

**THE FEDERAL EMPLOYEES' RETIREMENT
SYSTEM ACT OF 1986**

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The Federal Employees' Retirement System (FERS), enacted into law on June 6, 1986, covers civilian employees of the U.S. Government who were hired after 1983. FERS supplements Social Security¹ with a basic annuity plan and a thrift-savings plan. The Civil Service Retirement System (CSRS) remains in effect for employees hired before 1984 who do not elect to transfer to FERS.

Besides discussing the benefit changes, the paper covers related subjects of broader interest:

1. The federal legislative process, including the roles of interest groups, the Congress and the Administration, and the actuaries assisting them.
2. Investments in stocks and bonds by the new thrift plan, and why these use index funds.
3. How FERS serves as a model for other large public retirement systems, using a defined contribution plan to help meet its retirement objectives and giving the private sector opportunities to provide benefit services.

A. LEGISLATIVE BACKGROUND

The design of FERS reflects technical, actuarial, and investment decisions that were made in a political environment. To provide an understanding of what happened and why, we begin with a case study of the legislative process that led to FERS. The study is based on first-hand experience as an actuary serving on the Senate staff. Table 1 lists major events discussed. Following this history is a table summarizing the provisions of CSRS and FERS, and then a description of related legislation enacted around the same time as FERS. Subsequent sections treat the thrift-savings plan and the basic annuity plan in more detail.

1. *The Need for a New Retirement Plan*

The CSRS was created in 1920 to give the government an acceptable way to end the employment of workers too old or too disabled to provide

¹In this paper, "Social Security" means the Federal Old-Age, Survivors, and Disability Insurance (OASDI) program and excludes Medicare.

TABLE 1
EVENTS IN THE HISTORY OF THE FERS ACT

Date	Event
March 1920	Civil Service Retirement System created
August 1935	Social Security program created
April 1983	Social Security law amended to cover federal employees hired after 1983
July 1985	Senators Stevens and Roth introduced S. 1527
October 1985	Representatives Ford and Oaker introduced H.R. 3660
November 1985	Senate approved retirement bill by 96-1 vote
May 1986	Senate and House adopted conference report
June 1986	President Reagan signed FERS Act into law

satisfactory service [14, 53].² CSRS required substantial employee contributions, more than enough to pay benefits in the plan's initial years, a common practice among early public systems [33]. From 1942 to 1969, CSRS benefits were increased greatly. After 1969, public attitudes began to change, and cost-of-living adjustments that sometimes had exceeded the increase in Consumer Price Index were cut back a bit [31].

The Social Security program, enacted into law in 1935, first covered public employees in 1950, when state and local government groups were allowed to join and federal employees not under a retirement system became covered [54]. Military personnel came under Social Security provisions in 1957. Over the years many advisory groups and policy analysts recommended that federal civilian workers be covered, especially those newly hired [13]. This was surely correct in theory—by the 1970s Social Security covered nine out of ten workers, and nonuniversal coverage created gaps, overlaps, and windfalls in benefits for noncovered workers and their families. In practice, covering federal workers raised many problems of plan design, legislative jurisdiction, and acceptance by employee organizations, and so it had to await a time when the arguments favoring coverage became stronger and better accepted.

By the time the Reagan Administration began in January 1981, Social Security trust funds were running low. That year President Reagan appointed the National Commission on Social Security Reform to recommend ways to strengthen Social Security financing. This obviously would require some combination of benefit reductions and tax increases. The magnitude of such unpopular changes, affecting the vast majority of Americans, would be reduced if the program brought in more noncovered employees, who were

²A list of acronyms and abbreviations used is given at the end of the paper.

mostly government workers. (A related expansion of coverage was enacted in 1982, requiring that all federal workers pay the Medicare Hospital Insurance part of the payroll tax after 1982. The change recognized that most federal workers already qualify for Medicare through nonfederal employment of the employee or spouse.)

In its report early in 1983, the Commission recommended covering newly hired federal civilian employees as part of a broad reform package. In hearings on the report in February 1983, conservative groups testified in favor of this coverage proposal, citing issues of fairness to other taxpayers, while liberal groups also favored the proposal as a way of strengthening Social Security financing. Federal employee unions and organizations opposed the proposal, stating that a satisfactory supplemental retirement system should be designed first and that the expected savings to Social Security would not materialize.

The Social Security Amendments of 1983 mandated Old-Age, Survivors, and Disability Insurance coverage, effective January 1, 1984, for federal civilian employees in the following classes: (1) employees newly hired, or rehired with pre-1984 service after a break in service exceeding 365 days; (2) elected officials, high-level political appointees, and judges; and (3) employees of the legislative branch who had not elected to be covered by CSRS by December 31, 1983 [57]. With Social Security coverage in effect, it no longer made sense for new federal employees to receive the full CSRS benefits or to pay the full CSRS contributions. Thus, the retirement, survivors, and disability benefits for new federal workers had to be redesigned to recognize the benefits they would begin earning from OASDI.

In November 1983, an interim plan was enacted for 1984-85, temporarily providing new employees with the CSRS benefits offset by OASDI benefits deemed earned during federal service [24, 58]. The interim plan provided transitional benefits in survivor and disability cases and included a self-imposed legislative deadline of December 31, 1985, for enactment of a permanent plan to supplement Social Security. Employee contributions for the interim plan were set at 1.3 percent of pay, to provide parity between new and old employees. The 1.3 percent, when added to the 5.7 percent contribution rate for OASDI, equaled the 7 percent employee contribution rate under CSRS, although above the Social Security wage base CSRS-covered employees would pay 7 percent and new employees only 1.3 percent.

2. *Political Background*

While federal employee retirement legislation was taking shape in 1981–86, the two political parties shared power in Washington, with a popular Republican President, Democrats solidly controlling the House of Representatives, and Republicans holding a narrow majority in the Senate.

Shortly after the second Reagan Administration began in 1985, new people were appointed to three key policymaking positions regarding federal employee issues: the White House Chief of Staff; the Director, Office of Management and Budget (OMB); and the Director, Office of Personnel Management (OPM). Thus, although the first Reagan Administration was perceived to be a tough and experienced bargainer on federal employee issues, the President having fired the striking air-traffic controllers in 1981, the Administration's new team had yet to be tested. OPM, the Administration's technical advisor on federal employee retirement, had an actuarial staff and had used consulting actuaries for special studies prior to 1985.

In the House of Representatives, jurisdiction over federal employee retirement and other compensation issues resided in the Committee on Post Office and Civil Service and its Subcommittee on Compensation and Benefits. In the Senate, jurisdiction was in the Committee on Governmental Affairs and its Subcommittee on Post Office and Civil Service. (Hereafter, these will be referred to simply as the Senate or House "committee" or "subcommittee.") The House committee received ongoing assistance from a firm of consulting actuaries, and the Senate committee staff included an actuary during 1985–86.

Federal workers are a natural constituency of these two committees. During the 1970s, federal employee unions and organizations formed the Fund for Assuring an Independent Retirement Coalition, originally to resist coverage under Social Security and later to coordinate the lobbying of federal employee organizations on retirement issues.

The Federal Government Service Task Force, another important coalition concerned about federal employee pay and benefits, comprised 50 members of Congress whose legislative districts included substantial numbers of federal employees. In October 1984, the Task Force published a position paper, "Ten Myths About Civil Service Retirement," arguing that federal employee benefits were not overly generous [8]. In January 1985, the National Committee on Public Employee Pension Systems (PEPS), a group wishing to limit federal pensions, published a response to the "Ten Myths." PEPS

also proposed a new federal employee retirement system coordinated with Social Security [12].

The President's Private Sector Survey on Cost Control, better known as the Grace Commission, also advocated lower pensions for civil servants. (J. Peter Grace, its chairman, also headed W. R. Grace & Company.) The multivolumed Grace Commission report gave thousands of ideas for cutting the cost of the federal government, including a retirement plan coordinated with Social Security. A 1985 General Accounting Office (GAO) report indicated that the Grace Commission had overstated the savings that could be achieved for many of its retirement recommendations [3]. An earlier GAO report had found that W. R. Grace & Company's retirement plan offered potentially greater benefits than CSRS provides for most civil service employees [1].

Certain arguments were used by those trying to reduce the cost of federal employee pensions—that the retirement ages were too low, the cost-of-living adjustments (COLAs) too generous, and the plan greatly underfunded. Articles published for the general public told anecdotes of long-retired employees getting paid more than the active employees who replaced them and engaging in “double-dipping” by moving in and out of government employment and Social Security [35, 42, 45]. Meanwhile, those opposing reductions argued that the total pay and employee benefits package for federal employees was below levels for similar packages in private industry, that pay was not keeping up with inflation, and that windfalls available in the past had been eliminated. Organizations participating on both sides of this debate were assisted by consulting actuaries.

As 1985 began, federal employee unions said that they still hoped to repeal the legislation requiring those hired after 1983 to come into Social Security, and at least one bill was introduced proposing such repeal (H.R. 1336).

3. *Policy and Research Studies*

The Congress relies on three agencies for objective analyses of prospective legislation:

1. The Congressional Budget Office (CBO) typically projects revenues and outlays over the next five fiscal years for legislative proposals, indicating changes from a baseline reflecting current law. CBO's budget-score-keeping role is extremely important, with legislators often keeping one eye on public policy effects and the other on budget effects.

2. The Congressional Research Service (CRS), part of the Library of Congress, provides a wide range of work products. During 1982–84, CRS published studies of federal employee retirement and developed models to estimate actuarial normal costs and benefit replacement rates [14, 15, 17, 18]. During 1985–86, CRS cost and benefit estimates for each major proposal were used by all three parties in the legislative process—the House, the Senate, and the Administration. All cost estimates given in this paper were prepared by CRS except where indicated. CRS received technical studies and extensive ongoing support from consulting actuaries, the same ones who were assisting the House committee.
3. The General Accounting Office (GAO) analyzes the effects of proposed legislation and experience and trends under existing legislation. In 1984–85, the GAO published surveys of benefit levels, plan features, and retirement age data for nongovernmental retirement programs [2, 4, 5].

In 1983–84, the chairman of the Senate subcommittee, Sen. Ted Stevens, sponsored five Forums on Federal Pensions to educate key Senate personnel on issues and practices. The Employee Benefit Research Institute (EBRI) arranged for private pension experts to speak at these forums. Other participants came from government, employee organizations, lobbying groups, and academia [23].

4. *Action in 97th and 98th Congresses (1981–84)*

During 1981–84, federal employees became covered by Social Security, as discussed earlier, and the groundwork was laid for redesign of CSRS.

When Senate Republicans became the majority in 1981, Senator Stevens made a commitment to design a new retirement plan including Social Security. Stevens worked closely with CRS and outside experts regarding plan design and cost estimates and with leaders of employee groups regarding acceptability [21, 22]. In September 1982, Stevens introduced S. 2905, a bill to cover new employees by Social Security and to establish a defined contribution plan and a thrift plan. For five years, contributions would go into government securities paying interest at a rate 2 percentage points above the increase in the Consumer Price Index (CPI). After that, employees could allocate the money among several funds. Current employees could transfer to the new plan, with credit for the greater of (A) their contributions to date and matching employer contributions, with 5 percent interest, or (B) the present value of accrued benefits, based on 6 percent interest and CPI assumptions. Method B usually gave more to older workers.

In August 1983, Rep. John Erlenborn proposed the Federal Annuity and Investment Reform (FAIR) program. The plan had new features: (1) both a defined benefit plan and a thrift plan would supplement Social Security; (2) thrift plan funds would be invested in qualified investment programs, meaning individual retirement account (IRA)-like arrangements offered to individual employees by eligible fund managers (qualified banks, insurers, etc.); (3) the defined benefit plan would emphasize benefits to shorter-service, lower paid, and highly mobile employees, using a flat 1.15 percent accrual rate, ERISA-type vesting of accrued benefits, and indexing of vested deferred benefits. (The traditional CSRS emphasis on benefits for long-service federal employees would further diminish because of the portable benefits provided by Social Security and the thrift plan); and (4) under the existing CSRS, COLAs would be reduced and funding strengthened.

In December 1984, CRS published a major study of design options, cost estimates, and replacement rates, based on methodology eventually to be used in all cost estimates in the legislative process. The study showed an employer normal cost of 25 percent of pay for CSRS, and two alternative cost figures for a representative private plan: 19 percent for a "more generous" private plan and 16.5 percent for a "less generous" private plan. To provide comparability with CSRS, costs of the private plans included items usually kept separate: Social Security (OASDI), all disability and survivor benefits, all postretirement inflation increases (indexing), and thrift-savings (capital accumulation) plans [17].

A preliminary design study, performed for OPM by consulting actuaries and reported in December 1984, developed higher cost estimates—28 percent of pay for CSRS and 17 percent for a "typical nonfederal" plan—because of different assumptions and methods [30]. With no accepted definition of a representative private plan to serve as a benchmark, the costs and benefits of a typical private plan were the subject of ongoing discussion among the Administration and the two congressional committees. For example, at the 1985 Senate hearings, GAO testified that 19.3 percent of pay was the cost of an average private firm retirement program, based on a recent study [17, 26]. But when Sen. Albert Gore, Jr., questioned this, GAO added that 25.1 percent was the figure from the same study for large companies with work forces closer in size to the federal civilian work force.

5. *Action in 99th Congress (1985–86)*

a. *Preliminary Proposals*

In January 1985, Sen. Stevens informally proposed a retirement plan consisting of Social Security, a modest defined benefit plan, and a generous thrift plan. The estimated employer cost was 22 percent of payroll, well below the comparable estimate of 25 percent for CSRS. When federal employee unions made it clear that they disliked this proposal, Stevens indicated he would not introduce it as a bill [36]. The employee organizations had not yet accepted the finality of Social Security coverage and seemingly were not ready to back any retirement plan to supplement Social Security.

In March 1985, the director of OPM submitted for clearance by OMB a defined contribution plan to supplement Social Security and gave copies of the proposal to interested parties [37]. The government would contribute 11.6 percent of pay to an account held for each employee, to be invested in special government obligations. The estimated employer cost, including ancillary benefits and OASDI, was 19 percent of pay. But that OPM director was soon to leave the government, and the Administration never did propose a retirement plan of its own for new federal employees.

In June 1985, Rep. Rod Chandler introduced H.R. 2869, a revised version of the Federal Annuity and Investment Reform (FAIR) Act, again proposing to supplement Social Security with both a defined benefit plan and a thrift plan. A related proposal co-sponsored by Chandler was H.R. 3098, allowing any Qualified Professional Asset Manager (QPAM, meaning a bank, insurance company, money manager, etc., as defined by existing ERISA regulations for private plans) to establish a tax-qualified investment account called a Retirement–Universal Security Arrangement (Retirement–USA). Employers and employees could use a Retirement–USA as a convenient way to accumulate portable retirement funds. Chandler's FAIR bill used the Retirement–USA concept to invest federal employee thrift plan contributions.

b. *Senate Bill (S. 1527 and H.R. 2672)*

In the spring of 1985, the chairman of the Senate committee, Sen. William Roth, formed a Pension Work Group within the committee to design a bipartisan plan and introduce it at the full committee level. By May 1985, the Pension Work Group had tentatively agreed on a plan with an estimated employer normal cost of 22.4 percent of payroll. But as the final language and budget estimates were being readied, an unexpected political problem

arose regarding COLAs. In a dramatic 50-49 vote along party lines at 2 A.M. on May 10, the full Senate approved drastic spending cuts as part of a deficit-reduction package, with a freeze on all COLAs. Majority Leader Robert Dole called it "the most exciting vote I've ever cast in the Senate" and pointed to it with pride in the 1988 Presidential campaign. The COLA freeze soon lost Administration support and was omitted from the final budget package late in 1985. But for several months after May 10, Senate Democrats united in support of full COLAs.

