Federal Employees' Retirement System: Benefits and Financing

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Summary

Most civilian federal employees who were hired before 1984 are covered by the Civil Service Retirement System (CSRS). Federal employees hired in 1984 or later are covered by the Federal Employees' Retirement System (FERS). Both CSRS and FERS require participants to contribute toward the cost of their pensions through a payroll tax. Employees who are covered by CSRS contribute 7.0% of pay to the Civil Service Retirement and Disability Fund (CSRDF). They do not pay Social Security taxes or earn Social Security benefits. Employees enrolled in FERS contribute 0.8% of their pay to the CSRDF. They pay 6.2% of wages up to the Social Security taxable wage base to the Social Security trust fund. The taxable wage base is $106,800 in 2011.

The minimum retirement age (MRA) under CSRS is 55 for workers who have at least 30 years of service. Under FERS, the MRA was 55 for employees born before 1948. The MRA for employees born between 1953 and 1964 is 56. It will increase to age 57 for those born in 1970 or later. Both FERS and CSRS allow retirement with an unreduced pension at the age of 60 for employees with 20 or more years of service and at the age of 62 for employees with at least 5 years of service.

The Thrift Savings Plan (TSP) is a retirement savings plan similar to the 401(k) plans provided by many employers in the private sector. In 2011, employees covered under either CSRS or FERS can contribute up to $16,500 to the TSP. Employees aged 50 and older can contribute an additional $5,500 to the TSP. Employees under FERS receive employer matching contributions of up to 5% of pay from the federal agency by which they are employed. Federal workers covered by CSRS also can contribute to the TSP, but they receive no matching contributions from their employing agencies.

The Office of Personnel Management (OPM) estimates the cost of CSRS to be an amount equal to 25.8% of employee pay. The federal government pays 18.8% of this amount and the other 7.0% is paid by employees. OPM estimates the cost of the FERS basic annuity at an amount equal to 12.5% of pay. The federal government contributes 11.7% of this amount and the other 0.8% is paid by employees. There are three other employer costs for employees under FERS. Both the employer and employee pay Social Security taxes equal to 6.2% of pay up to the maximum taxable amount; agencies automatically contribute an amount equal to 1% of employee pay to the TSP; and agencies make matching contributions to the TSP equal to up to 4% of pay.

At the start of FY2009, the CSRDF had an unfunded liability of $674.2 billion, consisting of a $673.3 billion deficit for CSRS and a $0.9 billion deficit for FERS. Although the civil service trust fund has an unfunded liability, it is not in danger of becoming insolvent. OPM projects that the balance of the CSRDF will continue to grow through at least 2080, which point it will hold assets equal to more than four times total payroll and about 19 times total annual benefit payments.

The CSRDF is invested in special-issue U.S. Treasury bonds. Congress could permit the trust fund to invest in other assets—such as corporate stocks and bonds—but the effects of such a change on the federal budget and on government ownership of private-sector assets would deserve careful consideration.

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Background on Retirement Plan Design

Employers establish retirement plans both to help them attract workers with valuable skills and to enable older workers to retire without facing the prospect of inadequate income. Employers must balance the goals of providing adequate retirement income with controlling the cost of the retirement plan. For employers in the private sector, another important consideration is the regulatory environment in which their retirement plans must operate. Private-sector retirement plans must comply with the relevant provisions of federal law, including the Employee Retirement Income Security Act (ERISA), the Age Discrimination in Employment Act (ADEA), and the Internal Revenue Code.

Two Types of Retirement Plans

Retirement programs generally can be classified as either *defined benefit* (DB) plans or *defined contribution* (DC) plans. In a defined benefit plan, a worker's retirement benefit is typically paid as a life annuity based on years of service and average salary. A defined contribution plan is much like a savings account maintained by the employer on behalf of each participating employee. The employer and/or employee contribute a specific dollar amount or percentage of pay into an account, which is usually invested in stocks and bonds. When the worker retires, he or she receives the balance in the account, which is the sum of all the contributions that have been made plus interest, dividends, and capital gains (or losses), net of fees and expenses. The retiring worker usually has the choice of receiving these funds as a series of payments over a period of years or as a lump sum.

An important difference between the two types of retirement plans is that in a defined benefit plan it is the *employer* who bears the financial risk, whereas in a defined contribution plan it is the *employee* who bears the financial risk. In a defined benefit plan, the employer promises to provide retirement benefits in the form of a life annuity or its actuarial equivalent.[1] To pay the promised benefit, the employer must make contributions to a pension fund, which is invested in stocks, bonds, and other assets. The employer's contributions plus the expected investment earnings on the contributions must be sufficient to pay the pension benefits that workers have earned under the plan. The employer is at risk for the full amount of retirement benefits that have been earned by employees. If the pension plan is underfunded, the employer must make additional contributions so that the promised benefits can be paid.

In a defined contribution plan, the employee bears the investment risk. If the contributions to the plan have been insufficient or if the securities in which the contributions have been invested lose value or appreciate too slowly, the employee might reach retirement age without the financial resources needed to maintain his or her desired standard of living in retirement. If this occurs, the worker might have little choice but to delay retirement.

[1] The actuarial equivalent of a life annuity is a lump-sum payment that could purchase an annuity of equal value, assuming a certain interest rate and life expectancy.

