OFFICE OF
INSPECTOR
GENERAL
UNITED STATES POSTAL SERVICE

# Using U.S. Postal Service-Specific Assumptions for Calculating the Civil Service Retirement System Liability

# Management Advisory Report

September 27, 2013

Report Number FT-MA-13-023

OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

# HIGHLIGHTS

September 27, 2013

**Using U.S. Postal Service-Specific Assumptions for Calculating the Civil Service Retirement System Liability**

Report Number FT-MA-13-023

***BACKGROUND:***

The Civil Service Retirement System is a pension program offered to employees of the U.S. Postal Service and federal agencies. The Postal Service and its employees contribute to the pension program for future benefits. The U.S. Office of Personnel Management administers the Civil Service Retirement System.

As of September 30, 2012, the Office of Personnel Management projected an $18.7 billion Civil Service Retirement System unfunded liability. The U.S. Postal Service Office of Inspector General previously analyzed Postal Service funding levels and compared them to federal and state governments, the military, and corporations. Those comparisons supported that the Postal Service funded its retirement liabilities at a substantially higher level than the other organizations.

Our objective was to review the assumptions used for the Postal Service's Civil Service Retirement System liability calculation and determine what effect those assumptions may have on the Civil Service Retirement System liability calculation estimate.

***WHAT THE OIG FOUND:***

Postal Service employees have distinguishing employee characteristics (salary growth and life expectancy) that the Office of Personnel Management does not take into consideration when applying actuarial assumptions. These characteristics, as well as other non-employee factors, impact the Civil Service Retirement System liability calculation. Currently, the Office of Personnel Management uses the same actuarial assumptions for Postal Service and federal employees without regard to the characteristic differences between them.

If the Civil Service Retirement System liability was calculated using Postal Service-specific assumptions, the liability could be reduced by $1.3 billion, from $209.9 billion to $208.6 billion, and the Postal Service could achieve a more accurate liability estimate that more closely aligns with future benefits.

***WHAT THE OIG RECOMMENDED:***

We recommended management coordinate with the Office of Personnel Management to modify the future Civil Service Retirement System liability calculation to use actuarial assumptions specific to the Postal Service.

*Link to review the entire report*

September 27, 2013

**MEMORANDUM FOR:** JOSEPH A. CORBETT
CHIEF FINANCIAL OFFICER AND
EXECUTIVE VICE PRESIDENT

**FROM:** John E. Cihota
Deputy Assistant Inspector General
for Financial and Systems Accountability

**SUBJECT:** Management Advisory Report – Using U.S. Postal Service-Specific Assumptions for Calculating the Civil Service Retirement System Liability (Report Number FT-MA-13-023)

This report presents the results of our review of Using U.S. Postal Service-Specific Assumptions for Calculating the Civil Service Retirement System Liability (Project Number 13BG015FT001).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Denice M. Millett, director, Finance, or me at 703-248-2100.

Attachment

cc: Corporate Audit and Response Management

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## Introduction

This report presents the results of our self-initiated review of Using U.S. Postal Service-Specific Assumptions for Calculating the Civil Service Retirement System (CSRS) Liability (Project Number 13BG015FT001). Our objective was to review the assumptions used for the Postal Service's CSRS liability calculation and determine what effect those assumptions may have on the CSRS liability calculation estimate. See Appendix A for additional information about this review.

The CSRS is a pension program offered to employees of the Postal Service and federal agencies. The Postal Service and its employees contribute to the pension program for future benefits. The U.S. Office of Personnel Management (OPM) administers the CSRS and reported, as of September 30, 2012, the Postal Service had an unfunded liability of $18.7 billion for CSRS. The U.S. Postal Service Office of Inspector General (OIG) previously analyzed funding levels and provided comparisons to the federal government, military, state governments, and corporations. Those comparisons supported that the Postal Service had funded its pension liabilities at 105 percent.

Previous recommendations focused on legislation to refund surpluses and address future surpluses.[1] This report focuses on the calculations behind the CSRS liability. Specifically, we wanted to identify whether there were characteristics of Postal Service employees that distinguish them from other federal employees to the extent that those characteristics impact the CSRS liability. To assist in answering our objective, the OIG contracted with Hay Group, an independent actuarial firm with expertise in Postal Service pension benefits.

## Conclusion

Demographic differences between Postal Service and other federal employees impacted the calculation of the CSRS liability estimate. Specifically, Postal Service employees have distinguishing employee characteristics (salary growth and life expectancy) that the OPM does not take into consideration when applying actuarial assumptions. When calculating the CSRS liability using actuarial assumptions specific to the Postal Service, the liability is reduced by $1.3 billion. Using assumptions that more closely align with Postal Service employees causes the CSRS liability to decrease from $209.9 billion to $208.6 billion.