The tentative Senate bill included a COLA based on the annual increase in CPI minus 2 percentage points, not a full COLA, and so the bipartisan bill had to become a Republican bill until COLAs became less controversial [48, 52]. Accordingly, provisions of the Senate plan were cut back to leave more room for bargaining later, reducing the cost to 20.8 percent of payroll. After the proposal was approved by the Administration at a White House meeting in July, it was introduced by Senators Stevens and Roth as S. 1527.

This proposal used a defined benefit unit of 1 percent of high-5 average salary, payable at age 62 unreduced, or at age 55 after 30 years of service subject to a 2 percent per year reduction from age 62. The COLA at ages 67 and over was based on the full CPI increase; at ages 62 to 67, it was based on the CPI increase minus 2 percentage points (CPI-2); below age 62 there was no COLA. (In the hearings these were described as the Classic COLA, the Diet COLA, and the Un-COLA.) Employees could contribute up to 5 percent of pay to a tax-deferred thrift plan, with full employer matching, and another 5 percent of pay with no matching. Investment options allowed employees to choose among a government securities fund, a fixed-income fund, and a stock index fund.

At Senate hearings in September 1985, the Administration gave qualified support to the Stevens-Roth bill, but employee groups were concerned about the changes from existing practice. Senate committee leaders from both parties responded that they were serious about moving ahead without further delay, promising that if they could get any plan through the Senate and House, the real plan would be written in a House-Senate conference committee. Accordingly, the union leaders agreed to cooperate [26].

In October 1985, the Senate committee approved a bipartisan substitute version of S. 1527 and reported it for floor action, accompanied by the customary written report [27]. The bill now contained two separate retirement plans, and each newly hired employee was to make an irrevocable choice of one or the other. Option A's features appealed to mobile employees

and Republicans (low employee contributions, modest early retirement features and COLAs, and a generous thrift plan). Option B's features appealed to career employees and Democrats (higher employee contributions, liberal early retirement and COLAs, and a scaled-back thrift plan). Such dual options would be difficult to administer, but served their purpose in moving the bill to the Senate floor.

In November 1985, the Senate approved the provisions of S. 1527 by a 96-1 vote, with minor floor amendments that were not contested. The estimated employer cost was 21.9 percent of pay. The administration gave qualified support to the bill, objecting to the thrift plan's administrative structure [51].

Just before final vote, the full retirement plan was added as an amendment to H.R. 2672, an unrelated bill already passed by the House. (This maneuver was prearranged and approved by the leadership. H.R. 2672 provided for renaming a post office in New Jersey.) The Senate plan now could go directly to a House-Senate conference committee, even though the House had not voted on a retirement plan. In a few days both chambers named conferees on H.R. 2672.

c. House Committee Bill (H.R. 3660)

During 1983-85, the House committee prepared for a major redesign of retirement benefits, getting preliminary studies and holding four sets of hearings [14, 19]. The October 1985 hearing focused on H.R. 3660, proposed that month by the committee's chairman, Rep. Bill Ford, and the subcommittee's chairwoman, Rep. Mary Rose Oakar. H.R. 3660 was patterned after CSRS, with many differences from the Senate bill, including (1) COLA based on the full CPI increase; (2) survivor and disability benefits more like those in CSRS; (3) a less generous thrift plan, with employee contributions matched at only \$0.50 per \$1.00; (4) availability of the thrift plan to CSRS employees, without employer matching contributions; and (5) no provision for CSRS employees to transfer to the new plan.

The estimated employer cost of H.R. 3660 was 25.4 percent of pay, slightly more than the comparable figure of 25.0 percent for CSRS. At the hearing, Ford indicated he had kept a commitment to the employee organizations to support a plan at least as generous as the existing CSRS. The House committee approved an amended bill on November 14 and, without issuing a report on H.R. 3660, went to conference on H.R. 2672, as described earlier. (Some policymakers considered the 25.4 percent cost a soft

figure, in the sense that a lower cost plan might have emerged from the process of getting approval from the full House.)

Table 2 outlines the House committee bill (H.R. 3660) and the two separate options under the Senate bill (H.R. 2672).

The 1983 legislation establishing the interim plan had set a December 31, 1985, deadline for enacting a new plan. A continuing resolution (P.L. 99-147, section 147) now extended this deadline to April 30, 1986.

d. The Conference

The House-Senate conference lasted for six months, from November 1985 to May 1986. The conferees held only two formal meetings, in May 1986, preceded by dozens of smaller intensive sessions among principals or staff—from the House, the Senate, and sometimes the Administration. Whenever House and Senate people met, always looming in the background was the White House's veto power. The Administration was mainly concerned about holding down the employer cost and keeping the thrift plan's private sector investments out of politics, and played a very minor role in drafting the provisions of the conference bill.

To facilitate agreement among the conferees, the "scope" of a House-Senate conference normally is determined by the extremes of the two differing bills on which they confer. For example, if one bill had a COLA based on the full CPI increase and the other had a COLA based on the CPI increase minus 2 percentage points, the final bill would have a COLA within that range. In this conference, insisting on the traditional concept of scope would not have facilitated agreement, because there were as many as four different proposals to reconcile instead of the usual two: both Senate Options A and B, which differed greatly; the House Committee bill (H.R. 3660), which had not undergone the full process of a committee report, floor amendments, and a roll-call vote; and the House-passed bill (the original H.R. 2672), with no new retirement provisions whatever, which in theory could have meant that the House had voted to give new employees the existing CSRS plus Social Security.

As predicted at the Senate hearings, the conferees agreed to start over and write the retirement plan from scratch, with few constraints regarding "scope." The final bill written in conference combined the provisions that the various conferees valued most highly while satisfying the Administration sufficiently about the overall cost and thrift plan structure. Conferees from the House Committee on Ways and Means dealt with the provisions on tax treatment and Social Security, discussed later.

The conference turned out to have two distinct stages. By mid-March of 1986, the House and Senate conferees had reconciled their differences regarding the major provisions and essentially agreed on an outline of final legislation. Then began an end game lasting two months, until the Administration resolved its earlier concerns. When the April 30 deadline passed without new legislation, an automatic provision took effect under which all employees hired after 1983 began contributing 7 percent of pay for retirement instead of 1.3 percent. (After the enactment of FERS, the extra 5.7 percent of pay was refunded.)

The Administration indicated its approval on May 14, and the next day the conferees met to ratify the new plan. They still were working from an outline at that stage, but an all-night effort produced a May 16 conference report giving full statutory language and the statement of managers. (Time did not permit completion of the usual section-by-section analysis; this was published separately in October by the Senate committee [29].) The bill, including last-minute technical changes ordered by means of Senate Concurrent Resolution 142, was approved by both chambers on a voice vote and sent to the President, who held a signing ceremony at the White House on June 6, 1986.

e. Final Provisions

Table 3 outlines CSRS and FERS, including new CSRS provisions allowing CSRS employees to join the thrift plan or transfer to FERS [29, 60]. Temporary provisions adopted later to delay thrift plan contributions to April 1, 1987, are not shown, nor are provisions for special kinds of employees, service, or pay. The language of CSRS and FERS is given in Title 5, U.S. Code, Chapters 83 and 84, respectively. Foreign Service and Central Intelligence Agency special-class employees have separate plans patterned after CSRS and FERS.

The provisions of FERS, discussed in detail later, have the following relationship to the House and Senate bills:

1. The defined benefit provisions in FERS are close to those in the House bill, although COLAs are patterned after Senate Option A. The minimum retirement age gradually increases from 55 to 57, as suggested in conference by House Republicans.
2. The thrift plan is close to the Senate version regarding contributions and investment options, although the automatic 1 percent employer contribution was added in conference. As in the House bill, thrift plan accounts

TABLE 2

COMPARISON OF HOUSE AND SENATE BILLS

Provision	Senate Option A	Senate Option B	House
1. Employee contribution rate (for basic benefits, in addition to cost of Social Security [OASDI] and Medicare)	None Employees come under Option A permanently when they are first hired, if they do not elect to pay the Option B contributions, or when separating from employment if they withdraw the Option B contributions	7% of pay minus employee's share of OASDI contribution: Up to Over S.S. S.S. wage wage <u>Year base base</u> 1987 1.3% 7.0% 1988-9 0.94 7.0 1990+ 0.8 7.0 (Wage base in 1987 is \$43,800)	Flat percentage of base pay: <u>Year %</u> 1987 1.3 1988-89 0.94 1990+ 0.8
2. Basic annuity formula (per yr of service)	0.9% times 1st 15 years of service, 1.1% times years of service over 15, all times high-5 average salary	Same as Option A	1% of high-3 average salary Unused sick leave not credited
3. Unreduced retirement benefits	Age 62 and 5 yr service	Age 55 and 30 yr service Age 62 and 5-29 yr service	Age 55 and 30 yr service Age 60 and 20-29 yr service Age 62 and 5-19 yr service Supplement paid to age 62, equal to estimated S.S. at age 62
4. Reduced retirement benefits	Age 55 and 30 yr service, reduced 2% per year employee is below 62 Age 55 and 10-29 yr service, reduced 5% per year employee is below 62	Age 55 and 10-29 yr service, reduced 5% per year employee is below 62	No provision
5. Cost-of-Living adjustments (COLAs) (based on annual percentage increase in CPI)	<u>Status COLA</u> Retired up to age 62 No COLA Retired ages 62-66, or survivors and disabled to age 67 CPI minus 2% Age 67 and up Full CPI	<u>Status COLA</u> Retired up to age 62 CPI minus 2% Retired ages 62 and up, or survivors and disabled at any age Full CPI	Annual COLA equal to full percentage increase in CPI
6. Contributions to thrift savings plan	Employee may contribute up to 10% of pay; first 5% is matched by employer at rate of \$1.00 per \$1.00 Maximum employer contribution per employee is 5% of pay	Employee may contribute up to 10% of pay; first 6% matched as follows: <u>Contribution Employer</u> <u>(% of pay) match</u> First 1% \$1.00 per \$1.00 Next 2% \$0.50 per \$1.00 Next 3% \$0.25 per \$1.00 Maximum employer contribution per employee is 2.75% of pay	Employee may contribute up to 10% of pay; first 6% matched by employer at rate of \$.50 per \$1.00 Maximum employer contribution per employee is 3% of pay

TABLE 2—Continued

Provision	Senate Option A	Senate Option B	House
7. Other thrift plan features	Employee has choice of three investment funds Vesting grades up to 100% after 5 yr service	Same as Option A	Employee has choice of 6 investment funds Vesting is full and immediate CSRS employees may contribute, but no employer match
8. Survivor benefits (in addition to benefits from Social Security, Thrift plan, and Federal Employees' Group Life Insurance [FEGLI])	At preretirement death, spouse gets 50% of accrued annuity, reduced for age at death below 62, crediting employee with minimum of 10 yr service At postretirement death, spouse gets 50% survivor annuity. Employee's annuity reduced 10% while employee alive	At preretirement death, spouse gets 50% of accrued annuity, not reduced for age at death below 62, crediting employee with minimum of 10 yr service At postretirement death, spouse gets 50% survivor annuity Employee's annuity reduced 10% while both spouses alive Active employees in FEGLI covered for 2 × annual pay, at all ages	At preretirement death, spouse gets 50% of accrued annuity, with additional benefit to age 60 if S.S. is not payable At postretirement death, spouse gets 50% survivor annuity Employee's annuity reduced by 2.5% of first \$3,600 and 10% of the excess while both spouses alive Child's benefits to age 18, or 22 if student, offset by S.S.
9. Disability benefits	Long-term disability (LTD) benefit to age 62, at 60% of high-5 offset by Social Security (or 40% to age 55, if employee can't meet S.S. disability test) Annuity is paid when LTD benefit stops, crediting service while disabled, and with high-5 increasing with CPI minus 2 percentage points, but not more than LTD amount	LTD benefit, same as Option A Annuity is paid when LTD benefit stops, crediting service while disabled, and with high-5 increasing with full CPI; not limited to LTD benefit amount	Disability annuity, on top of social security, if any, is the accrued annuity, but not less than smaller of (A) 20% of high-3 salary or (B) annuity projected to age 60 Employee who can't meet S.S. test of disability also gets supplement to age 62 equal to the smaller of (A) disability annuity or (B) 70% of social security
10. Transfers	CSRS employees may transfer to new plan with S.S. in 1987	Same as Option A	No provision

Note: Senate Options A and B are from H.R. 2672, containing retirement provisions of S. 1527, passed by Senate on November 7, 1985. House bill is H.R. 3660, approved by House Committee on Post Office and Civil Service on November 14, 1985.

vest immediately (except the automatic 1 percent contribution vests after three years of service in most cases), and CSRS employees may contribute on a nonmatched basis.

3. The survivor and disability provisions are complex, many of them written in conference. The disability provisions generally use the House approach, which does not tighten the test of disability or raise benefit levels.
4. The Senate provision was included allowing CSRS employees to transfer to FERS, but with transfers not commencing until July 1, 1987.

Final estimates at the time of enactment indicated that FERS had an employer normal cost of 22.9 percent of payroll (13.6 percent was for basic benefits, 3.4 percent for the thrift plan, and 5.9 percent for Social Security) [29]. The estimated employer cost of CSRS using the same assumptions was 25 percent of payroll.

Table 4 summarizes budget estimates made by the CBO shortly before enactment. Each amount represents the aggregate change in budget deficit over the five fiscal years 1987-91. A negative figure means a reduction in the deficit, and a positive figure means an increase in the deficit. The budgetary logic by which thrift plan contributions in special issue government securities have no budget effect until paid out is discussed more fully later in this paper. Over the five years FERS was estimated to reduce the deficit by \$8.4 billion. (Within each item making up the total, the year-by-year figures were estimated to increase substantially during the five years [29].)

f. Related Legislation

Gramm-Rudman Statute

The federal budget deficit, which was close to \$200 billion each fiscal year during the mid-1980s, dominated political agendas in Washington and drove much of the legislation. One attempt to deal with the problem was a statute enacted in December 1985 known as Gramm-Rudman-Hollings, or Gramm-Rudman [59]. This law provided that, unless certain deficit-reduction goals were met, automatic across-the-board cuts in most federal programs would take effect. Because the Gramm-Rudman goals became more difficult each year, there was much doubt that they could be met or, if they were not met, that the drastic cuts would be allowed to occur. Within a few months the Supreme Court overturned a key provision, finding that the Comptroller General lacked the power to make certain determinations required, so that the spending cuts did not have an enforcement mechanism. This led to later efforts to revitalize the Gramm-Rudman statute as a way of

