L Fund usage is highest among the 2–5 years tenure cohort (24%) and the 6–10 years group (21%). The majority of the participants in these two cohorts began Federal service after the implementation of the L Funds in 2005. Usage of the L Funds drops off somewhat with the less than two years cohort (18%), where the impact of auto-enrollment and inertia are likely being felt.

Table 3 on the next page reports on the percentage of participants who have not engaged in any investment activity, i.e., they did not change how their contributions are invested or make a change to their existing investment allocation. As illustrated in the table, the majority of participants, regardless of age, tenure, or salary, do not actively manage their TSP accounts. While participants initiated a higher level of investment activity during the 2008 economic turbulence, the level of activity for any participant cohort did not exceed 30% during that year.

Table 3

Annual FERS Investment Inactivity by Age, Tenure, and Salary Quintile

	2008	2009	2010	2011	2012
Age					
< = 29	88.3%	91.3%	89.2%	87.2%	89.0%
30–39	84.1%	88.8%	87.8%	86.8%	88.8%
40–49	79.1%	84.5%	84.8%	84.4%	86.8%
50–59	76.0%	81.5%	80.8%	81.1%	83.9%
60–69	74.6%	80.8%	77.7%	80.9%	84.0%
70+	79.7%	83.4%	82.8%	84.3%	86.7%
Tenure					
Less than 2 years	91.2%	92.5%	89.9%	89.8%	91.5%
2–5 years	87.6%	91.2%	89.3%	88.6%	90.6%
6–10 years	82.7%	87.2%	86.0%	85.7%	88.3%
11–20 years	76.1%	82.0%	82.4%	82.1%	85.3%
21 + years	70.7%	77.2%	77.2%	76.7%	79.9%
Salary Quintile					
Q1 Lowest Paid	89.3%	92.9%	91.3%	91.7%	92.8%
Q2 Lower Paid	81.5%	86.6%	86.1%	85.6%	88.5%
Q3 Mid-Range	78.8%	84.1%	84.3%	84.1%	86.8%
Q4 Higher Paid	75.7%	82.2%	81.4%	80.6%	83.3%
Q5 Highest Paid	73.1%	78.2%	77.0%	76.8%	79.0%

Loan and Hardship Withdrawal Usage

The TSP allows two types of loans — general purpose and residential. A general purpose loan has a repayment term of 1 to 5 years while a residential loan has a repayment term of 1 to 15 years. Participants may have only one of each loan type outstanding at the same time. Participants may only borrow their employee contributions and the minimum loan amount is \$1,000.

Loan usage has consistently been highest among the 30–39 and 40–49 age cohorts, with approximately 12% of the participants in each cohort receiving a loan in 2012. All age groups experienced an increase in loan usage in 2012(see Figure 8 on the next page). While most age cohorts had an increase of approximately one percent or less, the cohort under age 29 had its loan usage increase by more than 2%.

Figure 8

FERS Loan Usage Age

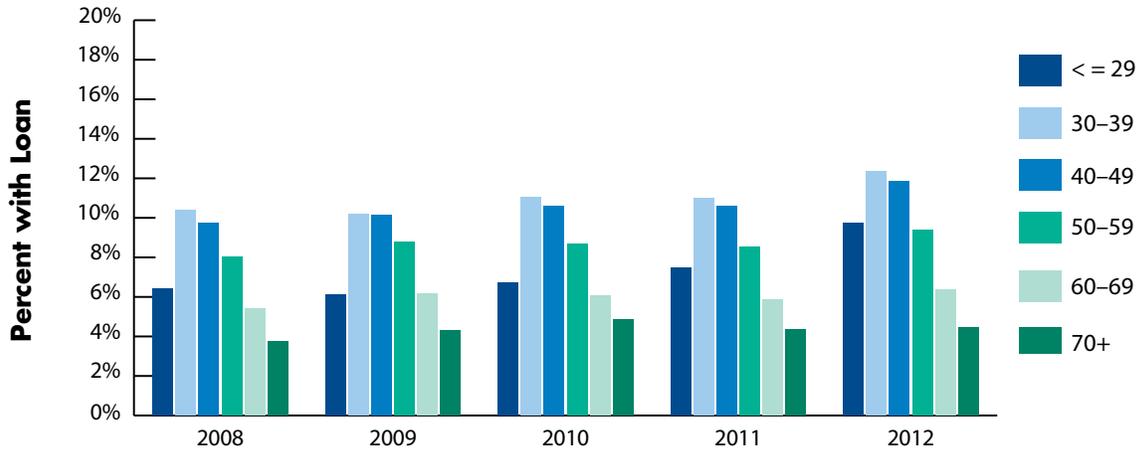
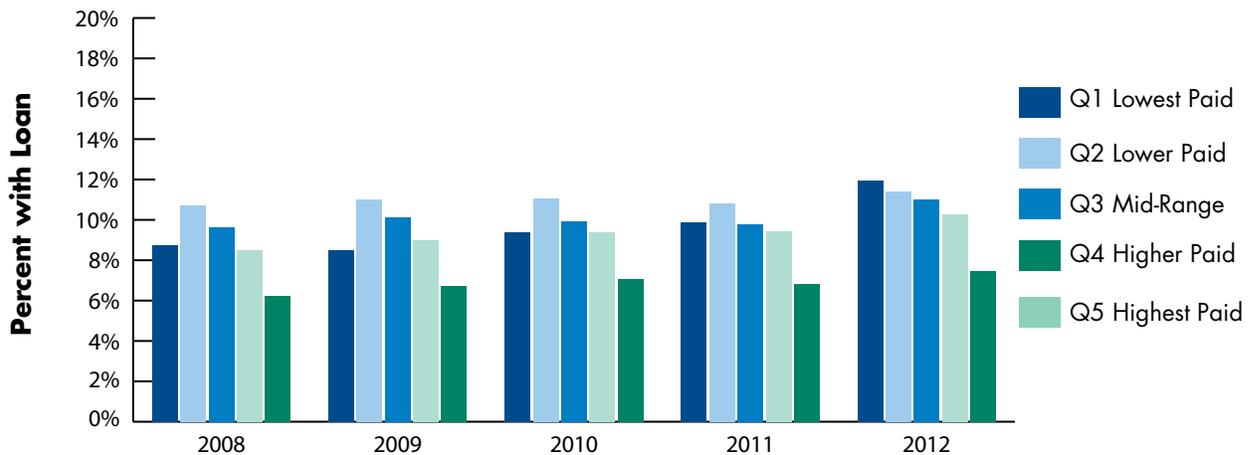