CSRS and FERS

Most civilian federal employees who were hired before 1984 are covered by the Civil Service Retirement System (CSRS). Under CSRS, employees do not pay Social Security taxes or earn Social Security benefits. Federal employees first hired in 1984 or later are covered by the Federal Employees' Retirement System (FERS). All federal employees who are enrolled in FERS pay Social Security taxes and earn Social Security benefits. Federal employees enrolled in either CSRS or FERS also may contribute to the Thrift Savings Plan (TSP); however, only employees enrolled in FERS are eligible for employer matching contributions to the TSP.

Origins of the Federal Civilian Retirement System

Congress passed the Civil Service Retirement Act of 1920 (P.L. 66-215) to provide pension benefits for civilian federal employees. In 1935, Congress created the Social Security system for workers in the private sector. During the 1950s, Congress allowed state and local governments to bring their employees into Social Security, and today about three-fourths of state and local employees are covered by Social Security. Federal employees remained outside of Social Security until Congress passed the Social Security Amendments of 1983 (P.L. 98-21). This law required all civilian federal employees hired into permanent employment on or after January 1, 1984, to participate in Social Security.

Enrolling federal workers in both CSRS and Social Security would have resulted in substantial duplication of benefits and would have required employees to contribute more than 13% of pay to the two programs. Consequently, Congress directed the development of a new retirement system for federal workers with Social Security as its cornerstone. The new plan was designed to include many features of the retirement plans of large employers in the private sector. The result of this effort was the Federal Employee Retirement System Act of 1986 (P.L. 99-335), enacted on June 6, 1986. The FERS has three elements:

- Social Security,
- the FERS basic retirement annuity and the FERS supplement, and
- the Thrift Savings Plan.

The FERS covers federal employees initially hired into federal employment on or after January 1, 1984, and employees who voluntarily switched from CSRS during "open seasons" in 1987 and 1998.[2] Former federal employees who had completed at least five years of service under CSRS and were later rehired by the government after a break in service could either join FERS or participate in the "CSRS offset plan." Under the CSRS offset plan, 6.2 percentage points of the employee's payroll contribution and an equal share of the employer contribution are diverted from CSRS to the Social Security trust fund. Later, the retiree's CSRS annuity is reduced (offset) by the amount of his or her Social Security benefit. Both CSRS and the CSRS offset program will terminate with the death of the last worker or survivor still covered under that program, which the Office of Personnel Management (OPM) estimates will occur around the year 2070.

[2] The open season held from July through December 1998 was authorized by P.L. 105-61, enacted on October 10, 1997.

Eligibility and Benefit Amounts Under FERS and CSRS

Under both CSRS and FERS, the date of an employees' eligibility to retire with an annuity depends on his or her age and years of service. The amount of the retirement annuity is determined by three factors: the number of years of service, the accrual rate at which benefits are earned for each year of service, and the salary base to which the accrual rate is applied.[3]

Retirement Age and Years of Service

Under CSRS, a worker with at least 30 years of service can retire at the age of 55; a worker with at least 20 years of service can retire at the age of 60; and a worker with 5 or more years of service can retire at the age of 62.

Federal employees are fully vested in the FERS basic retirement annuity after five years of service. The FERS minimum retirement age (MRA) for an employee with 30 or more years of service was 55 for workers born before 1948. The MRA under FERS began to increase in 2003 for workers born after 1947. The MRA for employees born between 1953 and 1964 is 56. It will increase to 57 for those born in 1970 or later. (See **Table 1**.) A worker who has reached the minimum retirement age and has completed at least 30 years of service can retire with an immediate, unreduced annuity. A worker with 20 or more years of service can retire with an unreduced annuity at age 60, and a worker with at least 5 years of service can retire at age 62.

Table 1. Minimum Retirement Age Under FERS

Year of Birth	Minimum Retirement Age
1947 or earlier	55 years
1948	55 years, 2 months
1949	55 years, 4 months
1950	55 years, 6 months
1951	55 years, 8 months
1952	55 years, 10 months
1953 to 1964	56 years
1965	56 years, 2 months
1966	56 years, 4 months
1967	56 years, 6 months
1968	56 years, 8 months
1969	56 years, 10 months
1970 or later	57 years

Source: U.S. Office of Personnel Management.

[3] This report describes basic retirement benefits for federal employees under CSRS and FERS. Both programs also provide for disability retirement, benefits for surviving dependents, and benefits for former spouses. These benefits are described in three other CRS reports: CRS Report RS22838, *Disability Retirement for Federal Employees*; CRS Report RS21029, *Survivor Benefits for Families of Civilian Federal Employees and Retirees*; and CRS Report RS22856, *Retirement and Survivor Annuities for Former Spouses of Federal Employees*.

Under FERS, an employee can retire with a reduced benefit at the minimum retirement age if he or she has completed at least 10 years of service. The retirement benefit is permanently reduced by 5% multiplied by the difference between 62 and the retiree's age at the time the annuity begins. For example, an employee with at least 10 years of service who retires at 56 would receive a pension benefit that is reduced by 30% below the amount that would be paid to an individual with the same salary and years of service who retired at the age of 62.