We believe the Postal Service's CSRS liability should be calculated using actuarial assumptions specific to Postal Service employees. This approach provides a more accurate estimate of retirement liabilities that are more likely to match future retirement benefits actually paid.

[1] See Prior Audit Coverage section for additional information.

## Postal Service-Specific Assumptions

Characteristic and demographic differences between Postal Service employees and other federal employees impact the projected CSRS liability. Specifically:

- Postal Service employees have received smaller pay increases than assumed, general increases have been lower than predicted, and Postal Service employees have fewer steps in their pay scale than typical federal employees. Consequently, Postal Service employees reach the top step more quickly and salary growth ceases, effectively reducing the CSRS liability.

- The OPM projected improved mortality rates for federal employees, which increased the CSRS liability. However, when considering only Postal Service employees, the mortality improvements for retired men ages 55 to 64 were significantly lower at 0.3 percent compared to the OPM's 1.7 percent projection. Overall, the mortality improvement for retired men was 1 percent for Postal Service employees compared to the OPM’s 2 percent projection. For retired females, the mortality improvement was slightly higher at 1.5 percent for Postal Service employees compared to the OPM’s 1.2 percent projection. The combined effect of these differences reduces the CSRS liability.

Investment returns also impact the CSRS liability but are not directly related to employee characteristics or demographics.

- Actual investment returns on CSRS assets have been lower than expected and have increased the CSRS liability. In July 2012, the assumed investment rate for CSRS assets was reduced from 5.75 percent to 5.25 percent. Interest rates have a dynamic effect on pension assets and projected liabilities. As interest rates rise, liabilities decrease. Conversely, when interest rates lower, liabilities increase. Recent slight rises in interest rates have bolstered corporate pension assets and reduced liabilities. This trend may also reduce the Postal Service’s CSRS liability in the future.

To review the CSRS liability, we analyzed salary growth, demographic experiences,[2] life expectancies, and investment returns using census data on Postal Service employees and retirees provided by the OPM.[3] We concluded that some characteristics and demographics of Postal Service employees differ from those of federal employees, and these differences impact the CSRS liability. When calculating the CSRS liability, the OPM applies actuarial assumptions to Postal Service employees and federal employees equally, without regard to the characteristic differences.

We recalculated the Postal Service’s CSRS liability and found that the combined effect of the characteristic and demographic differences (and other factors) reduce the Postal

[2] Demographic experiences include termination, retirement (including early retirement), disability, and death. We concluded the demographic experiences had a neutral effect on the CSRS liability.
[3] Most recent census data is from September 30, 2011.

Service's CSRS liability by $1.3 billion. Using OPM's assumptions, the CSRS unfunded liability was $18.7 billion; while using the Postal Service-specific assumptions, the CSRS unfunded liability would be $17.4 billion. See Attachment A for further information on the characteristic differences and adjusted calculations for CSRS. See Appendix B for monetary impact calculations.

The Postal Service's employee population is large enough to support the development of Postal Service-specific actuarial assumptions, which should be used to calculate the Postal Service's CSRS liability. Adjusting actuarial assumptions for Postal Service employees will provide a more accurate estimate of the Postal Service's CSRS liability. Additionally, this approach would better align the estimated CSRS liability with future benefits paid to Postal Service CSRS retirees.

## Current Legislation

Congress has introduced several bills that address the Postal Service's retirement liabilities:

- *Postal Reform Act of 2013* (S. 1486), introduced on August 1, 2013, includes a provision to calculate the CSRS liability by using demographic factors specific to Postal Service employees and economic assumptions regarding wage and salary growth that reflect the specific past, and likely future, pay for Postal Service employees. The act also provides an opportunity for the Postal Service to request funding surpluses up to $6 billion, which could be used to pay financial obligations.

- *Postal Reform Act of 2013* (H.R. 2748), introduced on July 19, 2013,[4] provides for the use of demographic and economic assumptions specific to Postal Service employees to calculate the CSRS liability.

- *Postal Service Protection Act of 2013* (S.316), introduced on February 13, 2013, would return prior CSRS overpayments to the Postal Service.

- *Postal Service Protection Act of 2013* (H.R. 630), introduced on February 13, 2013, would require the recalculation of the CSRS liability and restore retirement annuity obligations.

We will continue to monitor the legislative activity as part of our ongoing analysis.