TABLE 3
COMPARISON OF CSRS AND FERS

	Civil Service Retirement System (CSRS)	Federal Employees' Retirement System (FERS)																												
1. Employee contribution rate (in addition to Medicare and thrift plan contributions)	Civil servants employed continuously from December 1983 contribute 7% for retirement and are not covered by S.S. Benefits for certain employees covered by S.S., or for special-class employees contributing at higher rates, are not shown in this table	<table border="1"> <thead> <tr> <th>Year</th> <th>For retirement, on total basic pay</th> <th>For S.S., on pay over earnings base</th> </tr> </thead> <tbody> <tr> <td>1987</td> <td>1.3%</td> <td>5.7%</td> </tr> <tr> <td>1988-9</td> <td>0.94</td> <td>6.06</td> </tr> <tr> <td>1990+</td> <td>0.8</td> <td>6.20</td> </tr> </tbody> </table> Benefits for special-class employees contributing at higher rates are not shown in this table	Year	For retirement, on total basic pay	For S.S., on pay over earnings base	1987	1.3%	5.7%	1988-9	0.94	6.06	1990+	0.8	6.20																
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1987	1.3%	5.7%																												
1988-9	0.94	6.06																												
1990+	0.8	6.20																												
2. Basic annuity formula (per year of service)	Based on high 3-year average pay: 1.5% for first 5 yr, 1.75% next 5 yr, and 2% for yr over 10 Unused sick leave is credited	1% of high-3 average salary, except 1.1% at retirement after age 62 and 20 yr service Unused sick leave not credited																												
3. Unreduced retirement benefits (age and service requirements)	Age 55 and 30 yr service, age 60 and 20 yr service, or age 62 and 5 yr service	Minimum retirement age (MRA, based on table below) and 30 yr, age 60 and 20 yr, or age 62 and 5 yr service <table border="1"> <thead> <tr> <th>Year of birth</th> <th>MRA</th> </tr> </thead> <tbody> <tr> <td>Before 1948 . . .</td> <td>55</td> </tr> <tr> <td>1948</td> <td>55 + 2 mo.</td> </tr> <tr> <td>1949</td> <td>55 + 4 mo.</td> </tr> <tr> <td>1950</td> <td>55 + 6 mo.</td> </tr> <tr> <td>1951</td> <td>55 + 8 mo.</td> </tr> <tr> <td>1952</td> <td>55 + 10 mo.</td> </tr> <tr> <td>1953 - 1964 . . .</td> <td>56</td> </tr> <tr> <td>1965</td> <td>56 + 2 mo.</td> </tr> <tr> <td>1966</td> <td>56 + 4 mo.</td> </tr> <tr> <td>1967</td> <td>56 + 6 mo.</td> </tr> <tr> <td>1968</td> <td>56 + 8 mo.</td> </tr> <tr> <td>1969</td> <td>56 + 10 mo.</td> </tr> <tr> <td>1970+</td> <td>57</td> </tr> </tbody> </table>	Year of birth	MRA	Before 1948 . . .	55	1948	55 + 2 mo.	1949	55 + 4 mo.	1950	55 + 6 mo.	1951	55 + 8 mo.	1952	55 + 10 mo.	1953 - 1964 . . .	56	1965	56 + 2 mo.	1966	56 + 4 mo.	1967	56 + 6 mo.	1968	56 + 8 mo.	1969	56 + 10 mo.	1970+	57
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4. Supplement payable to age 62	No provision	Employee separating after MRA with 30 yr service, or age 60 with 20 yr service, gets supplement to age 62, equal to estimated age-62 S.S. benefit that is attributed to federal service Supplement subject to earnings test similar to one used by S.S. Supplement is reduced by one-half of employee's earned income above annual exempt amount (\$5,760 in 1986)																												
5. Reduced retirement benefits	No provision	Age 55 and 10-29 yr service, reduced 5% for each year that retirement age is below 62																												
6. Involuntary retirement benefits	Age 50 and 20 yr service, or any age and 25 yr service: Benefit is reduced 2% for each year by which age is below 55	Age 50 and 20 yr service, or any age and 25 yr service; annuity is paid unreduced, supplement paid from MRA to age 62																												

TABLE 3—Continued

	Civil Service Retirement System (CSRS)	Federal Employees' Retirement System (FERS)								
7. Vesting and refunds (at separation from employment)	<p>< 5 yr service: Refund of contributions with interest</p> <p>≥ 5 yr service: Refund of contributions or deferred annuity at age 62</p> <p>Rehired employees may redeposit contributions with interest to get credit for prior service</p>	<p>< 5 yr service: Refund of contributions with interest</p> <p>≥ 5 yr service or more: Refund of contributions with interest, or annuity deferred until attainment of age and service needed for unreduced annuity (MRA and 30 yr, age 60 and 20 yr, or age 62 and 5 yr) or reduced annuity at age 55 and 10 yr service</p> <p>Employee taking refund irrevocably forfeits all credit for period of service involved</p>								
8. Cost-of-living adjustments (COLAs) (based on annual percentage increase in CPI)	Annual COLA equal to full increase in CPI	<p>Annual COLA goes to regular retirees over age 62, and to all disabled employees and survivors:</p> <table border="1"> <thead> <tr> <th>CPI increase</th> <th>COLA percentage</th> </tr> </thead> <tbody> <tr> <td>Up to 2%</td> <td>Same as CPI increase</td> </tr> <tr> <td>2% to 3%</td> <td>2%</td> </tr> <tr> <td>3% or more</td> <td>CPI increase minus 1 percentage point</td> </tr> </tbody> </table>	CPI increase	COLA percentage	Up to 2%	Same as CPI increase	2% to 3%	2%	3% or more	CPI increase minus 1 percentage point
CPI increase	COLA percentage									
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3% or more	CPI increase minus 1 percentage point									
9. Contributions to thrift savings plan (tax-deferred under the rules for a 401(k) arrangement)	Employee may contribute up to 5% of pay; no employer contribution	<p>Employer automatically contributes amount equal to 1% of pay</p> <p>Employee may contribute up to 10% of pay, with matching as follows:</p> <table border="1"> <thead> <tr> <th>Contribution</th> <th>Employer match</th> </tr> </thead> <tbody> <tr> <td>First 3% of pay . .</td> <td>\$1.00 per \$1.00</td> </tr> <tr> <td>Next 2% of pay . .</td> <td>\$0.50 per \$1.00</td> </tr> </tbody> </table>	Contribution	Employer match	First 3% of pay . .	\$1.00 per \$1.00	Next 2% of pay . .	\$0.50 per \$1.00		
Contribution	Employer match									
First 3% of pay . .	\$1.00 per \$1.00									
Next 2% of pay . .	\$0.50 per \$1.00									
10. Vesting of thrift plan contributions	Immediate vesting	Immediate vesting, except automatic 1% contribution vests after 3 yr service for civil servants (2 yr service for others)								
11. Thrift plan investments: — Employee may elect to invest own account in:	G Fund: Government securities, special issues.	<p>G Fund: Government securities, special issues</p> <p>F Fund: Fixed-income securities</p> <p>C Fund: Common stocks, using an index fund</p>								

TABLE 3—Continued

	Civil Service Retirement System (CSRS)	Federal Employees' Retirement System (FERS)																																						
— Phase-in of private sector investment option in early years of the plan:	Not applicable	<table border="1"> <thead> <tr> <th rowspan="2">Contributions in calendar year</th> <th colspan="2">% required to be invested in G Fund</th> </tr> <tr> <th>Employee</th> <th>Employer</th> </tr> </thead> <tbody> <tr><td>1987</td><td>100%</td><td>100%</td></tr> <tr><td>1988</td><td>80</td><td>100</td></tr> <tr><td>1989</td><td>60</td><td>100</td></tr> <tr><td>1990</td><td>40</td><td>100</td></tr> <tr><td>1991</td><td>20</td><td>100</td></tr> <tr><td>1992</td><td>0</td><td>100</td></tr> <tr><td>1993</td><td>0</td><td>80</td></tr> <tr><td>1994</td><td>0</td><td>60</td></tr> <tr><td>1995</td><td>0</td><td>40</td></tr> <tr><td>1996</td><td>0</td><td>20</td></tr> <tr><td>1997+</td><td>0</td><td>0</td></tr> </tbody> </table>	Contributions in calendar year	% required to be invested in G Fund		Employee	Employer	1987	100%	100%	1988	80	100	1989	60	100	1990	40	100	1991	20	100	1992	0	100	1993	0	80	1994	0	60	1995	0	40	1996	0	20	1997+	0	0
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12. Survivor benefits (in addition to benefits from thrift plan and Federal Employees' Group Life Insurance [FGLI])	<p>At preretirement death after 5 yr service, spouse gets 55% of:</p> <p>(A) accrued annuity, or, if larger, lesser of (B) or (C):</p> <p>(B) 40% of high-3 salary, or</p> <p>(C) annuity projected to age 60</p> <p>At postretirement death, spouse gets 55% survivors annuity</p> <p>Employee's annuity is reduced by 2.5% of first \$3,600 and 10% of excess while both spouses alive</p> <p>Child's benefits payable to age 18, or age 22 if a student</p>	<p>At preretirement death after 18 mo. service, in addition to any S.S. spouse gets lump sum equal to \$15,000 (indexed) plus 1/2 of employee's annual pay and, if employee had 10 yr service, annuity equal to 50% of accrued annuity</p> <p>At postretirement death, spouse gets 50% survivors annuity, plus supplement to age 60 if no S.S. is payable</p> <p>Employee's annuity reduced 10% while both spouses alive</p> <p>Child's benefits to age 18 (22 if a student), offset by S.S.</p>																																						
13. Disability benefits	<p>Benefits after 5 yr of service:</p> <p>(A) accrued annuity, or, if larger, lesser of (B) or (C):</p> <p>(B) 40% of high-3 pay, or</p> <p>(C) annuity projected to age 60</p>	<p>S.S. disability benefits and, after 18 mo. service, disability annuity to age 62 equal to 40% of high-3 offset by 60% of S.S. (except in 1st yr, 60% of high-3 offset by 100% of S.S.), but not less than accrued annuity</p> <p>Annuity recomputed at age 62 from basic annuity formula, but limited to benefits from 40%-minus-60% formula; years of disability are credited; high-3 is increased at annual rate of CPI increase less 1%</p>																																						
14. Transfers	Employee may transfer to FERS July-December 1987, or after 1987 if within 6 mo. following rehire	Not applicable																																						

TABLE 4

ESTIMATED BUDGET IMPACTS OF THE FERS ACT (\$ BILLIONS)

Employee thrift plan contributions, by salary reduction	- 9.8
Higher postage rates, to defray costs of U.S. Postal Service	- 4.0
Decreased payroll deductions, on pay above Social Security wage base	0.4
Decreased current income taxes from thrift plan participants	1.6
Investment of thrift plan funds in nongovernmental securities	1.7
Increased benefits from FERS, thrift plan, and Social Security	1.7
Total change in deficit	- 8.4

forcing action on the deficit. Because the FERS Act reduced the five-year deficit by an estimated \$8.4 billion, Gramm-Rudman enhanced its appeal.

Tax Reform Act of 1986

The Tax Reform Act of 1986 became law in October 1986, with several effects on federal employee retirement benefits [62].

First, tax reform wiped out deductible contributions to IRAs by many federal employees (individuals earning over \$25,000 and couples earning over \$40,000 were at least partly affected). Also, tax reform removed uncertainty that the new thrift plan would get favorable tax treatment. Such changes made the thrift plan more attractive to employees.

However, the Tax Reform Act's stricter nondiscrimination test, if applied to federal employees, would have limited the average annual deferral (contribution) percentage by federal employees earning over \$50,000 per year to 2 percentage points more than the average contributed by lower paid employees. In practice, this would require extensive computations after year-end and refunds of excess contributions. Although only about 5 percent of federal employees earned over \$50,000, such a retroactive test would cause uncertainty, extra administrative cost, and potential cutbacks in contributions among over-\$50,000 employees. As indicated below, legislation enacted at the end of 1987 exempted the federal thrift plan from this test.

Finally, the Tax Reform Act repealed the three-year recovery rule for benefits paid from a contributory retirement plan. The old rule allocated CSRS benefits first as a return of the employee's after-tax contributions, which thus were received tax-free during the first year or two in typical cases. The new rule prorated the tax-free return of contributions evenly over the expected lifetime of a retired employee, thus speeding up the taxation of benefits substantially. This change had a much greater effect under CSRS than FERS because of the heavier after-tax contributions under CSRS.

Technical Corrections through January 1988

Several laws enacted in October 1986 made technical changes to FERS. The most visible change was to defer the effective date of thrift plan contributions from January 1 to April 1, 1987, allowing more lead time to set up administrative procedures, with catch-up contributions to be made during the balance of the 1987 fiscal year [61]. Another law revised the fiduciary rules applying to officials of the Thrift Board [63].

Three more sets of technical amendments relating to FERS were signed into law in April 1987, December 1987, and January 1988. Regarding FERS itself, the most important change was to revise the fiduciary language to indemnify the Thrift Board members and Executive Director against personal liability; without such protection, the Board members had announced they would resign, having determined that adequate fiduciary insurance was not available from private industry [64]. The amendments also made many small changes in eligibility and other provisions [65].

Other important changes involved Social Security and the Internal Revenue Code [66]:

1. The Social Security provision known as the government pension offset was modified to tighten the offset rules for federal employees transferring from CSRS to FERS after 1987.
2. The federal employee thrift plan was exempted from the nondiscrimination requirements applying to highly paid employees under 401(k) plans.

These changes are discussed later.

B. THRIFT-SAVINGS (DEFINED CONTRIBUTION) PLAN

This section begins by giving reasons for including a thrift plan in FERS and for allowing investments in the private sector. Next are a description of the four major investment alternatives considered in the legislative process and reasons why Congress decided on a passive investment approach involving an index fund. Last is a discussion of administrative provisions.

1. *Purposes of Thrift Plan*

The thrift-savings plan is the most innovative feature of FERS. Although large private firms often use thrift plans to supplement defined benefit plans, CSRS and other large public retirement systems use defined benefit plans almost exclusively. Why did FERS include a thrift plan? Jamie Cowen, counsel for Senator Stevens' subcommittee and the principal draftsman of FERS, gave several reasons [25]:

- Employees would be encouraged to save toward their retirement.
- Employees would appreciate the early vesting and loan provisions.
- Employees would have portable benefits, allowing them to change jobs without heavy forfeitures of benefits.
- Employees would own their accounts, which would not be subject to possible benefit cuts to help balance the budget.
- The plan would use private investments, producing higher investment returns and aiding capital formation in the U.S. economy.

Other advantages of a thrift plan include the following:

- Thrift plan participation tends to be tilted somewhat toward highly paid employees, thus coordinating with Social Security, as discussed later.
- A thrift plan does not have open-ended costs or unfunded liabilities and can set aside funds in the private sector as benefits are earned.
- Employee contributions invested in special government securities reduce five-year budget outlays. (This was a reason for covering CSRS employees.)
- Employees can contribute from before-tax dollars when the plan receives the tax treatment provided under section 401(k).

Possible disadvantages of a thrift plan include the following:

- Employees risk accumulating inadequate funds because of poor investment returns, long life spans, or inflation.
- Federal employees, with heavy payroll deductions already, may not be able to afford additional contributions to a thrift plan.
- The cost of additional benefits for employees who leave before retirement reduces the amount available for retirement benefits.
- Investing may become politically motivated or may be handled ineptly and lose employees' confidence.
- The plan may fail to meet retirement objectives because employees make the wrong investment choices or divert fund payouts to nonretirement purposes.
- Policymakers in the legislative and executive branches must learn to deal with new investment and administrative concepts, including a need to communicate thrift plans aggressively.

2. *Private Sector Investments: Pros and Cons*

The three large federal retirement systems—CSRS, Social Security, and the military retirement system—have always invested in government securities. (A few small plans and agencies use private investments.) All other possibilities have seemed objectionable, as explained by Robert J. Myers:

1. Investing in corporate securities implies government control of much of the private economy, assuming that government officials would control investment decisions. If funds instead were invested widely and indiscriminately, there might be loss of principal or investment return.
2. Another possibility would be for agency officials to invest the funds in activities deemed socially and economically desirable, such as housing. This would be even more objectionable, involving government control by persons not directly accountable to voters [11].

For the new federal employee retirement plan, discussions during 1982–84 focused on the historically greater yields of private investments. The Ibbotsen-Sinquefield data, as updated for the 1985 Senate hearings, showed average annual rates of return from 1926 through mid-1985 as follows:

Common stocks (S&P 500)	9.7%
Long-term corporate bonds	4.6%
Long-term government bonds	3.9%
Treasury bills	3.4%
Inflation (CPI)	3.1%

Besides investment return, a second argument favoring private sector investments was that additional savings invested in the private sector would increase capital formation and stimulate long-range economic growth. This argument depends on *additional* savings; if investments of a federal retirement system were merely shifted from government securities to private investments, the government would have to borrow more from the private sector, with no net effect on the economy. Policymakers generally accepted this reasoning, although the macroeconomic effects are difficult to analyze and predict.