Retirement Income Adequacy

Replacement Rates

A commonly used measure of retirement income adequacy is the percentage of pre-retirement income replaced by pension income. This measure—the *replacement rate*—is expressed by the following ratio:

$$\frac{\textit{annual retirement benefits}}{\textit{annual pre-retirement earnings}}$$

Replacement rates usually are based on the sum of the employee's pension benefit and Social Security benefit. Because retirees do not have the expenses that are associated with having a job, most people are able to maintain their previous standard of living with less income than they had while working. Although there is no fixed rule about what comprises an adequate replacement rate, most pension analysts believe retirement income should replace at least 70% to 80% of pre-retirement income.[4] Workers who had low-wage jobs generally need a replacement rate near the high end of this range because a higher proportion of their income is expended on non-discretionary items, such as food, clothing, shelter, health care, and taxes.

Determinants of the Replacement Rate

The basic retirement annuity under both CSRS and FERS is determined by multiplying three factors: the *salary base*, the *accrual rate*, and the number of *years of service*. This relationship is shown in the following formula:

$$\textit{Pension Amount} = \textit{salary base} \times \textit{accrual rate} \times \textit{years of service}$$

Salary Base

In both CSRS and FERS, the salary base is the average of the highest three consecutive years of basic pay.[5] This is often called "high-three" pay.

[4] U.S. Government Accountability Office, *Federal Pensions: Thrift Savings Plan Has Key Role in Retirement Benefits*, HEHS-96-1, October 1995.

[5] This calculation is based on nominal or "current dollars" rather than indexed or "constant dollars."

Accrual Rates

The accrual rate is the pension benefit earned for each year of service, expressed as a percentage of the salary base. Under FERS, workers accrue retirement benefits at the rate of 1% per year. A worker with 30 years of service will have accrued a pension benefit equal to 30% of high-three pay. For employees in FERS who have at least 20 years of service and who work until age 62, the accrual rate is 1.1% for each year of service. For example, a worker under FERS who retires at 61 with 29 years of service would receive an annuity equal to 29% of his or her high-three average pay. Delaying retirement by one year would increase the annuity to 33% of high-three average pay (30 x 1.1 = 33).

CSRS pension accrual rates increase with length of service. CSRS pensions equal 1.5% of high-three average pay for each of the first 5 years of service, 1.75% for the 6th through 10th years; and 2.0% of high-three average pay for each year of service after the 10th year. This formula yields a replacement rate of 56.25% for a worker who retires with 30 years of service. FERS accrual rates are lower than the accrual rates under CSRS because employees under FERS pay Social Security payroll taxes and earn Social Security retirement benefits.

Members of Congress, congressional staff, federal law enforcement officers, firefighters, and air traffic controllers accrue benefits at higher rates under both CSRS and FERS than do other federal employees. Under CSRS, Members of Congress and congressional staff accrue benefits at the rate of 2.5% for each year of service. This results in a replacement rate of 75% after 30 years of service. Law enforcement officers and firefighters accrue benefits at the rate of 2.5% for each of their first 20 years of service and 2.0% for each year thereafter. Under FERS, Members of Congress, congressional staff, law enforcement officers, and firefighters accrue pension benefits at the rate of 1.7% per year for their first 20 years of service and 1.0% for each year of service after the 20th year. These accrual rates yield a pension equal to 34% of the FERS salary base after 20 years of service and 44% after 30 years of service.

Replacement Rates for Federal Retirees

For a regular federal employee with 30 years of service, CSRS provides a replacement rate equal to 56.25% of high-three average pay. Estimating replacement rates under FERS is complicated by the fact that income from two of its components—Social Security and the TSP—will vary depending on the individual's work history, contributions to the TSP, and the investment performance of his or her TSP account.[6]

Social Security and the "FERS Supplement"

Because Social Security retirement benefits cannot begin before the age of 62, Congress included in FERS a temporary supplemental benefit for workers who retire before age 62. This "FERS supplement" is paid to workers who retire at the age of 55 or older with at least 30 years of service or at the age of 60 with at least 20 years of service. It is also paid to law enforcement officers, firefighters, and air traffic controllers who retire at the age of 50 or later with 20 or more years of service. The supplement is equal to the estimated Social Security benefit that the

[6] For estimates of the replacement rates under FERS, see CRS Report RL30387, *Federal Employees' Retirement System: The Role of the Thrift Savings Plan*, by Katelin P. Isaacs.

individual earned while employed by the federal government. It is paid only until the age of 62, regardless of whether the retiree chooses to apply for Social Security retired worker benefits at 62 years old.

Cost-of-living Adjustments

Cost-of-living adjustments (COLAs) protect the purchasing power of retirement benefits from being eroded by inflation in the prices of goods and services. COLAs do not raise the real value of income. They merely prevent the real value of income from falling. In 1972, Congress passed legislation providing for automatic COLAs for Social Security. COLAs have been in effect since 1962 for CSRS. Social Security COLAs and CSRS COLAs are equal to the annual change in the Consumer Price Index for Urban Wage and Clerical Workers (CPI-W).[7]

As a cost-control measure, Congress limited the annual COLA applied to the FERS retirement annuity. Under FERS, the basic retirement annuity is fully indexed if inflation is under 2% per year and partially indexed if inflation exceeds 2%. If the CPI-W increases by up to 2%, then the FERS annuity increases by the same percentage. If the CPI-W increases by 2% to 3%, the FERS annuity increases by 2%. If the CPI-W increases by more than 3%, the FERS annuity increases by the rise in the CPI-W minus one percentage point. Under FERS, COLAs are applied only to annuities of retirees who are age 62 or older, individuals who retired by reason of disability, and to survivor annuitants. Other FERS retirees receive no COLAs while they are under the age of 62.