[4] On July 24, 2013, the House Oversight and Government Reform Committee sent the bill to the House as a whole for consideration.

## Recommendation

We recommend the executive vice president, chief financial officer:

1. Coordinate with the Office of Personnel Management to modify the future Civil Service Retirement System liability calculation to use actuarial assumptions specific to the Postal Service.

## Management's Comments

Management agreed with the finding, recommendation, and monetary impact. Management stated they are ready to assist the OPM; however, management understands that OPM's position, under current law, is that OPM does not have the authority to change the calculation of the Postal Service's liability. Management will continue to support pending legislation that would direct the OPM to use Postal Service-specific actuarial assumptions in calculating the Postal Service's liability. See Appendix C for management's comments in their entirety.

## Evaluation of Management's Comments

The OIG considers management's comments responsive to the recommendation and management's corrective actions should resolve the issue identified in the report. The OIG considers the recommendation significant; however, since management's corrective actions are ongoing and subject to legislative action, the OIG will close the recommendation upon issuance of the report.

# Appendix A: Additional Information

## Background

The CSRS is a pension program offered to employees of the Postal Service and federal agencies. Career employees hired before January 1, 1984, generally participate in the CSRS.[5] The OPM administers the Civil Service Retirement and Disability Fund, available to pay CSRS benefits to retirees.

The OPM calculates the CSRS contribution rate based on a percentage of an employee's salary. Postal Service employees contribute at the same rate as other federal employees. For most employees, the CSRS contribution rate is 7 percent. By law,[6] the Postal Service is not currently making contributions to the CSRS.[7]

To account for future CSRS benefits, a liability is estimated and disclosed in the financial statements. The OPM calculates the CSRS liability using actuarial assumptions for salary growth, demographic experiences,[8] life expectancies, and investment returns. Changes in the economic climate or demographics can alter the liability from year to year. Understandably, actuarial assumptions will never equal the actual experiences, resulting in actuarial gains or losses. In recent years, lower interest rates and longer life spans have increased the liability.

The OPM provides an annual estimate of the CSRS assets and liability for the federal government, including the Postal Service. The assets include actual contributions, plus interest earned on those contributions, less benefits paid to retirees. The liability includes projections of future benefits paid to retirees, less expected future contributions. A surplus exists when the assets exceed the estimated liability. Conversely, an unfunded liability exists when the estimated liability exceed the assets.

The OIG has previously offered a variety of recommendations to assist the Postal Service in controlling expenses and decreasing future losses caused by funding the CSRS liability. The Postal Service continues to work with Congress to develop legislation to address the comprehensive issues identified in our prior reports.

[5] Some employees hired prior to 1984 had the option to switch from the CSRS to the Federal Employees Retirement System.
[6] *Postal Accountability and Enhancement Act of 2006*, Public Law 109-435.
[7] Beginning in FY 2017, any unfunded liability will be amortized and paid to the Civil Service Retirement and Disability Fund.
[8] Demographic experiences included termination, retirement (including early retirement), disability, and death.

## Objective, Scope, and Methodology

Our objective was to review the assumptions used for the Postal Service's CSRS liability calculations and determine what effect those assumptions may have on the CSRS liability calculations estimate. To achieve our objective we:

- Reviewed prior OIG and Government Accountability Office reports.
- Contracted with Hay Group, an independent actuarial firm with expertise in the Postal Service's CSRS liability.
- Considered proposed legislation and current news articles.

We conducted this review from January through September 2013 in accordance with the Council of the Inspectors General on Integrity and Efficiency, *Quality Standards for Inspection and Evaluation*. We discussed our observations and conclusions with management on September 11, 2013, and included their comments where appropriate. We did not rely on computer-generated data to support the opinions and conclusions presented in this report.

## Prior Audit Coverage

Since 2010, we have issued a series of reports discussing the CSRS liability and how the Postal Service pays more than its fair share to the federal government.

- *Pension and Retiree Health Care Funding Levels* (Report Number FT-MA-12-002, dated June 18, 2012).
- *Leveraging Assets to Address Financial Obligations* (Report Number FF-MA-11-118, dated July 12, 2011).
- *Substantial Savings Available by Prefunding Pensions and Retirees' Health Care at Benchmarked Levels* (Report Number FT-MA-11-001, dated November 23, 2010).
- *Summary of Substantial Overfunding in Postal Service Pension and Retiree Health Care Funds* (Report Number FT-MA-10-002, dated September 30, 2010).