A 1984 report by the Senate subcommittee expressed the view that (1) private investments historically had higher rates of return, (2) private investments by a federal plan could assist in capital formation, (3) an independent board would minimize the risk of government interference in investment decisions, (4) financial markets would have no problem absorbing the investments of a federal plan, and (5) employees could direct their own investments, e.g., among stocks, bonds, and real estate [24].

Beginning in 1985, more attention was focused on the possibility that investment decisions could be influenced by social and political considerations. A staff paper prepared in May 1985 for the Senate's Pension Work Group gave pros and cons of investing in the private sector. Advantages were

(1) historically higher yields, (2) investment choices for employees, (3) fairness to employees, avoiding low-yielding government securities, and (4) possible contribution to capital formation and economic growth. Disadvantages were (1) the issue of government control over "socially desirable" investments, (2) related problems with control of private securities and proxy voting, (3) poor returns during some time periods, (4) speedup in budget outlays, and (5) administrative problems with investments, recordkeeping, and communication.

Regarding social-political issues, the staff paper warned that private investments might involve judgments about keeping funds out of "bad" places, e.g., South Africa, tobacco and liquor industries, nuclear power and weapons facilities, or firms with bad records on labor relations, environment, safety, or defense contracts. Conversely, funds might be steered toward "good" uses, e.g., low-interest mortgages, low-rent housing, minority-owned businesses, small businesses, or bailouts for large employers. Who would decide, by what process, and how could such decisions be kept separate from politics? These questions had been discussed before by private firms and state and local government [7, 38]. Now the federal government wanted satisfactory answers.

3. *Choosing an Investment Method*

Thrift plan investment provisions occupied far more time in the legislative process than any other provisions of FERS. The question was how to invest in private securities without giving the executive branch investment powers that might be used for political purposes. In response, four different thrift plan investment methods were proposed during 1985–86: (1) government securities only; (2) active investments, with investment managers insulated from elected officials; (3) IRA-type investments, giving employees almost full control; and (4) passive investments, controlled by statute, with an index fund.

The final legislation provided for investment in several government-managed funds, including an index fund for common stocks. The index fund was intended to give federal employees an attractive way to participate in the growth of the private sector without political interference. The decision to use this approach was reached after extensive discussion of alternative proposals.

Alternative 1: Government Securities Only

OPM's proposal in March 1986 used a defined contribution plan with all funds in government securities. At House hearings in April, Chairman Ford

asked OPM Director Devine whether he could support a plan allowing employees to direct that funds be invested in the private sector. Devine responded that he would recommend a veto in that case, because of the danger that government officials would invest funds to favor selected private firms for political purposes [19]. But the Congress showed no enthusiasm for using government securities exclusively, and the Administration did not pursue this approach.

Alternative 2: Active Investments with Insulation of Managers

The Stevens proposals in 1982 and early in 1985 used actively managed investments, with each employee choosing among a few professionally managed funds. A politically appointed Thrift Board would name an Executive Director with broad discretion to invest the funds and substantial protection against removal from office. The Executive Director would select the fund managers, thus insulating them from political pressure. But, because the Thrift Board would have the power to replace the Executive Director, this method was deemed to have inadequate insulation of investment decisions against politics. (The matter of who would have the power to fire an independent arbiter was also the basis on which the Supreme Court later ruled Gramm-Rudman unconstitutional.)

Alternative 3: IRA-Type Arrangement

Erlenborn's 1983 proposal allowed each employee to select an institution to invest his or her funds from qualified managers, including banks, insurers, savings institutions, mutual funds, and stockbrokers, who would be subject to ERISA fiduciary standards. Others advocating this so-called IRA approach were Hartman in 1983, Chandler in 1985, and the Administration in 1985-86 [9].

Although the IRA method clearly kept politics and investments apart, it was ultimately rejected. The conference report for the FERS Act listed these objections, which were repeated from the Senate report:

- (1) There are literally thousands of qualified institutions who would bombard employees with promotions for their services. The committee concluded that employees would not favor such an approach.
- (2) Few, if any, private employers offer such an arrangement.
- (3) Even qualified institutions go bankrupt occasionally and a substantial portion of an employee's retirement benefit could be wiped out.
- (4) It would be difficult to administer.
- (5) This 'retail' or 'voucher' approach would give up the economic advantage of this group's wholesale purchasing power derived from its large size, so that employees acting individually would get less for their money [26, 28].

Alternative 4: Passive Investments with Index Fund

Senator Roth added to the Stevens proposal a passive investment approach used by some private plans to improve investment performance, and intended here to avoid political influence too. Statutory restrictions would minimize the Thrift Board's decision-making role for private sector investments. Employees would choose among only three funds, with the private investments essentially self-managed, leaving little or no room for political manipulation.

One fund would invest in special-issue U.S. government obligations. This seemed especially appropriate when the government's annual budget deficit was some \$200 billion. Any investments in special-issue securities would stay on budget until funds were paid out, thus reducing the deficit.

A second fund would invest in private fixed-income securities such as insurance company Guaranteed Investment Contracts (GICs), bank certificates of deposit, or other debt securities. This fund would provide an alternative to government securities without the risks of the stock market. Originally it was intended that this fund would use only securities *issued by* institutional investors such as banks and insurers, to avoid social and political judgments arising if the fund held securities issued by corporations that were the ultimate borrowers. The eventual language allows this fund to use securities *issued or selected by* institutions or money managers employed by the Thrift Board. This fund does not easily accommodate GICs, because of participant-allocation requirements and competition from the government securities fund.

The third fund was an index fund invested in common stocks, such as Standard & Poor's 500 or the Wilshire 5000. Once selected, the index essentially determines the mechanics of investing in the stocks in the index. But first, policymakers needed education on what an index fund is and how it works.

Operation of an Index Fund

In an index fund, the proportion of funds invested in a stock at any time is equal to the weighting of that stock in the index, easily determined from the market values of the stocks in the index. For example, suppose that ABC Company had outstanding 100 million shares with a current market price of \$20 a share. ABC Company would then have a capitalization of 100 million times \$20, or \$2 billion. If all stocks in the index had a capitalization of \$2 trillion, then ABC's stock would represent 0.1 percent of the total. Accordingly, the index fund would keep 0.1 percent of its investments (as nearly as possible) in ABC Company.

Continuing the example, what if the price of ABC stock suddenly jumped to \$22? Then the value of both ABC Company and the total of all stocks in

the index would increase by \$200 million. The percentage to be invested in ABC would become approximately 0.11 percent, and the fund would already hold the proper number of shares. Thus, an index fund has no need to buy or sell shares except to handle incoming or outgoing cash flow, or to adjust for any redefinition of the index, generally due to corporate mergers, spin-offs, or liquidations. While an index fund is growing, it merely buys and holds stocks in a set way that requires no knowledge of investments. Sampling techniques may allow an index fund to avoid the expense of holding every small company in the index.

Compared to an actively managed fund, savings in operating costs for an index fund are impressive. With no turnover of the stock portfolio, an index fund avoids turnover costs for administration, trading, and execution, estimated by one investment expert at 1.2 percent a year for a large actively managed fund; also, an index fund avoids research and decision-making costs of active management, estimated at 0.4 percent a year for a large fund [6]. (The 1.2 percent was estimated from 30 percent annual turnover times 4 percent for the round-trip cost to buy and sell, including both explicit costs, e.g., commissions, and implicit costs, e.g., execution. The 30 percent turnover figure was estimated in the early 1980s, and since then turnover is reported to have increased substantially.)

Discussions by Senate staff with large employers indicated that an established index fund could be managed for less than 0.1 percent a year. Thus, an actively managed fund must earn a rate of return about 1.5 percentage points higher than a passively managed fund every year simply to break even on the cost of active management.

In fact, investment publications note that most actively managed stock funds have not kept up with the market averages in recent years. Also, a stock index fund is well diversified against the risk of large losses in any stock or group of stocks. Although index funds were being used mainly in defined benefit plans, they appeared to have distinct advantages for the FERS thrift plan.

Indexing, in use since the mid-1970s, is based on the "efficient market" theory that the market involves a large number of professional players, with their actions combining to give each security a price tending to reflect all available information at a given time. Thus, an index fund relies on the market's pricing, without attempting to impose some other values. Although indexing has usually involved stocks, it can involve other kinds of securities. (It would appear possible in theory for indexing to become so dominant that it could contribute to market instability or pricing anomalies. However,

analyses of the so-called meltdown of the stock market in October 1987 have attributed the instability to strategies involving stock index futures rather than indexing itself.)

Choosing among the Alternatives

When the passive investment method was proposed, Senate policymakers quickly accepted it as the best way for federal employees to participate in the growth of the private economy without political manipulation of the investment process. Thus, Senate Options A and B had the same investment provisions, despite many other differences. The House bill combined active and passive management, but in conference the House receded to the Senate on this issue.

Meanwhile, the Administration came to dislike any central investment control, even using passive methods. At Senate hearings in 1985, the Administration representative indicated several problems with the Stevens-Roth bill but did not mention investment provisions. By November 1985, the Administration strongly recommended that employees choose their own fund managers because of concerns about the Thrift Board concept and possible social investing.

Over the next few months Administration officials argued their case in the press, expressing alarm at the power of a federal Thrift Board to "invest \$100 billion anywhere in the private market to forward its own social and economic agenda" [39, 40]. Senators Roth and Stevens responded in the *Congressional Record*, explaining how the Thrift Board would have no such power and indicating problems with the IRA arrangement [47, 49]. During these winter months, policymakers worked through various new approaches to the thrift plan structure. By the end of March 1986, all parties had finally agreed on the Senate approach. Advantages of this decision were described by the Senate committee:

By offering only a few alternative choices of investment funds, just as private plans do, this plan uses its size and mass purchasing power to make the funds available for investment work harder and more efficiently than is otherwise possible, and avoids turning the workplace into a marketplace where numerous promoters would contact employees to sell them investment products [29].

The conferees noted that large thrift plans usually let employees choose from three or four funds, rarely varying far from this range; evidently employers prefer not to choose a fund themselves, nor to administer very many choices. The conferees considered adding other funds to the original three but were unable to design other passively managed funds that would give

employees meaningful investment choices or justify the additional administrative burden.

Proxy Voting

A related political-social investment issue involved the voting rights connected with common stocks, a difficult issue even for private plans. The Senate bill would have let an employee committee decide how to vote proxies, but this was discarded as too activist. The conferees considered trying to sell the voting rights—an untested approach, too complex to develop in the time available. The conferees decided on the most passive approach possible—the government would not vote the shares at all. However, the legislative history is silent about whether outside fund managers can vote these proxies; perhaps they can if outside managers are used, although this might be viewed as the government's voting the shares indirectly.

4. *Design of the Thrift Plan*

a. Employee Participation

In the FERS cost estimates, the employer contributions indicated for the thrift plan implied certain levels of employee participation. Under Senate Option A and FERS, average participation (percentage of matchable employee contributions) was assumed to be 60 percent and 56 percent, respectively. Under Senate Option B and the House bill, with lower employer matching, assumed participation rates were 43 percent and 47 percent, respectively.

Most provisions of the FERS Act took effect on January 1, 1987, a date set in the Senate and House bills before delays occurred in enacting the legislation and appointing the Thrift Board. One thrift plan expert had stated for the 1985 Senate hearings: "Launching this program by January 1, 1987 will require tremendous quantities of hard work and luck and would have to be characterized as distinctly against the odds" [26]. Legislation late in 1986 postponed the thrift plan's effective date to April 1, 1987, with temporary increases in employee and employer contribution rates to make up for the three-month delay.

About 600,000 FERS employees, those hired after 1983, came into the thrift plan automatically on April 1, 1987, with some 40 percent of them making employee contributions in 1987. About 20 percent of the 2 million CSRS employees, hired before 1984, also joined the thrift plan in 1987.

Such initial participation rates were low compared to those estimated based on private sector experience.

The thrift plan is reopened each January and July for new entrants and for changes in contributions or investment allocation. Newly hired employees enter the plan at the second reopening, six to twelve months after hire; this delay reduces employer contributions and recordkeeping for short-term employees.

b. Administrative Structure

FERS established a new agency, the Federal Retirement Thrift Investment Board ("Thrift Board"), to do recordkeeping, investing, and other administration, using outside contractors as needed. Although one could make a case for handling this plan through OPM, a new agency independent of the Administration seemed more appropriate because of the different orientation needed to invest billions of dollars effectively in the interests of participants.

The Thrift Board has five members who are appointed by the President, taking into account one recommendation from the House and one from the Senate. The Board is structured as a truly independent agency: its members may not be removed by the President during their terms of office; it submits its budget directly to the Congress without approval by OMB; and it does not clear regulations with OMB before publishing them.

An executive director appointed by the Board manages investments, keeps employee records, and administers the plan, relying on agency personnel departments to transmit information to and from employees. The executive director has a permanent staff to assist in this work. An Employee Thrift Advisory Council, including leaders of the major employee unions and associations, assures close communication with employee representatives.

Normally, after enactment of major federal legislation, the administering agency begins taking the first steps promptly, especially when lead time is short. In this case, the Thrift Board first had to be appointed, and members were unwilling to serve without changes in the fiduciary rules. The result was a five-month delay until November 1986, when the executive director could be appointed and begin setting up the new agency.

Initially, the executive director has selected as the thrift plan's recordkeeper the U.S. Department of Agriculture's National Finance Center, whose people were already familiar with federal payroll systems and did not have to go through the time-consuming federal contracting procedures.

c. Investment Funds

The Thrift Board has named the three investment funds the G Fund, the F Fund, and the C Fund (investing in government securities, fixed-income securities, and common stocks, respectively).

For the G Fund, FERS allows the Thrift Board to specify the maturities of government securities to be purchased from Treasury. Investment yields are set by law, equal to the average yield on outstanding Treasury issues with maturities over four years, regardless of actual maturities used by the thrift plan. Initially the Thrift Board is using maturities of one day, to avoid possible market risk that would otherwise follow from the statutory language.

For the F Fund, the Thrift Board is using a bond index fund designed to replicate the performance of the Shearson Lehman government/bond index. For the C Fund, the Thrift Board is using a stock index fund designed to replicate the performance of the Standard & Poor's 500-Stock Index. Both these funds are being managed by the Wells Fargo Bank. An index fund is required by law only for the C Fund; by voluntarily choosing an index fund for the F Fund as well, the Thrift Board affirms its preference for indexing in this plan.

d. Fiduciary Rules

Thrift Board members, and staff or contractors with control over plan assets, are subject to fiduciary rules patterned after those in ERISA. (The ERISA rules as to prohibited transactions are modified in FERS to provide that such transactions are not prohibited, but the thrift plan must receive adequate consideration.) These complex rules are an innovation at the federal level, and Congress did not have full communication with the Administration in designing these or other technical provisions of the thrift plan. (Upon signing the legislation, the President stated that the thrift plan needed administrative and technical changes [44].)

The fiduciary rules had been carried forward from early versions of the legislation. After 1985, when passive investment provisions were introduced to restrict the Thrift Board's policymaking role, there was concern that these fiduciary rules were too strict. But this was outweighed by concern that only strict rules would give employees the protection needed against misuse of funds.

However, by January 1988, the Congress had liberalized the fiduciary rules three times in an effort to protect employees without unduly burdening the Thrift Board and its Executive Director, as discussed in the previous

section. The Department of Labor and Department of Justice played major roles in drafting these revisions to the fiduciary rules.

e. Payout of Thrift Plan Funds

Provisions for paying funds from the thrift plan are intended to preserve the funds for retirement purposes and allow favorable tax treatment under the Tax Reform Act of 1986. In-service withdrawals are prohibited, and loans are available only for specified purposes—purchase of a primary residence, educational expenses, medical expenses, or financial hardship—under a program to be established in 1988. A terminating employee may roll the funds over into an IRA. An ex-employee with vested rights to a basic CSRS or FERS annuity may elect payment in the form of an annuity from an insurance company or in a lump sum or installments at retirement age.