The Thrift Savings Plan

The Thrift Savings Plan (TSP) is a defined contribution (DC) retirement plan similar to the 401(k) plans provided by many employers in the private sector. The TSP is a key component of FERS, especially for workers in the middle and upper ranges of the federal pay scale, who are unlikely to achieve adequate retirement income—as measured by the replacement rate—from Social Security and the FERS basic annuity.

In 2011, federal employees can contribute up to $16,500 to the TSP.[8] Employees aged 50 and older can contribute an additional $5,500. Contributions to the TSP are made on a pre-tax basis, and the contributions and investment earnings are free from taxes until the money is withdrawn from the account.[9] For all federal workers under FERS, the agencies where they are employed contribute an amount equal to 1% of each employee's base pay to the TSP, whether or not the employee chooses to contribute anything to the plan. In addition, employees enrolled in FERS can receive employer matching contributions equal to 4% of pay, according to the schedule

[7] Under both CSRS and FERS, automatic COLAs are paid out beginning in January each year, based on the percentage increase in the CPI-W for the most recent third quarter (July-September) compared to the third quarter in the last year a COLA was determined. In 1994, 1995, and 1996 COLAs for civil service annuitants were delayed from January until April as a means of achieving budgetary savings. In 2010 there was no automatic COLA for civil service annuitants. And there is no automatic COLA in 2011. See CRS Report 94-834, *Cost-of-Living Adjustments for Federal Civil Service Annuities*, by Katelin P. Isaacs for a complete history of COLAs under CSRS and FERS.

[8] See 26 U.S.C. §402(g). Prior to 2006, employee contributions were limited to the lesser of a specific percentage of pay or the amount permissible under I.R.C. §402(g). The *Consolidated Appropriations Act of 2000* (P.L. 106-554) eliminated the percentage-of-pay limitations on contributions to the TSP, effective in 2006.

shown in **Table 2**. Federal workers covered by CSRS also may contribute to the TSP, but they receive no matching contributions from their employing agencies.

P.L. 111-31 (June 22, 2009) directed the Federal Retirement Thrift Investment Board to add a qualified Roth contribution to the TSP. Under a Roth contribution option, salary deferrals into a retirement plan are made with after-tax income. Qualified distributions from the plan—generally, distributions taken five or more years after the participant's first Roth contribution and after he or she has reached age 59½—are tax-free.

TSP participants are immediately vested in their contributions to the plan, all federal matching contributions, and any interest, dividends, or capital gains attributable to those contributions. Participants are fully vested in the 1% agency automatic contribution to the TSP after three years (two years for congressional employees and executive branch political appointees).

Table 2. Government Matching Rate on TSP Contributions by FERS Participants

Employee	Government	Total
0.0%	1.0%	1.0%
1.0%	2.0%	3.0%
2.0%	3.0%	5.0%
3.0%	4.0%	7.0%
4.0%	4.5%	8.5%
5.0% or more	5.0%	10.0%

Source: Federal Retirement Thrift Investment Board.

TSP Investment Options

The value of an individual's TSP account at retirement will depend on how much he or she contributed to the TSP each year, the number of years over which contributions were made, and the investment earnings of the TSP funds. Participants in the TSP may choose among five funds in which they can invest their TSP contributions:

- The "C" fund invests in the common stocks of corporations represented in the *Standard and Poor's 500* index of companies incorporated in the United States.
- The "F" fund invests in bonds in the same proportion as they are represented by the Shearson Lehman Brothers Aggregate (SLBA) bond index.
- The "G" fund invests in U.S. government securities and pays interest equal to the average rate of return on government securities with maturities of four years or more.
- The "S" fund invests in the common stocks of companies represented in the *Wilshire 4500* index. These are smaller companies than those in the *S&P 500*.
- The "I" fund invests in the common stocks of foreign corporations represented in the Morgan-Stanley *EAFE* (Europe, Australia-Asia, Far East) index.[10]

[10] The "S" and "I" funds were added in 2001 in accordance with the *Thrift Savings Plan Act of 1996* (P.L. 104-208).

In 2005, the TSP added three "Lifecycle Funds," which are invested in various combinations of the five existing TSP funds. According to the Federal Retirement Thrift Investment Board, participants who invest in these funds "benefit from having professionally designed asset allocation models available to optimize their investment performance by providing portfolios that are appropriate for their particular time horizon."[11] The participant's time horizon is based on the future date he or she expects to begin withdrawing money from the TSP.

Historical rates of return for the TSP are shown in **Table 3**. For the years before 2001, the rates of return for the S and I funds are the rates of return for the indices on which those funds are based.