## Appendix B: Monetary Impact

| Recommendation | Impact Category | Amount (in billions) |
|---|---|---|
| 1 | Funds Put to Better Use[9] | $1,300,000,000 |

As of September 30, 2012, the OPM projected an $18.7 billion unfunded liability for the Postal Service's CSRS program. Using Postal Service-specific actuarial assumptions, the unfunded liability would be $17.4 billion, resulting in a $1.3 billion decrease in the unfunded liability.

[9] Funds that could be used more efficiently by implementing recommended actions.

# Appendix C: Management's Comments

JOSEPH CORBETT
CHIEF FINANCIAL OFFICER
EXECUTIVE VICE PRESIDENT

UNITED STATES POSTAL SERVICE

September 26, 2013

JUDITH LEONHARDT
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Draft Management Advisory Report–Using U.S. Postal Service-Specific Assumptions for Calculating the Civil Service Retirement System Liability (Project 13BG015FT001)

Thank you for the opportunity to review and comment on the subject draft management advisory report. Management appreciates the efforts the Office of Inspector General (OIG) has taken with respect to assumptions used to calculate this portion of our financial liability.

Management agrees with the findings, recommendations, and monetary impact identified in this draft.

Recommendation:
We recommend the executive vice president, chief financial officer:

1. Coordinate with the Office of Personnel Management to modify the future Civil Service Retirement liability calculation to use actuarial assumptions specific to the Postal Service.

Management agrees that the Postal Service's liability to the Civil Service Retirement System should be calculated using demographic and pay increase assumptions specific to the Postal Service. We stand ready to assist the Office of Personnel Management (OPM) in developing this calculation by providing any necessary information. However, it is our understanding that OPM's position is that it does not have the authority under current law to change the calculation of the Postal Service's liability. Therefore, management continues to support pending legislation that would direct OPM to use Postal specific assumptions in calculating the Postal Service's liability.

Management does not believe this report contains any proprietary or business information and may be disclosed pursuant to the Freedom of Information Act.

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## Attachment A: Hay Group Report – Civil Service Retirement System – May 9, 2013

May 9, 2013

# U.S. Postal Service

Evaluation of the USPS Postal Service Fund for Employees Enrolled in the Civil Service Retirement System

HayGroup®

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HayGroup

## Contents

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## EXECUTIVE SUMMARY

USPS Office of Inspector General (OIG) retained Hay Group to perform an analysis of the USPS portion of the Civil Service Retirement System (CSRS).

This report provides the measurement of the USPS portion of CSRS using USPS-specific assumptions and is comparable to the Office of Personnel Management's (OPM's) most recent estimates. The economic assumptions reflect the July 2012 changes by the Board of Actuaries, and the underlying census data from OPM as of September 30, 2011. We have incorporated November 2012 forecasts of USPS-salary increases and revised the annuitant mortality rates to reflect OPM's recent changes to its mortality assumptions.

Table E-1 compares our measurement of the CSRS deficit under USPS-specific assumptions to OPM's results. As of September 30, 2011, the deficit was measured to be $16.5 billion under USPS-specific assumptions rather than the $17.8 billion measured by OPM.

We also projected the results to September 30, 2012 to be comparable to OPM's projection. OPM's projected deficit of $18.7 billion for CSRS decreases to $17.4 billion when remeasured using USPS-specific assumptions.

**Table E-1**
**CSRS Surplus under Different Assumptions**
**Amounts in $Billions**

| | OPM Assumptions | USPS-Specific Assumptions |
|---|---|---|
| Deficit Estimate as of September 30, 2011 | $17.8 | $16.5 |
| Deficit Projection as of September 30, 2012 | $18.7 | $17.4 |

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## I. MEASUREMENT OF LIABILITY

This section will look at the following information:

1. Demographic assumptions
2. Economic assumptions
3. Most recent census data (September 30, 2011)
4. Salary increase forecasts from the USPS forecasting unit
5. Annuitant mortality rates

It should be noted that most of our experience analyses that we performed included combined CSRS and FERS Postal Service data. This was done in order to have a larger, more credible, data set. As an example, FERS is newer and has a relatively small group of retirees. By combining CSRS retirees with FERS retirees, we have a much larger data set to analyze the mortality assumption. By using the combined data, we can develop more credible baseline mortality and the mortality improvement trends.

Demographic assumptions

Experience gains (losses) can occur when demographic experience is different than expected. Hay Group conducted an actuarial investigation on the USPS population in 2010 to see how it differed from the total CSRS and FERS populations. Individual data on all members employed by USPS were gathered for nine snapshot annual dates, covering eight years of elapsed time. Also, an additional file was provided for each year that documented the Nature of Action for any active employee who separated between the snapshot dates.