Figure 9 reveals a stair-step pattern of loan usage among the salary quintiles, with loan usage generally declining as salaries increase. However, there is one notable exception as 2nd quintile participants had higher loan usage than the lowest-paid participants from 2008 through 2011. That trend reversed in 2012, when loan usage among the lowest-paid participants increased by more than 2% from the prior year.

Figure 9

FERS Loan Usage by Salary Quintile

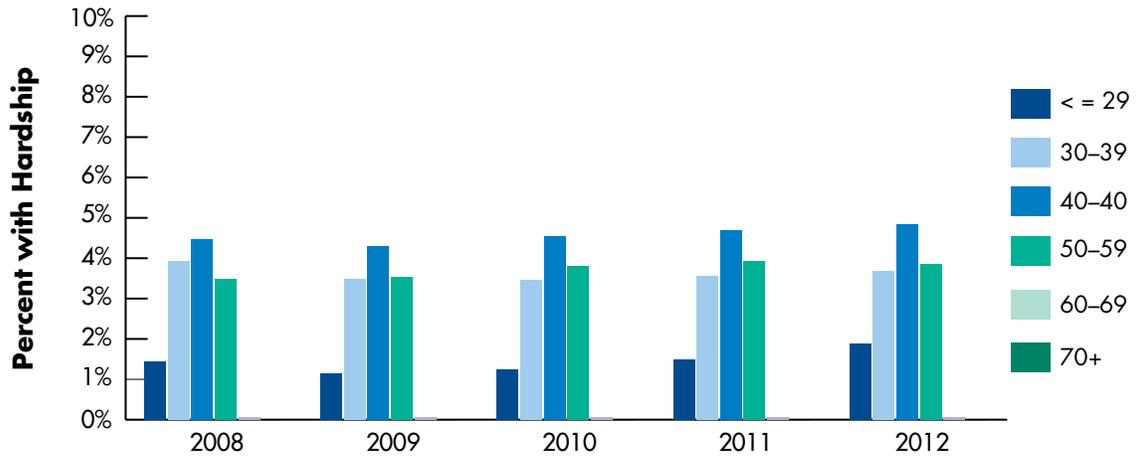


Participants may take a hardship withdrawal if they have a financial need as the result of a recurring negative cash flow, medical expenses, a personal casualty loss, or legal expenses associated with a divorce. Participants may only withdraw their employee contributions, and the minimum withdrawal amount is \$1,000. In addition to a 10% early withdrawal penalty tax if the participant is younger than 59 ½, employee contributions are suspended for six months after a hardship withdrawal. As a result of the employee contribution suspension, FERS participants do not receive any Agency Matching Contributions during this period.

Hardship withdrawal usage is consistently highest among the age 40–49 cohort, with more than 4% of participants in this cohort receiving a hardship withdrawal during each year in this reporting period (see Figure 10 on the next page). The three youngest cohorts experienced a slight increase in withdrawal usage in 2012 over the previous year.