Table 3. Annual Rates of Return for Thrift Savings Plan Funds

Year	G Fund	C Fund	F Fund	S Fund	I Fund
1988	8.8%	11.8%	3.6%	20.5%	26.1%
1989	8.8%	31.0%	13.9%	23.9%	10.0%
1990	8.9%	-3.2%	8.0%	-13.6%	-23.6%
1991	8.1%	30.8%	15.7%	43.5%	12.2%
1992	7.2%	7.7%	7.2%	11.9%	-12.2%
1993	6.1%	10.1%	9.5%	14.6%	32.7%
1994	7.2%	1.3%	-3.0%	-2.7%	7.8%
1995	7.0%	37.4%	18.3%	33.5%	11.3%
1996	6.8%	22.8%	3.7%	17.2%	6.1%
1997	6.8%	33.2%	9.6%	25.7%	1.5%
1998	5.7%	28.4%	8.7%	8.6%	20.1%
1999	6.0%	21.0%	-0.8%	35.5%	26.7%
2000	6.4%	-9.1%	11.7%	-15.8%	-14.2%
2001	5.4%	-11.9%	8.6%	-2.2%	-15.4%
2002	5.0%	-22.1%	10.3%	-18.1%	-16.0%
2003	4.1%	28.5%	4.1%	42.9%	37.9%
2004	4.3%	10.8%	4.3%	18.0%	20.0%
2005	4.5%	5.0%	2.4%	10.5%	13.6%
2006	4.9%	15.8%	4.4%	15.3%	26.3%
2007	4.9%	5.5%	7.1%	5.5%	11.4%
2008	3.8%	-37.0%	5.5%	-38.3%	-42.4%
2009	3.0%	26.7%	6.0%	34.9%	30.0%
1988-2009	**6.1%**	**9.3%**	**7.1%**	**10.2%**	**5.6%**

Sources: http://www.tsp.gov, http://www.wilshire.com, and http://www.msci.com.

Note: Rates of return for the TSP funds are shown net of expenses.

[11] Statement of Gary A. Amelio, former executive director of the Federal Retirement Thrift Investment Board before the Senate Subcommittee on Securities and Investment, June 14, 2005.

TSP Withdrawal Options

There are three ways an employee can withdraw funds from the TSP. Funds can be withdrawn

- as a life annuity,[12]
- in a single lump-sum payment, or
- in a series of monthly payments, either for a fixed number of months or in a fixed dollar amount until the account is depleted.

A retiree can choose to have payments begin immediately or at a later date. There is a 10% tax penalty for those who withdraw funds before the age of 59½. The penalty does not apply if the individual has retired and is aged 55 or older, or if the withdrawals are taken as a series of substantially equal periodic payments based on the person's remaining life expectancy.

Employer and Employee Contributions to CSRS and FERS

Both CSRS and FERS require participants to contribute toward the cost of their future pensions through a payroll tax. Under CSRS, employees contribute 7.0% of base pay to the Civil Service Retirement and Disability Fund (CSRDF). Under FERS, employees contribute 0.8% of pay to the CSRDF and they also pay Social Security taxes of 6.2% on salary up to the maximum taxable wage base ($106,800 in 2011). Participants in CSRS are not covered by Social Security.[13] Members of Congress contribute 8.0% of salary to the CSRDF if covered by CSRS and 1.3% of salary if under FERS. All members of Congress pay Social Security taxes, regardless of whether they are under CSRS or FERS.[14]

In the private sector, employers are required by the Employee Retirement Income Security Act of 1974 (ERISA, P.L. 93-406) to pre-fund the benefits that workers earn under defined benefit plans. Pre-funding of future pension obligations is required because there is always the possibility that a firm could go out of business. A firm that closes down will no longer have revenues to pay its pension obligations, and if these obligations were not fully funded, retirees and employees of the firm would lose some or all of their pension benefits. Private-sector employers with defined benefit pensions are required to pay premiums to the Pension Benefit Guaranty Corporation (PBGC), which insures the pensions of workers whose employer terminates a pension plan that has unfunded liabilities. For plans that terminate in 2011, the PBGC guarantees a maximum annual benefit of $54,000 for a worker retiring at the age of 65. The maximum benefit is lower for workers who retire before the age of 65. The PBGC does not insure federal, state, or local government pensions. The ultimate guarantors of government pensions are the taxpayers.

[12] An annuity is a contract between the individual and an insurance company that pays a monthly income in exchange for an initial premium. The monthly income that a given premium will purchase depends on both on the estimated rate of return from the investment and actuarial estimates of the annuitant's remaining life expectancy.

[13] Former federal employees are eligible for Medicare at the age of 65, regardless of whether they were covered by CSRS or FERS. Workers in both programs pay the Hospital Insurance (HI) payroll tax of 1.45% on all salary and wages.

[14] See also CRS Report RL30631, *Retirement Benefits for Members of Congress*, by Katelin P. Isaacs.

The federal government requires firms in the private sector to pre-fund employees' pension benefits to ensure that if a firm goes out of business, there will be funds available to pay its pension obligations. Although the federal government is unlikely to "go out of business," there are other reasons that Congress has required federal agencies and their employees to contribute money to the CSRDF.[15] First, by providing a continuous source of budget authority, the CSRDF allows benefits to be paid on time, regardless of any delays that Congress may experience in passing its annual appropriations bills. Secondly, the balance in the trust fund acts as a barometer of the government's future pension obligations. Given a fixed contribution rate and benefit structure, a rising trust fund balance indicates that the government is incurring obligations to make higher pension payments in the future.[16] Finally, prefunding pension obligations forces federal agencies to recognize their full personnel costs when requesting annual appropriations from Congress. Otherwise, these costs would be recognized only in the central administrative accounts of the Office of Personnel Management, and not by the agencies where the costs are incurred.