A history for each member in the study was created for each active employee's status on each of the nine snapshot dates. If the member was not yet hired, the status was blank. If the member was actively employed or had separated, then a code was used to indicate the status of that member. In the case of members who terminated during the study and then were rehired, the record indicated active status in the earlier years then a termination status up until the member was rehired. The first snapshot date following rehire then indicated that the member was active.

By stringing together the statuses for each employee, we were able to run the data through Access programs to summarize all actual and expected occurrences in the data plus counts of all members exposed to the valuation decrements. These actual counts, expected counts, and exposure were then compiled and analyzed to compare to the valuation assumptions, as well as develop USPS specific assumptions.

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In general, the USPS specific rates were developed to be consistent with OPM rates. For example, if the OPM rates were age and service based, then the USPS rates were developed to mirror the age and service based rate format.

The actuarial investigation reviewed the following elements:

1. Distribution of new entrants by age, sex, and service;
2. Withdrawal rates;
3. Normal retirement rates;
4. Involuntary retirement rates;
5. Disability retirement rates;
6. Early retirement rates;
7. Employee death rates;

Development of demographic actuarial assumptions begins with the analysis of actual experience to expected experience, and the calculation of the actual-to-expected ratio. The actual-to-expected ratio gives a measure of how closely the assumption predicted what actually happened. If the actual-to-expected ratio is greater than 100 percent, then the actuarial assumption under-predicted; if the actual-to-expected ratio is less than 100 percent, then the assumption over-predicted the number of occurrences.

In general, we found the following:

1. The USPS withdrawal (voluntary turnover) rate was lower than what OPM assumed.
2. The retirement rates are in line with the overall CSRS assumptions, normal retirement being higher and early retirement being lower.
3. The in-service mortality rate is materially higher than the assumption, however OPM includes margin for expected mortality improvement in its valuation assumption. Moreover, this assumption has the smallest impact on liabilities for active employees of those shown.
4. The rate of disability retirement was higher than assumed.

Even though each of these was the general direction, it does not mean that all rates were in that same direction for the entire group. For example, although most of the Postal Service specific withdrawal rates were lower, at some age and service combinations the actual rates were higher than OPM rates. Even though we may expect the liability to move in one direction based on a larger population, we may see a different impact when looking at a subset of the total population.

Economic assumptions

OPM's most recent valuation uses the new economic assumptions the Board of Actuaries adopted in July 2012. Table I-1 shows the prior and current economic assumptions. The reduction of the interest rate had the effect of increasing the liability and reducing the surplus, although this effect was partially offset by the decrease in salary growth.

**Table I-1**
**Economic Assumptions**

| Date Approved | Inflation | CSRS COLA | Interest Rate | Salary Growth |
|---|---|---|---|---|
| 6/11/2010 | 3.00% | 3.00% | 5.75% | 3.75% |
| 7/13/2012 | 3.00% | 3.00% | 5.25% | 3.25% |
| Change | None | None | (0.50%) | (0.50%) |

OPM assumed a general salary increase of 0.0 percent for FY2012 in place of the long term salary increase assumption of 3.25 percent. The lower than expected increase in salary has a smaller impact on CSRS because the majority of the liability for this group is from retirees rather than active employees.

In addition, for FY2012 the actual COLA of 3.6 percent for CSRS was applied in place of the long term COLA assumption.

Current census data

OPM provided the September 30, 2011 census information on USPS employees enrolled in CSRS and postal annuitants. OPM uses the liabilities as of September 30, 2011 from this data and rolls this liability forward to September 30, 2012 using standard actuarial techniques and also reflects known changes such as the actual January 1, 2012 COLA and general wage increase. More information appears in Section III.

Salary increase forecasts

Table I-2 shows the USPS forecast team's projected pay increases for all USPS employees. The following pay increases reflect the November 2012 forecast.

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| Table I-2<br>USPS Forecast Team's Projected Pay Increases for All USPS Employees | |
|---|---|
| Fiscal Year | Weighted Average Percentage Increase (November 2012) |
| 2012 | 1.33% |
| 2013 | 1.56% |
| 2014 | 2.90% |
| 2015 | 1.95% |
| 2016 | 1.85% |
| | |
| 2017 | 2.34% |
| 2018 | 2.38% |
| 2019 | 2.48% |
| 2020 | 2.51% |
| 2021 | 2.52% |
| | |
| 2022 | 2.52% |

For years after 2022, the USPS combined merit and general increase rate is assumed to be 2.85%.