Figure 10

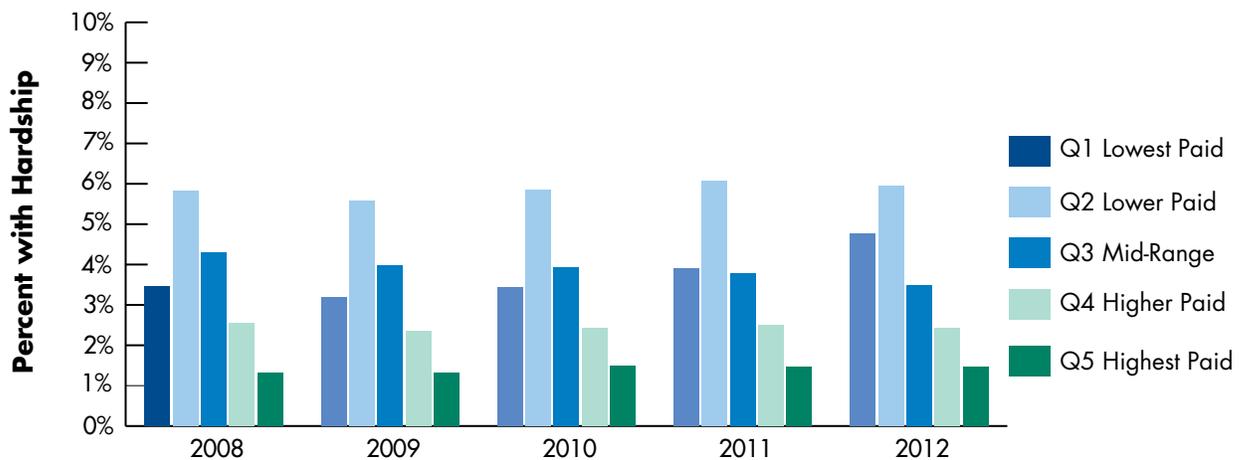
FERS Hardship Withdrawal Usage by Age



As with loan usage, there is a similar stair-step pattern of hardship withdrawal usage among the salary quintiles, with usage generally declining as salary levels increase (see Figure 11). Again, the 1st quintile presents an exception to this pattern, as hardship withdrawals were lower than those of the next lowest quintile in each of the years examined. However, hardship withdrawal usage did increase noticeably (almost 1%) within the 1st quintile this salary quintile in 2012.

Figure 11

FERS Hardship Withdrawal Usage by Salary Quintile



Summary

The analysis reveals an improvement in both the FERS participation and deferral rates. Participation was at a five-year high of 88.6% by the end of 2012, while the contribution deferral rate rose to 8.5%. However, the most notable finding is the impact of automatic enrollment on participant behavior.

Automatic enrollment helped produce a 16% increase in participation among the shortest-tenured participants. Participants with less than two-years of tenure now participate at a rate of 97.9% — the highest rate of participation among all tenure bands. The vast majority of auto-enrolled participants have “engaged” with 68% making deferral changes.

The average overall contribution deferral rate is trending back towards pre-economic downturn levels. Additionally, the deferral rate for participants with less than two years of tenure increased to 5.2%, nearly 1% above the 2008 level. For the first time in five years, the average participant in this tenure cohort is receiving the full matching contribution. While deferral rates continue to aggregate in the 5–6% range, with 31.5% of TSP contributors falling in this range, more than 78% of FERS participants are estimated to be receiving the full match.

Participants aged 29 and under have a disproportionate percentage (48%) of their account balances in the G Fund. However, this group also has the highest utilization of the L Funds. We further note that L Fund usage is highest among the 2–5 years tenure cohort (24%) and the 6–10 years group (21%). The majority of these cohorts were hired after the implementation of the L Funds. Overall, participants are investing in the L Fund in a manner appropriate for their age cohort.

Loan usage increased in 2012 with the youngest age cohort having an increase of 2% over the prior year. However, the highest loan usage is among the 30–39 and 40–49 age cohorts at approximately 12% each. The age 40–49 cohort also had the highest hardship withdrawal usage, with more than 4% of participants in this cohort receiving a hardship withdrawal in each year of this reporting period.

Appendix

FERS Salary Quintiles

Year	EE Count Salary	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
2012	EE Count	2,038,162	1	407,633	407,634	815,266	815,267	1,222,898	1,222,899	1,630,530	1,630,531	2,038,162
	Salary		\$10,000	\$50,839	\$50,839	\$56,746	\$56,746	\$73,396	\$73,396	\$97,333	\$97,333	\$230,700
2011	EE Count	2,150,461	1	430,093	430,094	860,185	860,186	1,290,277	1,290,278	1,720,369	1,720,370	2,150,461
	Salary		\$10,000	\$49,075	\$49,075	\$56,508	\$56,508	\$70,062	\$70,062	\$94,551	\$94,551	\$230,700
2010	EE Count	2,110,401	1	422,081	422,082	844,161	844,162	1,266,239	1,266,240	1,688,321	1,688,322	2,110,401
	Salary		\$10,000	\$11,538	\$47,900	\$47,900	\$55,530	\$55,530	\$67,762	\$67,762	\$92,431	\$230,700
2009	EE Count	2,026,503	1	405,301	405,302	810,602	810,603	1,215,903	1,215,904	1,621,203	1,621,204	2,026,503
	Salary		\$10,000	\$46,625	\$46,625	\$54,122	\$54,122	\$63,930	\$63,930	\$88,699	\$88,699	\$227,300
2008	EE Count	1,898,689	1	379,738	379,739	759,476	759,478	1,139,214	1,139,215	1,518,952	1,518,953	1,898,689
	Salary		\$10,000	\$45,171	\$45,171	\$52,526	\$52,526	\$60,978	\$60,978	\$84,578	\$84,578	\$221,100