Employee Contributions

Contributions to CSRS and FERS are not deposited into individual employee accounts. Nor is the amount of a federal worker's pension based on the amount of his or her contributions. All contributions are paid into—and all benefits are paid out of—the Civil Service Retirement and Disability Fund. Employee contributions pay for a comparatively small part of the retirement annuities paid by CSRS and FERS. There are, however, both budgetary and actuarial reasons that federal employees are required to contribute to CSRS and FERS.

Employee Contributions from a Budgetary Perspective

Employee contributions are revenues of the federal government. These revenues reduce the proportion of pension costs that must be borne by the public. In FY2009, employee contributions to CSRS and FERS totaled $3.5 billion, equal to 3.7% of the cash income of the Civil Service Retirement and Disability Fund. The other major sources of revenue to the CSRDF are agency contributions, contributions of the U.S. Postal Service on behalf of its employees, interest on the federal bonds held by the fund, and transfers from the general revenues of the U.S. Treasury. These transfers are necessary because the costs of the older of the two federal retirement programs, the CSRS, are not fully covered by employee and agency contributions. FERS benefits are required by law to be fully funded by the sum of contributions from employees and their employing agencies and the interest earnings of the CSRDF.

Employee Contributions in Actuarial Terms

Actuaries calculate the cost of defined benefits pension plans in terms of "normal cost." The normal cost of a pension plan is the level percentage of payroll that must to be set aside each year to fund the pension benefits that participants have earned. Normal cost is based on estimates of attrition and mortality among the workforce, future interest rates, salary increases, and inflation.

[15] In general, state and local governments do not face this risk either; however; they are more like private businesses in that they have in some cases defaulted on their public debts.

[16] As is explained later in this report, a large balance in the civil service retirement trust fund does not by itself make it easier to pay these benefits when they come due because the trust fund invests exclusively in U.S. Treasury securities.

OPM has estimated the current normal cost of CSRS to be 25.8% of payroll. The federal government's share of the normal cost of CSRS is 18.8% of payroll. The Civil Service Retirement Amendments of 1969 (P.L. 91-93) require participating employees and their employing agencies each to contribute an amount equal to 7.0% of basic pay to the CSRDF to finance retirement benefits under CSRS. The combined contribution of 14% of employee pay does not fully finance the retirement benefits provided by the CSRS. The costs of the CSRS that are not financed by the 7.0% employee and 7.0% agency contributions are attributable mainly to increases in future CSRS benefits that result from (1) employees' annual pay raises, and (2) annual COLAs to CSRS annuities. In actuarial terms, the employee and agency contributions totaling 14% of pay are equal to the *static normal cost* of CSRS benefits.[17] This is the benefit that would be paid if employees received no future pay raises and annuitants received no future COLAs. The *dynamic normal cost* of CSRS pensions includes the cost of financing future benefit increases that result from pay raises and COLAs provided to annuitants.[18]

Contributions from employees and their employing agencies meet about 54% of the normal cost of CSRS (14.0/25.8 = .543). The remaining 46% of the cost of CSRS is paid from the interest earned by bonds held by the retirement and disability trust fund, special contributions by the U.S. Postal Service for retired postal workers, and transfers from the general revenues of the U.S. Treasury. If each federal agency were to pay the full cost of CSRS benefits on an accrual basis, as is done under FERS, they would contribute an amount equal to 18.8% of payroll. This represents the dynamic normal cost of CSRS minus the required employee contribution of 7.0% of pay.

OPM has estimated the normal cost of the FERS basic annuity to be 12.5% of payroll (effective October 1, 2010, as required by P.L. 111-84). Federal law requires agencies to contribute an amount equal to the normal cost of FERS minus employee contributions to the program. Employees contribute 0.8% of pay toward their FERS annuities. Consequently, the normal cost of the FERS basic annuity to the federal government is equal to 11.7% of payroll (12.5-0.8=11.7). The federal government has three other mandatory costs for employees enrolled in FERS: Social Security, the 1% agency automatic contribution to the TSP, and agency matching contributions to the TSP. Social Security taxes are 6.2% of payroll on both the employer and the employee up to the maximum taxable amount of earnings ($106,800 in 2011). All agencies must contribute an amount equal to 1% of employee pay to the TSP. The normal cost of FERS to the federal government is therefore at least 18.9% of pay. Federal matching contributions to the TSP can add up to 4 percentage points to amount. For an employee enrolled in FERS who contributes 5.0% or more of pay to the TSP, his or her employing agency must finance retirement costs equal to 22.9% of employee pay.

CSRS and FERS differ in the way that each federal agency must budget its contributions toward employee pension benefits. Under FERS, each agency must include the *full normal cost* of the FERS basic benefit (11.7% of pay in 2011) in its annual budget request. In addition, each agency must include in its budget request the cost of the employer share of Social Security payroll taxes, the 1.0% automatic contribution to the TSP, and employer matching contributions to the TSP. Under CSRS, each agency must budget only a 7.0% contribution to the CSRDF, even though this is less than the full cost of the program. The costs associated with CSRS that are not paid by the

[17] A pension plan's normal cost is the level percentage of pay that, invested today at a particular real rate of interest will be sufficient to fully finance the retirement benefits under the plan.