Annutant mortality rates

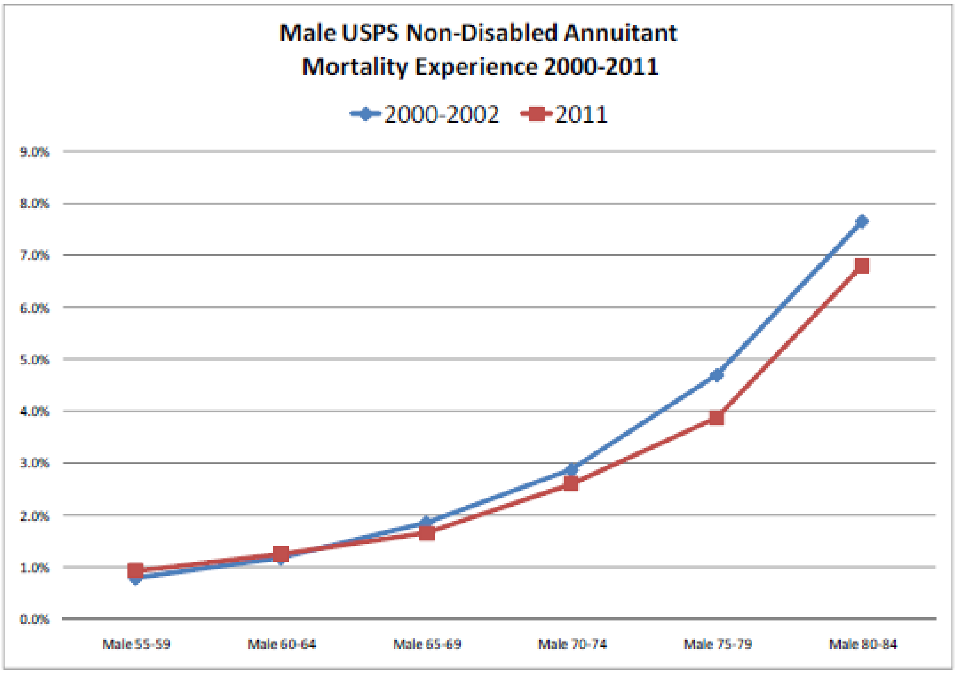
A study of USPS-specific mortality for annuitants was conducted using census and event data provided by OPM. The study included FERS and CSRS annuitants and was based on observed experience covering the period 2000 to 2011.

The charts below compare USPS mortality observed from the earliest years of the period analyzed to the experience in 2011, the latest year in the study period.

The study showed shifts in the rate of mortality by year – with improvements in mortality over the 11-year period for male annuitants over age 65, but deterioration in mortality rates for younger male annuitants.

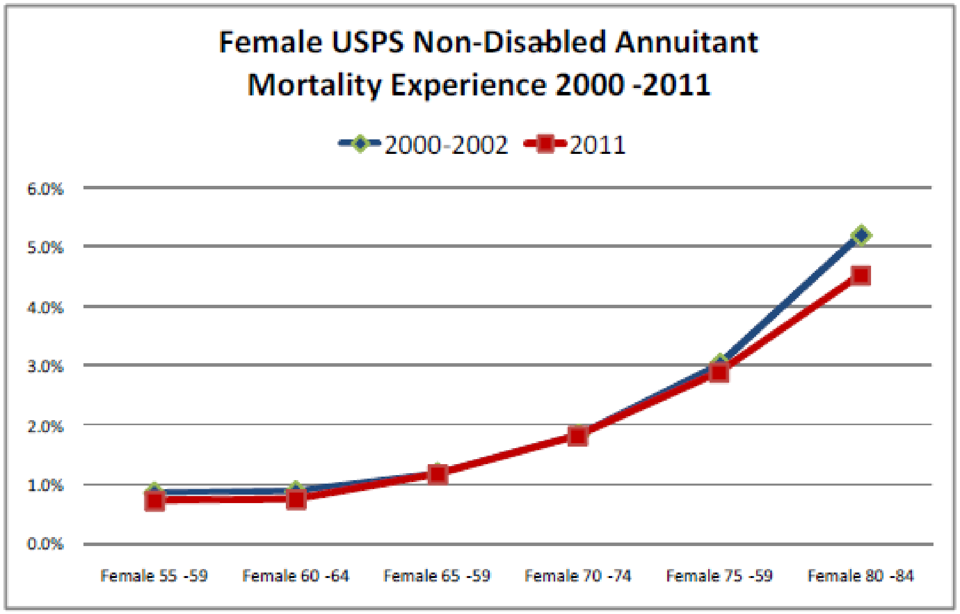
HayGroup

**Figure I-1 – Male Mortality Experience**




For females, the study showed a small improvement in mortality rates at ages under 65, no material improvement at ages 65-74 and a small improvement at ages 75-79, with larger improvement at the older ages.