C. BASIC ANNUITY (DEFINED BENEFIT) PLAN

This section begins by describing the financing of CSRS and FERS. Next is a discussion of methodology used by CRS to estimate costs during 1985–86 so that policymakers could arrive at appropriate tradeoffs in the legislative process. This is followed by a detailed explanation of the basic benefits that were outlined in Table 3 and of certain Social Security offset provisions. Last is a discussion of the transfer provision available to CSRS employees.

1. *Actuarial Costs and Funding*

a. Financing CSRS and FERS

Contributions for CSRS are paid in several parts: (1) employee contributions of 7 percent of pay; (2) matching 7 percent contributions by each agency for its employees; (3) additional contributions from Treasury for interest and amortization of unfunded liabilities, amounting to about 23 percent of pay in recent years; and (4) payments for military service credited to employees currently retiring, amounting to about 2.8 percent of pay in recent years [55].

The 1969 law establishing these contributions called for so-called static actuarial methods, which assumed no inflation although the benefits were based on high three-year average pay and included automatic COLAs after retirement. Thus, the normal cost for funding purposes was calculated at 14 percent of pay, with employee and agency each paying 7 percent [10].

Federal employee retirement plans must file annual disclosure reports with GAO using dynamic methods, i.e., actuarial assumptions reflecting inflation [56]. OPM's report for CSRS showed the following figures (rounded) as of September 30, 1984 [31]:

Normal cost, total	35% of pay
Less employee contribution	7% of pay
Employer normal cost	28% of pay

Note that the employer normal cost, 28 percent, is higher than the 25 percent figure computed by CRS, with OPM using more conservative economic assumptions. Actuarial liabilities for CSRS were as follows as of September 30, 1984:

	Based on Entry- Age-Normal Method	Based on Accumulated Benefits
Actuarial liability.....	\$667 billion	\$537 billion
Assets.....	<u>125 billion</u>	<u>125 billion</u>
Unfunded liability.....	542 billion	412 billion

The comparable unfunded-liability figures a year earlier were \$528 billion and \$405 billion, respectively. Such figures are sometimes cited to show that CSRS is too costly, a growing financial burden for future generations.

CSRS assets amounted to 5.7 times the annual outgo for benefits and expenses as of September 30, 1984. Based on OPM's 75-year projection to 2060, this ratio of assets to outgo does not drop below 5.7 over the entire period. Such figures are sometimes cited to show that CSRS financing is not a problem.

Contributions to the CSRS trust fund are invested in special-issue Treasury securities paying interest at the average market yield available at issue on outstanding marketable Treasury securities with maturities over four years.

Because assets consist of employer securities, CSRS can be viewed as a pay-as-you-go plan with book reserves, with the unfunded liability indicating the shortfall to date in booking reserves. In other words, the plan's assets are invested in government IOUs, so that funding at a faster or slower rate involves accounting transfers with no economic reality (except for off-budget agencies such as the U.S. Postal Service, which keep their finances separate from the federal government and get their revenues from user fees). More rapid funding would increase the amounts held in the CSRS trust fund (assets), with an offsetting increase in Treasury obligations (liabilities); because

special-issue (nonmarketable) securities are used, there would be no change in the budget deficit, but the national debt would increase. With the national debt always a sensitive political issue, it is impractical to speed up CSRS funding rapidly, even for on-budget agencies.

Employer contributions to CSRS are computed by OPM under the direction of a Board of Actuaries, using static methods that ignore inflation. (The board, consisting of three prominent consulting actuaries, has protested this restriction.) The disclosure calculations are also made by OPM under the board's direction using standard economic assumptions set by OMB for all the federal employee retirement systems; as of September 30, 1984, these assumptions included 5 percent inflation, 5.5 percent general pay increases for federal employees, and 6.5 percent interest.

Employer contributions for FERS are on a stronger actuarial basis than those for CSRS, with agencies paying the full normal cost rates for FERS based on realistic assumptions. Special computations reflect different benefits for air traffic controllers, congressional employees, etc. OPM calculates FERS normal costs under the direction of the Board of Actuaries, and agencies may appeal the result to the board. Such an appeal may be important to an off-budget agency such as the Postal Service. The same normal-cost rates must be used for all purposes, such as estimating savings from contracting-out of government work. These latter provisions are intended to protect against political manipulation of the cost estimates. (However, the definition of "normal cost" excludes Social Security and thrift plan contributions. This has the unintended effect of biasing cost comparisons in favor of contractors, because most government employees still are under CSRS with a high normal cost and no employer contribution for Social Security or the thrift plan.)

One fund is used for both CSRS and FERS. This responds to a concern among employee organizations that CSRS funds for a closed group might eventually be used up before all benefits were paid. The general comments about assets given above regarding CSRS also apply to FERS.

b. Actuarial Cost Estimates in the Legislative Process

When 1985 began, there was some concern about differences in the actuarial methods used by CRS and OPM. Although the two were not far apart in their estimates of employer cost for CSRS (about 25 percent of pay according to CRS and 28 percent according to OPM), the difference might have been enough to create confusion if policymakers had to use two sets

of numbers. CRS used the Social Security intermediate II-B ultimate economic assumptions, with 4 percent CPI increases, 5.5 percent general wage increases for federal employees and for all employees in the economy, and 6.1 percent interest. Apart from assumptions, two actuarial models might not respond exactly the same way in pricing benefits.

Key players in the Senate soon agreed informally that they were comfortable using the CRS assumptions and model. Their counterparts in the House also were comfortable, with the same actuaries advising the House committee and CRS. Then the Administration indicated its willingness to use the CRS estimates instead of OPM's for purposes of the legislative process. (This was convenient, because several top actuarial positions at OPM were unfilled during 1985-86, but OPM had used consultants before.) Although a small matter, clearing up this issue was a sign that all parties might be ready to bargain in good faith. Of course, using CRS estimates for design purposes would not affect the basis for statutory funding of the new plan unless its language so provided (it did not).

The CRS cost estimates recognized for legislative purposes used the entry-age normal cost method, based on a standard cross-section of newly hired civil servants, including elements of cost for each retirement, death, disability, or return-of-contributions benefit in a given proposal. Extra costs for special classes such as law enforcement officers, firefighters, and the like were excluded from these cost estimates, as were administrative costs and costs of transfers or other features provided to CSRS employees.

The employer normal cost of CSRS, about 25 percent of pay, was a benchmark. Some wished the new plan to cost the same as CSRS, while others hoped to reduce the cost level by several percentage points. However, because the employer was the federal government, special considerations applied in valuing Social Security and the tax deferral available under the thrift plan.

Value of Social Security

Coverage of new federal employees created a gain to the Social Security program because of their above-average career pay. CRS estimated the gain at 0.4 percent of payroll, equal to OASDI contributions for newly hired federal workers (11.8 percent) less the value of their OASDI benefits (11.4 percent, based on the actuarial methods and assumptions in the CRS pension model).

Of course, the coverage of new federal employees had been decided in 1983, and one might wonder how it could be a source of savings in a proposal during 1985-86. In the legislative process, provisions of current law are the

baseline for measuring costs and savings, and Social Security coverage was current law after 1983. On the other hand, if the new plan with Social Security were to be assessed by the value of benefits versus those of CSRS, a good case could be made for assigning to Social Security a value 0.4 percent of payroll below the value of the OASDI contributions. Such an adjustment for the value of Social Security was built into the design of H.R. 3660, which had an estimated cost above that of CSRS by 0.4 percent of payroll.

Toward the end of the conference, the Administration sought to reduce the estimated employer normal cost of the latest proposal from about 22.9 percent to 22.5 percent of pay. It became clear that the 22.9 percent did not reflect the potential offset of 0.4 percent for Social Security, and with such an adjustment the cost was 22.5 percent. This reasoning helped to bring all the parties together.

Value of Tax Deferral

The thrift plan under FERS provides valuable tax deferral for employee contributions. It could be argued that CSRS was providing no such tax deferral for employee contributions and that the value of favorable treatment should be measured and added to the normal cost of the new plan to the government. On the other hand, the new plan was supposed to be in line with private plans—do federal employees deserve lower benefits merely because their employer is the only one for whom favorable tax treatment is a direct cost? Moreover, provisions of the tax reform bill were not yet known, and there was real doubt that the new federal thrift plan would get favorable treatment, so it would have been premature to include the value of the tax treatment except as an alternative, and complex, way of computing costs. As it turned out, policymakers had no problem disregarding the favorable tax treatment for purposes of the normal cost estimates.

c. Special Situations Involving Actuarial Cost Estimates

The emerging plan design led to questions about how to estimate costs in two unusual situations, discussed here.

Senate Options A and B

The Senate bill required each newly hired employee to select either Option A or B irrevocably. The estimated employer cost was 21.9 percent of pay, computed independently for each option. A potential problem was that new employees would try to select an option in their own best interests and in so doing might create unanticipated costs. Employees expecting to leave in

a few years might choose Option A, contributing nothing for retirement while taking full advantage of the generous thrift plan. And career employees might choose Option B to get the more liberal 30-year retirement and COLA, making utilization higher than expected. The cost estimates assumed no adverse selection, implying either that employees would select Options A and B randomly or that virtually all employees would choose the same option. CRS indicated that the latter was intended, with Option A deemed far more attractive to new employees.

The two options in the Senate bill were a device to get the bill to conference and were not likely to survive thereafter. There was no serious challenge to the CRS rationale prior to conference, and then the two-option design was quickly abandoned.

Modified COLA

The official cost estimates reflected 4 percent annual increases in the CPI. Thus, a COLA equal to the CPI-increase minus one percentage point ($CPI - 1$) was priced as an automatic 3 percent annual increase. But a completely rigid 4 percent annual CPI assumption had the weakness that one could design artificial "no-cost" COLA modifications to provide extra benefits when inflation was not 4 percent. Then, for any year when the rate of inflation was not precisely 4 percent, the COLA would be limited only by the designer's imagination, not by cost constraints.

In mid-April 1986, a majority of the conferees proposed a modified $CPI - 1$ formula for the annual COLA, later enacted into law: full CPI in any year when inflation was 2 percent or less, with no CPI increase between 2 percent and 3 percent counted toward the COLA, and a COLA of $CPI - 1$ when inflation was 3 percent or more. The COLA would thus exceed $CPI - 1$ when inflation was below 3 percent. The issue was more a matter of actuarial cost estimates than plan design, because this COLA proposal would probably be dropped if it were recognized to cost even 0.1 percent of payroll more than $CPI - 1$. This in turn depended on how rigidly the 4 percent inflation assumption was interpreted by CRS and others.

That week an actuarial memo was prepared by this author and circulated, giving a cost estimate of 0.3 percent of payroll for the modification to the COLA, computed from the frequency distribution of actual CPI increases in 1952-83. The memo stated: "The proposal clearly would add to benefits and to cost. In this context a constant 4% CPI-increase assumption is artificial and inappropriate, failing to recognize that the 4% is merely an average of yearly figures that vary over a wide range. One is reminded of the amateur

statistician who drowned trying to wade across a stream with an average depth of two feet.”

Such arguments changed nothing. CRS maintained that the modified COLA had no extra cost when valued by the agreed-to assumptions. The Administration might have challenged this position but did not. And the conferees, struggling with other Administration objections, let the zero-cost estimate stand, allowing the modified COLA to become part of FERS.

One might argue that new actuarial methods using stochastic assumptions, not deterministic, could give a more sophisticated cost estimate and a different COLA outcome. Perhaps so, if such methods could be sold to policy-makers whose agendas and reasoning have little in common with actuarial theory.

Following enactment, the Board of Actuaries has also implicitly valued the modification to the COLA at zero cost, based on a simple 5 percent CPI assumption applied on a deterministic basis.

2. *Retirement Benefits and Ages*

a. *Replacement Rates: General*

Each replacement rate given below represents a retirement benefit as a percentage of final year's pay, adjusted to 1985 dollars. The resulting rates are about 5.5 percent below the benefit rates calculated from high three-year average pay. For example, the CSRS benefit after 35 years of service is 66.25 percent of high three-year average pay; the replacement rate shown here is 63 percent (of final year's pay). The replacement rates disregard two adjustments that are discussed later: credits for unused sick leave, and reductions for election of postretirement survivor benefits.

The replacement rates were estimated by the CRS, using the economic assumptions described earlier: 4 percent annual CPI increases, 5.5 percent wage increases, both for federal employees and for workers generally, and 6.1 percent interest [17]. Under the thrift plan, employees are assumed to contribute 5 percent of pay and to convert the account balance to an annuity with a 4 percent annual benefit increase that compensates fully for assumed inflation.

Different COLAs are not easily compared in a meaningful way. A full comparison of CSRS and FERS replacement rates should somehow reflect three COLAs: (1) a full COLA, used in CSRS and Social Security, and assumed to be used in the thrift plan; (2) a COLA of $\text{CPI} - 1$, used in FERS

for regular annuitants age 62 and over, and for all disabled annuitants and survivors; and (3) no COLA, used for regular FERS annuitants below age 62. To show the resulting variation in the replacement rate over time, CRS published several charts that show moving replacement rates between retirement age and age 80. The OPM study had used a presentation based on present value of benefits as a percentage of final pay, called the Lifetime Benefit Value Multiple [30].

For the 1982 Stevens proposal, and again for the 1983 Erlenborn proposal, CRS published replacement-rate tables in the form of both gross (before-tax) and net (after-tax) rates. After 1983, CRS published only gross replacement rates, citing uncertainty about future tax legislation for avoiding estimates of net rates. The rates given here are gross rates.

Of course, replacement rates are based on many assumptions and are at best only approximations that are not to be taken too literally. This should be kept in mind in the discussion of specific replacement rates below.

b. Coordination with Social Security Benefit Formula

Social Security Tilt

Anyone designing retirement benefits to supplement Social Security for employees at various pay levels learns that Social Security is tilted to favor lower-paid employees. The Social Security tilt is indicated by the estimated replacement rates in Table 5, showing the Social Security benefit at age 62 as a percentage of preretirement pay for employees retiring in 2030 after 35 years of service. Also shown are replacement rates from CSRS.

Table 5 illustrates the downward tilt in Social Security benefits, amounting to 17 percent of pay over the salary range shown (27 percent minus 10 percent), while CSRS provides a flat 63 percent. (Virtually all full-time federal civil servants of retirement age were earning between \$15,000 and \$75,000 during 1985.) Thus, if the new plan were to duplicate the level benefits of CSRS, it would have to supplement Social Security with benefits having an *upward* tilt.

Why Not a 100-Percent Offset Plan?

At first glance, supplementing Social Security with a 100-percent offset plan makes good sense. Each benefit in the new plan would equal the CSRS benefit less the Social Security benefit. Replacement rates from the supplemental plan then would have the upward tilt needed to reproduce CSRS's flat benefits.

TABLE 5
SOCIAL SECURITY AND CSRS REPLACEMENT RATES

Annual pay	From S.S.	From CSRS
\$15,000	27%	63%
30,000	21	63
45,000	16	63
60,000	12	63
75,000	10	63

Such a plan could be designed, at least approximately, but it would cost more than CSRS by almost 3 percent of pay and would have other problems [18]. The extra cost comes from certain Social Security benefits not paid by CSRS, and so not available as offsets: (1) When a worker changes employers, Social Security provides indexed deferred benefits, instead of merely a return of contributions as is typical under CSRS; (2) spouses and other family members get benefits from Social Security that are not payable from CSRS; and (3) as discussed earlier, Social Security redistributes some of the contributions for federal workers to others outside the government with lower career earnings.