[18] Two other elements of a pension plan's dynamic normal cost are increases in benefits that result from (1) new or expanded benefits and (2) newly covered groups of workers.

employee contribution of 7.0% and the agency contribution of 7.0% are treated as a general obligation of the U.S. Treasury.

In both CSRS and FERS, government contributions to the Civil Service Retirement and Disability Fund result in the Treasury issuing securities that are credited to the fund. The contributions for both programs are commingled, and benefits for retirees and survivors in both programs are paid from the CSRDF. In contrast, government contributions to the TSP are deposited into individual accounts for each TSP participant. The accounts are managed by the Federal Retirement Thrift Investment Board. The TSP is not a trust fund of the U.S. government. TSP accounts are individually owned by the participants in the TSP in the same way that 401(k) accounts are owned by workers in the private sector.

Financing Pension Benefits for Federal Employees

As of September 30, 2008, the CSRDF had net assets of $734 billion available for benefit payments under both CSRS and FERS. At the same time, the accrued actuarial liability under the CSRS and FERS plans was $1,408 billion.[19] In other words, on October 1, 2009, the civil service trust fund had an *unfunded actuarial liability* of $674 billion. All but $1 billion this unfunded liability is attributable to CSRS. Federal law has never required that employee and agency contributions must equal the present value of benefits that employees accrue under the CSRS. In contrast, the FERS Act requires that the benefits accrued each year by employees must be fully funded by contributions from employees and their employing agencies.

Although the CSRDF has an unfunded liability, it is not in danger of becoming insolvent. According to the projections of the actuaries at OPM, the assets of the CSRDF will continue to grow over the next 70 years. The fund's assets will reach $1.1 trillion in 2020, $2.4 trillion in 2040, $6.5 trillion in 2060, and $15.3 trillion in 2080. Actuarial projections indicate that the CSRDF will be able to meet its financial obligations in perpetuity. According to OPM, "the total assets of the CSRDF, including both CSRS and FERS, continue to grow throughout the term of the projection, and ultimately reach a level of about 4.1 times payroll, or about 19 times the level of annual benefit outlays."[20] One reason that the CSRDF will not exhaust its resources is that all federal employees hired since 1984 are enrolled in FERS. By law, the benefits that employees earn under FERS must be fully funded by the sum of employer and employee contributions and interest earnings.

Federal Trust Funds and Pre-Funding of Benefits

The CSRDF is similar to the Social Security Trust Fund in that 100% of the monies deposited must be used to purchase special-issue U.S. Treasury bonds. This exchange between the trust fund and the Treasury does not result in revenues or outlays for the federal government. It is an intra-governmental transfer, which has no effect on the size of the government's budget surplus or deficit.[21]

[19] The actuarial present value of benefits is based on their dynamic normal cost, including future COLAs.

[20] Civil Service Retirement and Disability Fund, *Annual Report of the Board of Actuaries, Civil Service Retirement and Disability Fund, Fiscal Year Ended September 30, 2009*, p. 18.

[21] Federal trust funds represent *budget authority*. Only *revenues* and *outlays* affect the size of the annual budget surplus (continued...)

Federal trust funds are not a "store of wealth" like private pension funds. The assets of the civil service retirement trust fund are U.S. Treasury bonds that function solely as a record of available budget authority. The bonds cannot be sold by the trust fund to the general public in exchange for cash. They can only be returned to the Treasury, which recognizes each bond as representing an equivalent dollar-value of budget authority to be used for the payment of benefits to federal retirees and their survivors. The Office of Management and Budget has stated that

> These [trust fund] balances are available for future benefit payments and other trust fund expenditures, but only in a bookkeeping sense. The holdings of the trust funds are not assets of the Government as a whole that can be drawn down in the future to fund benefits. Instead, they are claims on the Treasury. From a cash perspective, when trust fund holdings are redeemed to authorize the payment of benefits, the Department of the Treasury finances the expenditure in the same way as any other Federal expenditure—by using current receipts or by borrowing from the public. The existence of large trust fund balances, therefore, does not, by itself, increase the Government's ability to pay benefits. Put differently, these trust fund balances are assets of the program agencies and corresponding liabilities of the Treasury, netting to zero for the Government as a whole.[22]

Government trust funds, however, *can* ease the burden of future benefit payments if an increase in the trust fund balance represents a net increase in national saving. Again, quoting OMB:

> From an economic standpoint, the Government is able to prefund benefits only by increasing saving and investment in the economy as a whole. This can be fully accomplished only by simultaneously running trust fund surpluses equal to the actuarial present value of the accumulating benefits while maintaining an unchanged Federal fund deficit, so that the trust fund surplus reduces the unified budget deficit or increases the unified budget surplus. This would reduce Federal borrowing by the amount of the trust funds surplus and increase the amount of national saving available to finance investment. As long as the increase in Government saving is not offset by a reduction in private saving, greater investment would increase future national income, which would yield greater tax revenue to support the benefits.[23]