Figure I-2 – Female Mortality Experience




Based on the observed rates and the pattern of mortality changes over the past 11 years, we projected continued improvements at ages where we had seen improvements and stable rates for ages where mortality rates had increased. This projected set of rates was smoothed to develop the USPS specific mortality table.

The OPM revised assumptions included a change to the annuitant mortality rates that projected improvements in mortality (based on a study of the last 20 years' experience) to 2024. We analyzed the mortality experience of USPS annuitants from 2000 to 2011 and developed a USPS-specific set of mortality rates based on that experience. These rates were then adjusted by mortality improvement factors consistent with the approach used by OPM.

The analysis of the USPS experience showed that there was no improvement in rates for male annuitants under age 65 (rather, the rates had increased for ages under 60 and were flat for ages 60-64), and improvement that varied from under 0.5 percent per year to about 2 percent per year for male annuitants over age 65. The improvement in rates for female annuitants was between 0.5 percent and 3 percent per year. The table below shows the average improvement factors used for OPM-wide and USPS-specific mortality rates. Overall, the mortality improvement factors for USPS were lower for males and higher for females than OPM-wide.

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| Table I-3<br>Annual Rate of Mortality Improvement | | | | |
|---|---|---|---|---|
| | OPM-wide | | USPS | |
| | Males | Females | Males | Females |
| Under age 65 | 1.7% | 1.2% | 0.3% | 1.9% |
| Age 65 & over | 1.4% | 0.8% | 1.3% | 1.3% |
| Ages 55-90 | 2.0% | 1.2% | 1.0% | 1.5% |

This process (evaluation of historical changes and projection of future improvements) mirrors the process used by the OPM Office of the Actuary in developing the FERS and CSRS annuitant mortality rates.

The annuitant mortality rates were based on recent experience and projected improvements based on the rate of improvement observed over the last 10 years. The improvements are projected and a static mortality table is produced.

The combined impact of using USPS experience and USPS mortality improvement factors resulted in life expectancies for male USPS annuitants that are 1-2 years shorter than OPM-wide at ages 55 to 65 and longer for ages 75 and older. For female USPS annuitants the life expectancy is longer than OPM-wide at all ages, with the difference about 1 year at age 65.

Remeasured Estimates

Table I-4 shows the estimates of the CSRS liability and surplus as of September 30, 2011. The first column ("OPM Assumptions") shows the results from the OPM valuation using USPS-wide assumptions. The second column ("USPS-Specific Assumptions") includes both USPS pay assumptions and USPS demographic assumptions based on USPS employee experience for turnover, disabilities, retirement and annuitant mortality rates.

Table I-4 shows the liability is less than 1 percent lower when measured using USPS-specific assumptions.

The changes to salary, mortality, and withdrawal all led to a reduction in the deficit ($1.1, $0.6, and $0.2 billion respectively). The combination of these three reductions was offset in part by the change in retirement rates which increased the deficit by $0.6 billion. The net impact of these four sets of assumption changes was a $1.3 billion reduction in the deficit.

HayGroup

| Table I-4<br>Estimate of CSRS Deficit as of September 30, 2011<br>Based on Alternate Pay Increase and Demographic Assumptions<br>Amounts in $Billions | | |
|---|---|---|
| | OPM Assumptions | USPS-Specific Assumptions |
| Assumed Investment Return Rate | 5.25% | 5.25% |
| Assumed Post-Retirement COLA Increases | 3.00% | 3.00% |
| Salary Increase Assumptions: | | |
| General Salary Increase | 3.25% | USPS |
| Merit Salary Increase | OPM | USPS |
| Active Demographic Assumptions | OPM | USPS |
| Annuitant Mortality Assumption | OPM | USPS |
| Assets | $193.0 | $193.0 |
| Actuarial Accrued Liability | $210.8 | $209.5 |
| **Deficit** | **$17.8** | **$16.5** |

The results as of September 30, 2011 were projected to September 30, 2012. Table I-5 shows the deficit of $18.7 billion decreases by $1.3 billion to $17.4 billion when remeasured using USPS-specific assumptions.