Also, the federal tax code and IRS regulations would not allow a private pension plan to use a 100-percent offset. A private plan may offset only part of the worker's Social Security benefits, and so must preserve some of the Social Security tilt favoring lower-paid employees. A federal employee plan designed with a 100-percent offset would be contrary to established public policy imposed on private firms by the federal government.

Integration: Role of the Thrift Plan

Defined benefit plans may be integrated explicitly with Social Security, using either an offset or a step-rate formula. Or a plan may forgo integration, using an "add-on" formula to preserve the full Social Security tilt. At the House committee's hearings in April 1985, union leaders clearly indicated that the new plan should not be integrated [19]. Shortly afterward, the Senate's Pension Work Group decided against an integrated formula, choosing an add-on formula instead. Higher-paid employees still would benefit from "implicit integration" by participating more heavily in the thrift plan, receiving more matching employer contributions. Such implicit integration relies on aggregate employee behavior to vary by pay level. There will be an overlap effect, with some lower-paid employees using the thrift plan

heavily and some higher-paid employees staying out of it. No FERS provision explicitly favors higher-paid employees the way Social Security favors lower-paid employees, except for the offset formula used to compute disability benefits.

c. Benefit Formulas and Portability

CSRS strongly favors employees who stay to retirement, because of the high-3 benefit formula grading up with service, high employee contributions, and minimal benefits for employees who leave.

The design of FERS encourages more employee mobility. FERS has the same benefit unit for all years of service (although it increases from 1 percent to 1.1 percent for retirement after age 62 and 20 years), with low basic employee contributions and portable benefits from all three tiers of FERS.

d. Retirement Ages

For employees born after 1947, FERS gradually raises the minimum retirement age from 55 by two months per year until it levels off at age 56 for those born in 1953–64. Then this minimum retirement age again goes up by two months per year, to an ultimate level of age 57 for those born after 1969. Thus, 2003 is the first year when employees (born in 1948) reaching age 55 under FERS are not yet eligible to retire. Also, 2003 is the first year when workers (born in 1938) reaching age 65 under Social Security are not yet eligible for unreduced benefits. Some might have preferred to increase the FERS retirement age for the same employees affected by the Social Security age increase, i.e., those born after 1937. But, as a practical matter, the normal cost estimates were based on young employees hired in the future, and so the treatment of those born in 1938–47 (who were at ages 39 to 48 in 1986) did not affect these estimates.

FERS provides reduced optional retirement benefits at the minimum retirement age (55 to 57) after 10 years of service. This is consistent with private plans, allowing more flexibility to plan retirement or career changes. The reduction is 5 percent times the number of years below age 62.

Like CSRS, FERS allows more liberal retirement in special cases. Employees retiring involuntarily get unreduced benefits at age 50 after 20 years of service, or at any age after 25 years. These same age and service requirements define the normal retirement age for law enforcement officers, fire-fighters, air traffic controllers, members of Congress, and congressional staff. Such special-class employees also have a 1.7 percent benefit unit

instead of 1.0 percent, to compensate for lower thrift plan benefits accumulated over their shorter careers, providing reasonable continuity with CSRS.

e. COLAs

CSRS has automatic annual COLAs based on the percentage increase in CPI, although the COLA has been reduced or delayed several times in recent years [41]. FERS has a COLA based on the annual CPI increase minus one percentage point, with the 1 percent deduction phasing out when the CPI goes up less than 3 percent; the design of this phaseout was discussed earlier in connection with actuarial cost estimates. Under FERS, the COLA applies only to retired employees age 62 or over, disabled employees, and survivors.

f. Supplement and Earnings Test

To make up for the lack of a Social Security retirement benefit before age 62, FERS provides a temporary supplement to 62 after a 40-year career. Calculation of the supplement uses an assumed wage history, with wages in the first year of federal employment indexed backward to age 22 using the Social Security average wage series. The resulting benefit is prorated over actual years of federal employment, so that a 30-year employee gets a supplement of 30/40ths of the full amount [29].

The conferees decided on an earnings test for the supplement, mindful that such a test is used both by Social Security and by some private plans for Social Security make-up benefits. A FERS retiree loses \$1 of the pre-62 supplement for each \$2 earned in another job, with earnings exempt from this test up to \$5,760 a year (the Social Security annual exempt amount for workers below age 65 in 1986), indexed to wages. This is administered retroactively, with overpayments recovered from supplements payable in later years.

Supplements for employees retiring in the early years of FERS are small and can easily be wiped out under the earnings test.

g. Replacement Rate Examples

Table 6 indicates two examples of replacement rates from FERS, at age 57 with 30 years of service and at age 62 with 35 years of service, as estimated by CRS using the methods described earlier.

TABLE 6
FERS REPLACEMENT RATES

	Final Salary (Adjusted to 1985 Dollars)				
	\$15,000	\$30,000	\$45,000	\$60,000	\$75,000
A. Based on retirement at age 57 with 30 years of service					
1. At age 57 (initial level):					
a. Annuity	28%	28%	28%	28%	28%
b. Pre-62 supplement	19	15	12	9	7
c. Social Security	0	0	0	0	0
d. Thrift, 1% automatic	2	2	2	2	2
e. Subtotal	49	45	42	39	37
f. Thrift, EE + match	14	14	14	14	14
g. Total	64%	60%	56%	53%	52%
2. At age 62 (5 years later):					
a. Annuity	24%	24%	24%	24%	24%
b. Social Security	22	17	13	10	8
c. Thrift plan	16	16	16	16	16
d. Total	62%	57%	53%	50%	48%
3. At age 80 (18 years later):					
a. Annuity	21%	21%	21%	21%	21%
b. Social Security	22	17	13	10	8
c. Thrift plan	16	16	16	16	16
d. Total	58%	54%	50%	47%	45%
B. Based on retirement at age 62 with 35 years of service					
1. At age 62 (initial level):					
a. Annuity	36%	36%	36%	36%	36%
b. Social Security	27	21	16	12	10
c. Thrift, 1% automatic	2	2	2	2	2
d. Subtotal	66	60	55	51	48
e. Thrift, EE + match	20	20	20	20	20
f. Total	86%	80%	75%	71%	68%
2. Comparable CSRS benefit	63%	63%	63%	63%	63%
3. Minimum contribution by FERS employec needed to duplicate CSRS benefit:					
a. To thrift plan	0%	1%	2%	3%	4%
b. Total contributions	7%	8%	9%	8%	8%

Source: Congressional Research Service.

Example for Retirement at Age 57 with 30 Years of Service

This example, an important benchmark to policymakers, is based on the minimum age and service for retirement under FERS with unreduced benefits. Upon retirement at age 57 with 30 years of service, the basic FERS annuity is 28 percent of final year's pay. The second tier of benefits (pre-62 supplement and Social Security) is tilted to favor lower paid employees.

Finally, the thrift plan provides an estimated annuity of 16 percent of pay (the first 2 percent of this from the automatic 1 percent employer contribution, and the other 14 percent from the employee contribution and match). Table 6 shows that the initial replacement rates decrease from 64 percent to 52 percent over the pay range \$15,000 to \$75,000.

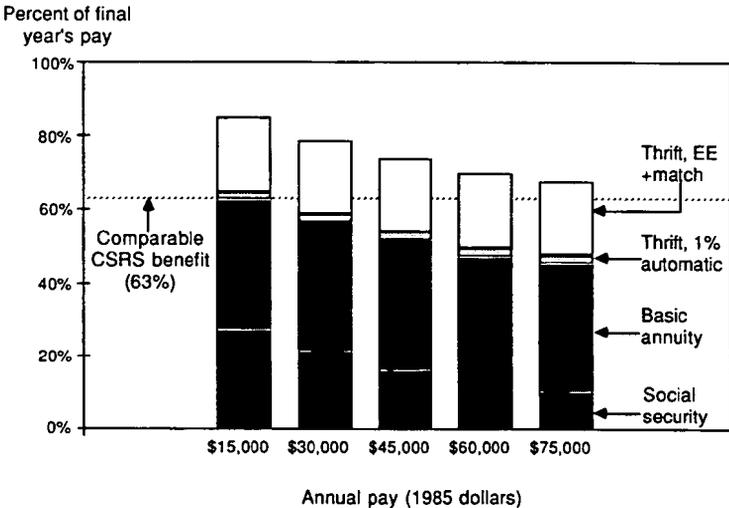
At age 62, five years after retirement, the basic annuity with no COLA has shrunk in current dollars, the supplement gives way to a Social Security benefit computed differently, and the thrift plan annuity still provides 16 percent of preretirement pay. At age 80, the basic annuity with a COLA of CPI - 1 has shrunk more in constant dollars.

Under CSRS, such a retiree would have received 53 percent of pay with a full COLA and no earnings test. Item A.1.e. indicates that the FERS replacement rate is below the CSRS 53 percent rate at all pay levels unless the employee contributes to the thrift plan. A 5 percent thrift plan contribution provides at least a 53 percent replacement rate until age 62, unless pay is over \$45,000, despite the lack of a COLA on the basic annuity. By age 80, all replacement rates are below 53 percent except for lower paid employees who contribute heavily to the thrift plan.

Example for Retirement at Age 62 with 35 Years of Service

This example, shown in the bottom half of Table 6 and again in Chart A, was also an important benchmark, for several reasons [46]:

1. Today's young workers will live many more years in retirement than their predecessors. It is very costly for any employer to let employees retire in their mid-50s and routinely pay for full retirement and health insurance benefits, including spouse benefits. Thus, it can be argued that retirement ages for full benefits need to increase, and employees wishing to retire early should be given reduced benefits.
2. A 35-year career is not unreasonably long. Someone graduating from high school would still have 8 to 10 extra years before age 62 for college, temporary jobs, and full-time child care. (Military service is credited under FERS.) Note that the Social Security program bases benefits for today's young workers on a career of at least 35 years.
3. A mobile employee, who earns only partial retirement benefits after working for the government for 10, 20, or even 30 years, can make up the balance from other sources. If an employee has several employers over a career of 35 years or more, why should the final employer pay for all the

Chart A**FERS Replacement Rates****Retirement at age 62 with 35 years service**

retirement benefits? This reasoning implies an obligation to do more for young employees who leave, reducing the amounts available for career employees.

- FERS includes a carrot and two sticks that encourage older employees to continue working to age 62: a benefit unit 10 percent higher for those who retire from active service after attaining age 62 and 20 years' service, no COLA before age 62 and an earnings test on the pre-62 supplement.

Upon retirement at age 62 with 35 years of service, the basic FERS annuity is 36 percent of pay. The thrift plan provides an estimated annuity of 22 percent of pay (the first 2 percent from the automatic 1 percent contribution, and the other 20 percent from the employee contribution and match). The initial replacement rates decrease from 86 percent to 68 percent over the pay range \$15,000 to \$75,000.

Under CSRS, such a retiree would get 63 percent of pay with a full COLA and no earnings test. Item B.3.a. of Table 6 shows the estimated rate that FERS employees should contribute to the thrift plan to get an initial replacement rate of 63 percent, ranging from zero for lower paid employees to 4 percent of pay for top employees. Item B.3.b. shows the resulting total

contribution rate to Social Security, FERS, and the thrift plan—7 percent for lower-paid employees, rising to 9 percent for those around the Social Security wage base, then dropping to about 8 percent for higher paid employees. This item provides a rough test of how closely FERS follows the implicit integration concept discussed earlier, disregarding individual pay increases, and of course depending on the assumptions used.

3. *Survivors and Disability Benefits*

The sample replacement rates computed by CRS for survivors and disability cases disregard the thrift plan. Mortality and disability rates increase over a worker's career, and so do thrift plan account balances. Although the thrift plan thus will provide substantial benefits in many death or disability cases, it was not practical to design benefits reflecting this directly, due to complexity and the voluntary nature of the thrift plan. In some cases of death or disability, FERS basic benefits plus Social Security are less than CSRS benefits. A short-service employee may make up this difference from life or disability insurance, and a long-service employee may make it up from the thrift plan.

A similar problem involved illustrating the lump-sum preretirement death benefits. CRS did not include these in the replacement rate examples because of the complexity of showing an equivalent annuity without knowing the spouse's age. Such problems might have been addressed in a narrower legislative effort aimed only at designing these ancillary benefits.

a. *Preretirement Survivors Benefits*

CSRS preretirement survivors annuity benefits, although substantial, are paid only if the employee was survived by a spouse or children. FERS relies heavily on Social Security to pay benefits in such cases. After 10 years of service, FERS provides annuities to such survivors, increasing with length of service to about half the level payable from CSRS (offset by Social Security children's benefits). Also, in all cases FERS pays a lump sum death benefit of \$15,000 (indexed) plus one-half of annual salary.

b. *Postretirement Survivors Benefits*

For an employee electing postretirement survivor coverage under CSRS or FERS, it was estimated that a reduction in annuity of roughly 13 percent would pay for a 50 percent spouse annuity in a typical case. (This calculation of actuarial equivalents involves the COLA and other characteristics of a

particular plan. The spouse's benefits are 55 percent and 50 percent of the unreduced annuity under CSRS and FERS, respectively.) The optional FERS postretirement surviving spouse benefits, which are automatic for a married annuitant unless both spouses waive the election, are a bit different from those of CSRS. FERS does retain the CSRS pop-up feature, meaning that the annuitant's benefit is reduced only while both spouses are alive.

CSRS reduces the employee's annuity by 2.5 percent of the first \$3,600 of initial annuity and 10 percent of the excess and provides a 55 percent surviving spouse annuity. Clearly such reductions do not pay for the full cost, and so the CSRS benefit is subsidized by the plan. FERS uses a flat 10 percent reduction and pays a 50 percent annuity to the spouse, plus a temporary benefit to age 60, when a surviving spouse becomes eligible for Social Security. FERS has much less subsidy, especially on the first \$3,600, where the heavy CSRS subsidy is viewed as making up for automatic Social Security spouse benefits unavailable to CSRS employees.

c. Disability Benefits

FERS uses a definition of disability like the one in CSRS, with benefits at roughly the levels of CSRS, including Social Security. However, FERS disability benefits are directly offset by a percentage of Social Security, requiring complex procedures to compute the initial offset, track the Social Security, and adjust benefits for inflation. Another administrative problem relates to the so-called megacap (see section 224 of the Social Security Act), which limits Social Security disability benefits so that the total from federal, state, and local government plans will not exceed 80 percent of pay. To administer the megacap, Social Security uses simple procedures that avoid the "circular offset" problem theoretically present when two plans such as FERS and Social Security can offset one another.

The conferees considered step-rate disability formulas to avoid such complications. But replacement rates from any step-rate formula plus Social Security increased slightly with pay over some salary ranges, instead of decreasing uniformly or staying level. That result was deemed unacceptable, and the step-rate method was abandoned in favor of the offset method.

The disability benefits include a recomputation at age 62, intended to avoid giving greater benefits thereafter to employees who did not meet the Social Security test of disability before 62 than to others who did meet this test.

4. *Other Provisions*

a. *Employee Contributions and Vesting*

Employee contributions for CSRS are a flat 7 percent of salary. These are fully vested, but employees who leave get little more: employees with one to five years of service get back their contributions with interest. Employees with at least five years of service may take a refund of contributions without interest or may leave their contributions in the plan and take a deferred annuity at age 62; this annuity is frozen until 62 but receives COLAs thereafter. Rehired employees may redeposit refunded contributions with interest and get credit for the prior period of service with a currently computed high-3 salary. Rehired employees who do not make the redeposit get credit for the prior service in determining eligibility for benefits, but not in the annuity formula.

Employee contributions for FERS and Social Security combined are 7 percent of pay up to the Social Security wage base. Above the wage base, only the basic FERS contribution is payable, at a rate of 1.3 percent in 1987, 0.94 percent in 1988–89, and 0.8 percent after 1989.