Investment Practices of Federal Trust Funds

Federal trust funds do not represent a store of wealth for the government because they consist entirely of U.S. government bonds. A bond represents wealth only when it is held by someone other than the individual, company, or government that issued it. A bond is an I.O.U.—that is, a promise to pay. An I.O.U. received from someone else might be considered an asset, provided that the issuer is willing and able to pay the debt when it is due, but writing an I.O.U. to oneself does *not* create an asset. This analogy applies to the U.S. Treasury bonds held by the federal government's trust funds: they are I.O.U.s issued by one agency of the U.S. government and held by another agency of the same government. Both the issuer and holder are part of the same entity:

(...continued)

or deficit. The excess revenues that result in a trust fund surplus therefore reduce the government's deficit (or increase its surplus) and the outlays for retiree and survivor benefits either reduce the government's budget surplus or increase the budget deficit. However, the exchange of cash for bonds (or vice versa) between the trust fund and the Treasury does not affect the deficit because it is an exchange that occurs entirely *within* the government.

[22] U.S. Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2010: Analytical Perspectives*, 2009, p. 345.

[23] Ibid.

the U.S. government. When federal trust funds redeem their bonds, the Treasury has only one source from which to obtain the required cash: the public. It can do this either by collecting taxes or by borrowing.

Many state and local government pension funds invest in stocks, bonds, mortgages, real estate, and other private assets. If Congress were to permit the CSRDF to acquire assets other than U.S. Treasury bonds—such as the stocks and bonds issued by private corporations—these assets could be sold to the public for cash as pension liabilities come due. This would represent a major change in public policy that would have important effects on the federal budget and on private businesses that would, in effect, be partly owned by an agency of the federal government.[24]

Among the possible drawbacks of allowing the CSRDF to invest in private assets are that the stocks and bonds purchased by the trust fund would displace purchases of these assets by private citizens, so that while civil service retirement benefits would be prefunded, it would be at the cost of reducing the amount of private-sector assets held by private citizens. In a scenario of "full displacement," there would be no net increase in the amount of saving and investment in the economy, just a reallocation of assets in which the government would own more private sector stocks and bonds and private investors would hold more Treasury bonds.

A second issue that would have to be considered if the trust fund were to purchase private investment securities would be the fund's management and investment practices. Who would make the investment decisions, and what would be the acceptable level of investment risk for the funds? The most fundamental risk is that poor investment choices would result in the trust fund losing value over time. Another question would be how the fund would decide what assets to purchase. Deciding what would constitute an appropriate investment for a fund that consists mainly of monies provided by taxpayers could be controversial. Not all companies, industries, or countries would be seen by the public as appropriate places to invest these funds. In short, the question of investing trust fund assets in securities other than U.S. Treasury bonds is one that would deserve close and careful consideration of all the possible ramifications.

Allowing the civil service retirement trust fund to invest in private-sector securities also would have implications for the federal budget. Currently, the trust fund is credited by the Treasury with agency contributions on behalf of covered employees, and it receives revenue in the form of employee contributions. Agency contributions are intra-governmental transfers, and have no effect on the size of the government's annual budget deficit or surplus. Employee contributions, however, are revenues of the U.S. government. As it now operates, the only outlays of the trust fund are payments to annuitants and relatively minor outlays for administrative expenses. If the trust fund were to purchase private assets such as corporate stocks and bonds rather than U.S. Treasury bonds, there would be an immediate outlay of funds. This outlay by the trust fund would be paid for in part by employee contributions that would be diverted from the general fund of the Treasury. The remainder of the purchase, financed by agency contributions, would replace an intra-governmental transfer with a direct outlay of federal funds.

[24] The Railroad Retirement and Survivors' Improvement Act of 2001 (P.L. 107-90) authorizes the Railroad Retirement Trust Fund to acquire corporate stocks, bonds, and other assets to fund railroad retirement benefits. According to the Congressional Budget Office, "such an action has no clear precedent and raises questions about how the federal government might behave as an investor in private enterprises." (Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2003-2012*, January 2002, p. 88.)

Because the Treasury would no longer receive employee contributions toward CSRS and FERS as revenue, it would have to borrow an equal amount from the public. Consequently, without an offsetting reduction in outlays elsewhere in the budget or an increase in revenues other sources, the net effect of these transactions would be an increase in the government's budget deficit (or a decrease in the budget surplus). If the budget accounting period extended over a long enough time, these transactions would cancel one another out because the long-term effect would merely move some outlays from the future, where they would have occurred as payments to annuitants, to the present, where they would occur partly as outlays to purchase assets and partly as a reduction in revenues that currently go to the general fund of the Treasury.

Conclusion

Federal employee pensions are financed by a combination of employee and agency contributions to the Civil Service Retirement and Disability Fund, which is required by law to invest all of its income in U.S. Treasury bonds. The fund currently holds bonds and other government securities valued at $734 billion and has liabilities of $1,408 billion. The resulting unfunded liability of $674 billion is attributable almost entirely to the old Civil Service Retirement System, which has never been fully funded. Nevertheless, all of the liabilities of the CSRDF represent a future claim on taxpayers because the entire trust fund is invested in Treasury bonds, which when redeemed will require the Treasury to raise an equivalent amount of cash from the public.

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