| Table I-5<br>Estimate of CSRS Deficit as of September 30, 2012<br>Based on Alternate Pay Increase and Demographic Assumptions<br>Amounts in $billions | | |
|---|---|---|
| | OPM Assumptions | USPS-Specific Assumptions |
| Assets | $191.2 | $191.2 |
| Actuarial Accrued Liability | $209.9 | $208.6 |
| **Deficit** | **$18.7** | **$17.4** |

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## II. METHODS

Methods

No two valuation systems prepare valuation data or value the benefits in exactly the same manner. We therefore prepared an initial valuation run using the OPM assumptions and compared the results to the published OPM valuation results. The resulting adjustment factor (ratio of Hay Group results to OPM results both using OPM assumptions) was used in subsequent valuations to develop the adjusted results. This methodology ensures that if OPM were to apply the USPS-specific assumptions, the valuation results should match the results in this report. Separate adjustment factors were developed for annuitants and employees.

Actuarial Cost Method

The actuarial liabilities relating to CSRS and FERS were valued according to the provisions under 5 USC 8348(h) and 5 USC 8423(b) and use methods and assumptions recommended by the CSRS Board of Actuaries. By law, there are currently no USPS employer contributions being made to CSRS (per 5 USC 8348(h)), however, employee contributions are being made.

By law, there is no Normal Cost determination for the USPS portion of CSRS. The USPS employer share of the Normal Cost was terminated in 2006 when the cost of military service was returned to the federal government. Any supplemental payments have been delayed until 2017. If deficits exist in fiscal year 2017 or later, these deficits will be funded through supplemental liability amortization payments from the Postal Service to the Civil Service Retirement and Disability Fund.

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## III. DATA

We received group data summaries from OPM which contained average pay and the number of members in individual age and service cells by gender and retirement system group. The data was prepared for use in Hay Group's valuation system (PVL) and the total number of records compared to headcounts provided by USPS. The totals were consistent.

We received USPS annuitant records in single age summaries by gender, type of benefit, type of retirement, and retirement system.

**Table III-1**
**USPS CSRS Active Employees**

| Retirement Group | Gender | Number | Average Pay |
|---|---|---|---|
| CSRS | Male | 57,218 | $59,095 |
| CSRS | Female | 26,782 | $58,923 |
| Total | | 84,000 | $59,040 |

**Table III-2**
**USPS CSRS Employees**

| Age Nearest Birthday | Closest whole year of service | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | <5 | 5 – 9 | 10 – 14 | 15 – 19 | 20 – 24 | 25 – 29 | 30+ | Total |
| 15 - 19 | - | - | - | - | - | - | - | - |
| 20 - 24 | - | - | - | - | - | - | - | - |
| 25 - 29 | - | - | - | - | - | - | - | - |
| 30 - 34 | - | - | - | - | - | - | - | - |
| 35 - 39 | - | - | - | - | - | - | - | - |
| 40 - 44 | - | - | - | - | - | - | - | - |
| 45 - 49 | - | 1 | 11 | 6 | 21 | 1,037 | 355 | 1,432 |
| 50 - 54 | 1 | 3 | 22 | 33 | 99 | 5,317 | 14,875 | 20,352 |
| 55 – 59 | 2 | 6 | 28 | 68 | 135 | 4,333 | 29,076 | 33,648 |
| 60 – 64 | 3 | 5 | 21 | 62 | 83 | 1,796 | 19,117 | 21,088 |
| 65+ | 1 | 2 | 7 | 13 | 35 | 545 | 6,876 | 7,479 |
| Total | 7 | 17 | 90 | 183 | 374 | 13,029 | 70,300 | 84,000 |

HayGroup

## IV. ACTUARIAL CERTIFICATION

USPS OIG retained the Hay Group to perform an analysis of the USPS portion of the CSRDF. The scope of this assignment was limited to CSRS. Use of these results for other purposes may not be appropriate.

This analysis has been conducted in accordance with generally accepted actuarial principles and practices.

The results shown in this report are reasonable actuarial results. However, a different set of results could also be considered reasonable actuarial results. The reason for this is that actuarial standards of practice describe a "best-estimate range" for each assumption, rather than a single best-estimate value. Thus, reasonable results differing from those presented in this report could have been developed by selecting different points within the best-estimate ranges for various assumptions.

The actuaries certifying to this report are members of the American Academy of Actuaries and other professional actuarial organizations, and meet the General Qualification Standards of the American Academy of Actuaries for purposes of issuing Statements of Actuarial Opinion.

Craig Graby, FCA, MAAA, EA
May 9, 2013