Vesting of the basic FERS contribution is more favorable than CSRS vesting in some cases and less favorable in others. Terminated vested employees who leave their contributions in FERS and have 10 to 29 years of service may take a reduced annuity at the minimum retirement age (55 to 57, depending on year of birth), and those with 30 years of service get an unreduced annuity at the minimum retirement age. However, those who withdraw their contributions are not allowed to redeposit them later; such employees irrevocably lose all credit for the prior service. The FERS provisions allowing terminated vested employees to receive benefits before age 62 were intended to provide more flexibility to accommodate different career plans or personal situations.

b. *Credited Service*

Federal employees earn 13 days of sick leave each year. Active employees who retire under CSRS get credit for unused sick leave under the annuity formula but do not get credit toward eligibility for benefits. This provision encourages employees not to use their sick leave, especially if they are near retirement and might otherwise take a use-it-or-lose-it attitude. FERS no longer credits unused sick leave. It is too early to tell whether this change in rules for FERS-covered employees will lead to excessive use of sick leave.

The FERS provisions for part-time service are similar to provisions enacted for CSRS in 1986. Formerly, part-time service was credited as if it were full-time service, and the pro rata pay for such years was used to compute the high-3 average. Thus, part-time employees moving to full-time employment gained benefits rapidly over the next three years, as the high-3 average pay went up. But full-time employees moving to part-time employment gained benefits very slowly, as high-3 pay was effectively frozen. Such anomalies are now removed prospectively under CSRS and FERS, because periods of part-time service are credited pro rata and high-3 average pay is computed from the full-time salary rates.

Credit for military service under FERS essentially follows the complex rules of CSRS, except that the deposit rate required to get credit for post-1956 military service, 7 percent of basic military pay under CSRS, is reduced to 3 percent under FERS in recognition of the less valuable benefit unit under FERS.

c. Lump-Sum Option

Because of impending tax reform, the conferees added a special option for retiring CSRS or FERS employees to elect a partial lump-sum refund equal to their contributions without interest. The purpose was to get around expected repeal of the three-year recovery rule by taking the refund as a tax-free return of contributions. As discussed earlier, the Tax Reform Act of 1986 turned out not to provide such tax-free treatment. The lump-sum option is controversial because it increases government outlays during the five-year budget period, and because employees may not understand why they must pay a tax to receive back the amount of their after-tax contributions. A law enacted late in 1987 provides that lump sums elected from January 1, 1988, through September 30, 1989, are paid in two installments, in separate fiscal years [65].

5. Social Security Offset Provisions

Although this paper generally does not discuss Social Security, two offset provisions of Social Security are of interest regarding FERS.

a. Government Pension Offset

The government pension offset (GPO), originally enacted as part of the 1977 Social Security Amendments, affects a retired worker whose pension is from noncovered government employment and whose spouse has worked

under Social Security. To keep a government annuitant from getting Social Security spouse benefits intended for nonworking spouses, the GPO formula offsets \$2 of each \$3 paid from a pension "earned in noncovered government employment" against Social Security benefits for a spouse or surviving spouse. In typical cases the effect of the GPO is to wipe out the spouse's benefit from Social Security. (For the statutory language, see section 202(b)(4)(A) of the Social Security Act.)

When is a pension deemed to have been "earned in noncovered government employment"? The test normally used for the GPO is whether or not the employee was covered by Social Security on the last day employed by the entity where the pension was earned. This rule was designed for employers who enter or leave covered employment, not for individuals who may transfer to FERS. Thus, a CSRS employee nearing retirement in 1987 could avoid the GPO by transferring to FERS.

The Senate bill required that the employee work under FERS at least five years after transfer, not just one day, to avoid the GPO. This was deleted from the bill in conference. However, an amendment effective in January 1988 provides a modified five-year rule, similar to the Senate version except that employees who were then over age 60 needed less than five years of coverage under FERS to avoid the GPO. Employees transferring to FERS in 1987 avoided the GPO.

b. Windfall Elimination Provision

The windfall elimination provision (WEP), part of the 1983 Social Security amendments, affects workers retired from noncovered employment who also worked in employment covered under Social Security.

For workers attaining age 62 in 1988, the basic Social Security retirement benefit based on average indexed monthly earnings (AIME) is 90 percent of the first \$319 of AIME, 32 percent of the next \$1,603 of AIME, and 15 percent of AIME over \$1,922. Someone retiring from noncovered employment will usually have a large gap in his or her Social Security record of covered earnings. This lowers the AIME compared to that of someone who always worked under Social Security, affecting the higher steps of the calculation (at the 32 percent and 15 percent rates). Then, with more of the benefit based on the 90 percent rate (the main source of the tilt in replacement rates discussed earlier), the replacement rate goes up. This is an unintended result of the three-step primary insurance amount (PIA) formula which is

designed to favor lower paid workers, not those whose Social Security records show high earnings for some years and gaps for other years due to noncovered employment.

To keep noncovered workers from getting benefits that are tilted to favor lower paid workers, the WEP applies a modified PIA formula, replacing the usual 90 percent rate by 40 percent. (See section 215(b)(7) of the Social Security Act.) For a noncovered government worker reaching age 62 after 1989, this will reduce basic benefits by about \$172 per month (50 percent of the \$319 bend point in the formula, with estimated indexing from 1988 to 1990), but not by more than 5/9ths of basic benefits based on the regular formula.

The WEP has further complications. The 40 percent rate grades in from 90 percent, based on year of birth and years of coverage; a full 90 percent rate is used for workers with 30 "years of coverage." For purposes of this 30-year rule, phasing in for those with 26 to 29 years, the WEP currently requires \$8,400 of annual covered earnings to get credit for a "year of coverage," indexed from 1988. The WEP reduction is limited to one-half of the noncovered government pension.

The WEP represents a disincentive for many CSRS employees to transfer to FERS, i.e., those with too few projected years of coverage to avoid the reduction. Thus, both before and after enactment of FERS, legislation was proposed that would liberalize the 30-year coverage rule, but these proposals have not become law. Other federal employees with substantial Social Security earnings, producing an AIME of at least \$319, are already subject to the full reduction from 90 percent to 40 percent; in such cases, where the windfall reduction will apply in any event, the WEP is not a further disincentive to transfer. And for a few federal workers with many years under Social Security, the WEP is even an incentive because transfer gives them an opportunity to qualify for a full benefit based on the 90 percent rate after they attain 30 years of coverage.

6. *Coverage and Transfers*

a. *Coverage*

Table 7 shows how to determine whether a federal civil servant is covered by CSRS, FERS, or a hybrid plan called CSRS Offset. CSRS Offset pays Social Security benefits, plus CSRS benefits reduced by the Social Security benefits deemed to have been earned during federal service. Employees

TABLE 7
COVERAGE STATUS UNDER CSRS AND FERS

Employee Class	Social Security Coverage?	Retirement Plan?	Employee Contribution (1987 Rates)
A. Continuous service from December 31, 1983, or before	No	CSRS*	7%
B. Hired in 1984 or after, no prior service under CSRS	Yes	FERS	7%, except 1.3% over S.S. earnings base
C. Hired in 1984 or after, with prior service under CSRS:			
1. No break in service exceeding 1 year that ended after 1983	No	CSRS*	7%
2. With break in service exceeding 1 year that ended after 1983:			
a. Less than 5 years of CSRS service by 12/31/86, or date of rehire if later	Yes	FERS	7%, except 1.3% over S.S. earnings base
b. 5 or more years of CSRS service by 12/31/86, or date of rehire if later	Yes	CSRS Offset*	7%

Note: These rules apply to federal civil servants. Different rules apply to some participants in legislative and judicial branches, executive branch elected officials, and political appointees in senior executive service or higher level positions.

*May transfer to FERS in the six-month period after June 30, 1987, or after return from any break in service following that date.

contribute 7 percent of pay for CSRS Offset, with the part of this needed for Social Security paid to the OASDI program. In comparison to CSRS, CSRS Offset pays additional Social Security benefits in some cases, has more favorable tax treatment of benefits to the extent paid from Social Security, and gives Social Security credits to employees who leave. However, benefits from Social Security before age 70 are earnings tested, and contributions to Social Security are not refunded to employees who leave before retirement.

b. Transfer Provisions

Employees in CSRS or CSRS Offset may transfer to FERS in the six-month period ending December 31, 1987, or ending after 1987 following return from any break in service. Transfer to FERS is a one-way street: someone who transfers to FERS cannot go back to CSRS. But a decision not to transfer could be changed if the employee left and were rehired. (Also, some observers expect Congress to allow further transfers to FERS after 1987.)

Employees with five or more years in CSRS who transfer to FERS retain their accrued CSRS benefits, with FERS benefits credited prospectively from date of transfer. The statute does not explicitly define all elements of "accrued benefits" for this purpose, but the treatment can be inferred.

Table 8 indicates the treatment of various elements of accrued CSRS benefits after transfer to FERS [32].

c. The Transfer Decision

Transfer to FERS may have many effects on a CSRS employee's benefits, depending on one's career history and plans, personal situation, and future unknowns such as life span, economic events, and new legislation. Apart from such variables, comparing benefits from both plans is complex because of the three layers in FERS, with different COLAs, earnings tests, and so forth.

During 1986–87, the government and private firms assisted CSRS-covered employees in deciding whether to transfer. Such assistance included analyses of considerations favoring each plan, computer-prepared comparisons of benefits, and individual counseling by specialists. With some 2 million CSRS employees able to transfer in 1987, computerized comparisons could be done economically, reflecting the individual's personal data and career plans. In many cases the output showed estimated FERS retirement benefits to be close to those of CSRS. Employees found that going through such an exercise gave them greater insight into their benefits from CSRS, FERS, and Social Security.

Possible advantages for an employee of staying in CSRS included:

1. Preserving the main CSRS retirement features—unreduced benefits at age 55 and 30 years of service, full COLA, and no earnings test.
2. Keeping other CSRS features—replacement rates not tilted to favor lower paid employees, greater preretirement survivors benefits in some cases,

TABLE 8

TREATMENT OF CSRS BENEFITS AFTER TRANSFER TO FERS

	CSRS Provision	FERS Provision	Treatment of Accrued CSRS Benefits after Transfer
A. Optional retirement age, unreduced benefits	Age 62 and 5 yr, or age 60 and 20 yr, or age 55 and 30 yr	Age 62 and 5 yr, or age 60 and 20 yr, or minimum retirement age (55 to 57) and 30 yr	FERS rules apply
B. Optional retirement age, reduced benefits	None	Minimum retirement age and 10 yr service	FERS rules apply
C. Basic benefit unit	1.5% × first 5 yr, 1.75% × next 5 yr, 2.09% × yr > 10	1% per year, except 1.1% for retirement at age 62 and 20 yr Pre-62 supplement	CSRS rules apply, except if < 5 yr at transfer, FERS rules apply
D. Crediting of unused sick leave	Credited	Not credited	Lesser of amount at transfer or retirement is credited
E. Maximum annuity	80% of high-3 salary, before unused sick leave	No maximum	Maximum applies only to CSRS benefit
F. Involuntary retirement age	Age 50 and 20 yr, or any age and 25 yr	Age 50 and 20 yr, or any age and 25 yr	CSRS rules apply
G. Involuntary retirement benefits	Reduced 2% per year of age from 55	Unreduced; pre-62 supplement available	CSRS rules apply
H. Retirement from terminated vested status	Unreduced at age 62	Unreduced at age 62, or at minimum retirement age and 30 yr, or at age 60 and 20 yr Reduced at minimum retirement age and 10 yr	FERS rules apply
I. Cost-of-living adjustment (COLA)	Full CPI	CPI less 1% (modified) for retirees age 62 and up, survivors, and disabled	CSRS rules apply
J. Vesting and redeposits	Vested after 5 yr Employee who cashes out and is rehired may redeposit refund	Vested after 5 yr Employee who cashes out loses all credit for service involved	CSRS rules apply
K. Employee contributions, basic rate	7%	1.3% in 1987, reducing to 0.8% after 1989	CSRS rules apply, except 5.7% refunded if < 5 yr at transfer

TABLE 8—Continued

	CSRS Provision	FERS Provision	Treatment of Accrued CSRS Benefits after Transfer
L. Eligibility for disability benefits	5 yr service	18 mo. service	FERS rules apply
M. Disability annuity	Lesser of: (a) annuity projected to age 60, or (b) 40% of high-3 avg	1st year: 60% of high-3 minus S.S. 2nd year to age 62: 40% of high-3 minus 60% of S.S. Recomputed at age 62	FERS rules apply, with minimum of annuity accrued to date
N. Eligibility for preretirement survivors benefits	18 mo service	18 mo. service needed for lump sum, 10 yr needed for annuity	FERS rules apply, with credit for CSRS service (after technical correction in 1987)
O. Preretirement survivor annuity benefits	Annuity is 55% of annuity computed as in Item M above	Lump sum is \$15,000, indexed, and 1/2 annual pay Annuity is 50% of accrued annuity	FERS rules apply
P. Postretirement survivor annuity election	Reduction is 2.5% of first \$3,600 annuity, 10% of excess Spouse gets 55% of unreduced annuity	Reduction is 10% of annuity Spouse gets 50% of unreduced annuity and pre-60 supplement	FERS rules apply

more favorable postretirement survivor provisions, credit for unused sick leave, and redeposit rights after cashout.

3. Avoiding possible problems with thrift plan nondiscrimination test, Social Security windfall elimination provision, less take-home pay due to thrift plan contributions, and need for former spouse's consent to transfer.

Possible advantages of transferring to FERS included:

1. Gaining portability from the thrift plan, Social Security, and FERS early retirement provisions.
2. Gaining other FERS features—replacement rates tilted to favor lower paid employees and those with nonworking spouses, greater disability benefits in some cases, additional Social Security credits, no 80 percent maximum, refund to employees with less than five years in CSRS.
3. Avoiding potential problems with the government pension offset.

The proportion of CSRS employees who elected to transfer to FERS during 1987 was very small, estimated at about 2 percent of those eligible, although CBO had estimated that about 40 percent of those eligible would be better off under FERS. One reason for the low transfer rate was the uncertainty about possible corrective legislation—only in the final days of 1987 was legislation passed to tighten the GPO prospectively, remove the nondiscrimination test permanently, and leave the WEP unchanged [65]. Thus, as a practical matter, most employees did not have sufficient time or information to make a fully informed decision about this complex election. Many observers expect that CSRS employees will be given another opportunity to transfer to FERS.

D. CONCLUSIONS

FERS gives new federal employees a retirement system to supplement Social Security and answers long-standing objections to CSRS provisions for early retirement, COLAs, portability, and funding. FERS is likely to be a model for revision of other large public employee retirement systems.

Adoption of a thrift plan for federal employees gives a sense of permanence to favorable tax treatment of 401(k) arrangements, with government officials having a direct personal interest in the rules governing such plans. Thus, the thrift plan represents another step along the road toward reliance on defined contribution plans and away from reliance on defined benefit plans.

The thrift plan's private sector investments are an ongoing policy experiment. The checks and balances designed into the thrift plan can be defeated by lawmakers determined to bring social and political values into the investment process. Presumably, employees and the public, if adequately informed, will resist efforts to politicize the investment process for this plan.

Lawmakers objected to integration of basic retirement benefits with Social Security, but they had no problem with integration of disability benefits. And the Congress eventually exempted highly paid federal employees from the nondiscrimination rules that normally apply to a 401(k) plan. This all suggests that government rules for private plans regarding integration and nondiscrimination could evolve in new directions in the years ahead.

The legislative process leading to FERS shows once again that each committee in the Congress, and each agency in the executive branch, has its own constituency and agenda. Such rationale helps explain differences between FERS and private plans on matters related to tax qualification and ERISA.

Finally, FERS presents new opportunities for the private sector to provide services to the government. Such services may include (1) thrift plan administration, recordkeeping, employee communications, fiduciary insurance, investments, annuities, and IRA facilities; (2) training agency personnel and informing employees regarding FERS, Social Security, and CSRS benefits; and (3) providing supplemental benefits to individuals wishing to fill temporary gaps in FERS or preferring privately financed arrangements after retirement.

ACRONYMS AND ABBREVIATIONS

401(k)	Section 401(k) of the Internal Revenue Code
AIME	Average indexed monthly earnings
CBO	Congressional Budget Office
CIA	Central Intelligence Agency
COLA	Cost-of-living adjustment
CPI	Consumer Price Index
CRS	Congressional Research Service
CSRS	Civil Service Retirement System
EBRI	Employee Benefit Research Institute
ERISA	Employee Retirement Income Security Act of 1974
FERS	Federal Employees' Retirement System
GAO	General Accounting Office
GPO	Government pension offset
IRA	Individual Retirement Account
IRS	Internal Revenue Service
MRA	Minimum retirement age
OASDI	Old-Age, Survivors, and Disability Insurance
OMB	Office of Management and Budget
OPM	Office of Personnel Management
PIA	Primary insurance amount
QPAM	Qualified professional asset manager
SS	Social Security
SSA	Social Security Administration
TSP	Thrift savings plan
WEP	Windfall elimination provision

REFERENCES

BOOKS, REPORTS, AND PAMPHLETS

1. COMPTROLLER GENERAL OF THE UNITED STATES. *Comparison of Retirement Benefits for W.R. Grace & Company and Civil Service Employees*, Washington, D.C.: U.S. General Accounting Office, June 12, 1984.
2. _____. *Features of Nonfederal Retirement Programs*, Washington, D.C.: U.S. General Accounting Office, June 26, 1984.
3. _____. *Analysis of Grace Commission Proposals to Change the CSRS*, Washington, D.C.: U.S. General Accounting Office, Feb. 13, 1985.
4. _____. *Benefit Levels of Nonfederal Retirement Programs*, Washington, D.C.: U.S. General Accounting Office, Feb. 26, 1985.
5. _____. *Retirement Before Age 65 Is a Growing Trend in the Private Sector*, Washington, D.C.: U.S. General Accounting Office, July 15, 1985.
6. ELLIS, C.D. *Investment Policy: How to Win the Loser's Game*, Homewood, Ill.: Dow Jones-Irwin, 1985.
7. EMPLOYEE BENEFIT RESEARCH INSTITUTE. *Should Pension Assets Be Managed for Social/Political Purposes?* Washington, D.C.: Employee Benefit Research Institute, 1980.
8. FEDERAL GOVERNMENT SERVICE TASK FORCE. *Ten Myths About Civil Service Retirement*. Washington, D.C., 1984.
9. HARTMAN, R. W. *Pay and Pensions for Federal Workers*, Washington, D.C.: Brookings Institution, 1983.
10. MCGILL, D. M. *Financing the CSRS: A Threat to Fiscal Integrity*, Homewood, Ill.: Pension Research Council, 1979.
11. MYERS, R. J. *Social Security*, 3d ed., Homewood, Ill.: Richard D. Irwin, 1985.
12. NATIONAL COMMITTEE ON PUBLIC EMPLOYEE PENSION SYSTEMS. *A Response to "Ten Myths About Civil Service Retirement" and Proposals for a Revised CSRS*, Washington, D.C.: National Committee on Public Employee Pension Systems, Jan. 31, 1985.
13. U.S. CONGRESS, HOUSE OF REPRESENTATIVES, COMMITTEES ON WAYS AND MEANS, SUBCOMMITTEE ON SOCIAL SECURITY. *Summary of Recent Recommendations for Changes in the Social Security System*, Washington, D.C.: Government Printing Office, Feb. 13, 1981.
14. U.S. CONGRESS, HOUSE OF REPRESENTATIVES, COMMITTEE ON POST OFFICE AND CIVIL SERVICE. *CSRS: History, Provisions and Financing*, Washington, D.C.: Government Printing Office, June 30, 1981.
15. _____. *Background on the CSRS*, Washington, D.C.: Government Printing Office, April 20, 1983.
16. _____. *Supplemental Retirement Plan for Federal Officers and Employees*, Washington, D.C.: Government Printing Office, February-March, 1984.

17. _____. *Study of Total Compensation in the Federal, State and Private Sectors* (prepared by Hay/Huggins), Washington, D.C.: Government Printing Office, Dec. 4, 1984.
18. _____. *Designing a Retirement System for Federal Workers Covered by Social Security* (prepared by CRS), Washington, D.C.: Government Printing Office, December 1984.
19. _____. *Supplemental CSR Plan (Hearings, parts I and II)*. Washington, D.C.: Government Printing Office, April and October 1985.
20. U.S. CONGRESS, SENATE. *Retirement Policy for Federal Personnel*, Washington, D.C.: Government Printing Office, January 1954.
21. U.S. CONGRESS, SENATE, COMMITTEE ON GOVERNMENTAL AFFAIRS. *Restructuring CSRS: Analysis of Options*, Washington, D.C.: Government Printing Office, January 1982.
22. _____. *Civil Service Pension Reform Act*, Washington, D.C.: Government Printing Office, December 1982.
23. _____. *Forums on Federal Pensions (Parts 1-5)*. Washington, D.C.: Government Printing Office, December 1983-July 1984.
24. _____. *Options to Implement an Interim Retirement Program for Civil Service Employees Who Will Be Covered by Social Security*, Washington, D.C.: Government Printing Office, Sept. 14, 1983.
25. _____. *Designing a New Retirement System: Issues to Consider*, Washington, D.C.: Government Printing Office, November 1984.
26. _____. *Civil Service Pension Reform Act of 1985, Hearings on S. 1527, September 9-11, 1985*, Washington, D.C.: Government Printing Office, Oct. 30, 1985.
27. _____. *Report to Accompany S. 1527*, Washington, D.C.: Government Printing Office, Oct. 30, 1985.
28. _____. *Conference Report to Accompany H.R. 2672*, Washington, D.C.: Government Printing Office, May 16, 1986.
29. _____. *Supplemental Information Regarding the Federal Employees' Retirement System Act of 1986*, Washington, D.C.: Government Printing Office, October 1986.
30. U.S. OFFICE OF PERSONNEL MANAGEMENT. *Technical Support in the Development of Modifications to the CSRS* (prepared by Towers Perrin Forster & Crosby and ICF, Inc.), Washington, D.C., December 1984.
31. _____. *U.S. CSRS Annual Report at 9/30/84*, Washington, D.C., May 1985.
32. _____. *FERS Transfer Handbook*, Washington, D.C., June 1987.
33. VAN RIPER, P. P. *History of the United States Civil Service*, White Plains, N.Y.: Row, Peterson & Co., 1958.

PAPERS AND ARTICLES

34. BNA PENSION REPORTER. "Agencies Have Huge Task Ahead to Prepare for New Pension System," Washington, D.C., June 30, 1986.

35. BOVARD, J. "Trim the Civil-Service Pension Bonanza," *Wall Street Journal*, Feb. 14, 1985.
36. CAUSEY, M. "Shelter Plan Shelved," *Washington Post*, March 8, 1985.
37. ———. "Generous Pension Plan," *Washington Post*, March 27, 1985.
38. CONFERENCE OF ACTUARIES IN PUBLIC PRACTICE. "Resolved, that Pension Plans Should (Should Not) Use Social Objectives in Addition to Investment Objectives in Determining Pension Policy—a Debate." *The Proceedings, 1983-84*, Vol. XXXIII (1984), 211-35.
39. DEVINE, D. J. "Pension Fund Plunder," *Washington Times*, Dec. 10, 1985.
40. HORNER, C. "Can Wall Street Afford Uncle Sam, Investor?" *Wall Street Journal*, Dec. 12, 1985.
41. HUSTEAD, E. C., AND TONI S. "Indexing of Federal Retirement Systems for Inflation," *TSA XXXIV* (1982), 57-77.
42. MILLER, T. S. "Uncle Sam's Out-of-Control Pension Program," *Reader's Digest*, September 1983.
43. RAUCH, J. "This Could Be the Year for Major Changes in the Retirement System for Federal Workers," *National Journal*, July 20, 1985.
44. REAGAN, R. "Statement Upon Signing of H.R. 2672," *Presidential Documents*, June 6, 1986.
45. ROOT, K. "U.S. Pension Time Bomb," *Nation's Business*, January 1984.
46. ROTH, W. V., JR. "A New Approach to Federal Retirement," *The Federal Managers Quarterly*, Fall, 1985.
47. ———. "Retirement Fund Safeguards," *Congressional Record*, Dec. 19, 1985.
48. TAPSCOTT, M. "Hill, White House Play Chicken, Put Federal Pension Plan at Risk," *Washington Times*, July 15, 1985.
49. ———. "Veto Threatened on New Federal Pension Plan," *Washington Times*, March 12, 1986.
50. U.S. NEWS & WORLD REPORT. "War over Civil Service Pensions Heats Up," *U.S. News & World Report*, March 25, 1985.
51. U.S. SENATE REPUBLICAN POLICY COMMITTEE. "Statement of Administration Position of S. 1527," Washington, D.C., Nov. 7, 1985.
52. WASHINGTON POST. "Good Deal for Federal Workers," *Washington Post*, July 12, 1985.

PUBLIC LAWS

53. P.L. 66-195. *Civil Service Retirement Act of 1920*. March 22, 1920.
54. P.L. 74-271. *Social Security Act*. Aug. 14, 1935.
55. P.L. 91-93. *Civil Service Retirement Amendments of 1969*. Oct. 20, 1969.
56. P.L. 95-595. *Amendments to Budget and Accounting Procedures Act of 1950*. Nov. 4, 1978.
57. P.L. 98-21. *Social Security Amendments of 1983*. April 20, 1983.

58. P.L. 98-168. *Federal Employees' Retirement Contribution Temporary Adjustment Act of 1983*. Nov. 29, 1983.
59. P.L. 99-177. *Balanced Budget and Emergency Deficit Control Act of 1985*. Dec. 12, 1985.
60. P.L. 99-335. *Federal Employees' Retirement System Act of 1986*. June 6, 1986.
61. P.L. 99-509. *Omnibus Budget Reconciliation Act of 1986*. Oct. 20, 1986.
62. P.L. 99-514. *Tax Reform Act of 1986*. October 10, 1986.
63. P.L. 99-556. *FERS Technical Corrections Act of 1986*. Oct. 27, 1986.
64. P.L. 100-20. *Technical Corrections to FERS*. April 7, 1987.
65. P.L. 100-203. *Omnibus Budget Reconciliation Act of 1987*. Dec. 22, 1987.
66. P.L. 100-238. *FERS Technical Corrections*. Jan. 8, 1988.

DISCUSSION OF PRECEDING PAPER

EDWIN C. HUSTEAD:

Mr. Schreitmuller has written an exhaustive and accurate description of the development and enactment of the Federal Employees' Retirement Act (FERS) of 1986. Since I was one of the consultants working for the Congressional Research Service and the House Committee on Post Office and Civil Service, I particularly appreciate Mr. Schreitmuller's kind words concerning the validity and importance of the actuarial estimates that were used to determine the costs of the various proposals.

It is important to understand the political context of the development of FERS. The congressional committees responsible for federal retirement were not the committees that had extended Social Security coverage to federal employees. The committees responsible for the retirement system viewed the extension of Social Security coverage to new federal employees as a problem that should be resolved with as little disruption to the retirement system as possible. They did not approach this as an opportunity to make major changes to the Civil Service Retirement System (CSRS).

Major changes of CSRS have been made at least once every generation. These usually evolve from careful and extensive studies of the retirement system, and the studies are typically conducted by special national commissions. The congressional committees, and the Administration, did not believe that this was the time or place for such a commission.

As Mr. Schreitmuller points out, the enactment process was greatly facilitated by agreement on a common set of assumptions and methods. It might have been impossible to reach agreement if two or three of the parties involved had depended on different assumptions and methods. As actuaries involved in similar systems can easily appreciate, there would have been a wide range of cost estimates depending on different sets of assumptions. The important point, recognized by the actuaries involved in the process, is that the differences between options will usually be similar under any reasonable set of assumptions. Therefore, a common set of assumptions could be used without disguising the relative cost of different options.

There were some differences of opinions among the actuaries involved in the process, and several of these are noted in Mr. Schreitmuller's discussion of Actuarial Cost Estimates in the Legislative Process. Fortunately, these relatively minor differences never advanced beyond background papers, so they did not interfere with the negotiation process.

As a final point, I believe that the relative number of transfers is of great interest. If the employees in CSRS had made the transfer based on purely economic grounds, about half of the employees would have transferred to FERS to improve the net present value of their benefits. We expected some inertia so that the transfers would have been in the 30 percent to 40 percent range. However, the total rate of transfer in the two open seasons was only 4 percent. A unique aspect of the transfer decision is that FERS included Social Security and many federal employees are concerned about the future of Social Security. But even that factor does not explain the tremendous rate of inertia. It would be of interest for a future paper to address the inertia factor in more detail.

MICHAEL R. VIRGA:

I will add to Mr. Schreitmueller's summary of the new retirement system for federal employees a few notes about the most recent actuarial valuation of the system. Valuation reports are prepared annually by the Office of Actuaries at the Office of Personnel Management, under the direction of the Board of Actuaries, and are available from that office.

The current normal cost for CSRS and FERS is based on new economic assumptions that were adopted by the Board of Actuaries and first effective in 1987, that is, 5 percent inflation, 5 percent general salary increases, and 7 percent interest. In addition to the general salary increase assumption, there is a scale of individual merit and longevity increases that averages about 3 percent per year over a typical career. The normal costs for the FERS defined benefit plan under these assumptions are as follows:

NORMAL COSTS UNDER FERS	
Regular employees	13.8%
Law enforcement and firefighters	26.7
Air traffic controllers	28.4
Military reserve technicians	13.7
Congressional employees	20.2
Members of Congress	20.9

These normal costs do not include the cost of Social Security or the thrift plan. The total normal cost of CSRS declined from about 35 percent of pay to about 29 percent under these assumptions.

The active employee population as of September 30, 1987 totaled 2,880,000, including 730,000 employees who were automatically covered under FERS and 70,000 who elected (or eventually would elect) FERS during the open enrollment period from July 1, 1987 through December 31, 1987, with the balance of 2,080,000 employees being covered by CSRS. The number of

employees covered by FERS is projected to equal the number covered by CSRS by the year 1995.

Because there is one fund available to pay both CSRS and FERS benefits, for actuarial purposes there is one plan with two tiers of benefits. The unfunded liability for the combined system as of September 30, 1987 was \$486 billion under the new assumptions (\$544 billion under the old assumptions). The accumulated plan benefits amounted to \$548 billion, and the fund balance was \$179 billion.

The valuation report also includes a 75-year open group projection of the funding of the combined system (but excluding Social Security) with separate accounting for CSRS and FERS. The total outlays as a percentage of payroll are projected to remain nearly constant at the current level of about 36 percent of payroll until the year 2020, when they start to decline to the ultimate level of about 23 percent of payroll.

The current statutory method for financing CSRS does not provide sufficient income to pay all CSRS benefits when the CSRS population is closed, and in the projection the assets attributable to CSRS are reduced to zero by the year 2020. Because there is a single fund, subsequent CSRS benefit payments cause increases in the unfunded liability under FERS that are amortized over 30 years. The combined system remains fully solvent, and fund assets gradually climb from the current level of 2.5 times payroll to an ultimate level of 4.5 times payroll.

ROBERT J. MYERS:

Mr. Schreitmueller is to be heartily congratulated for this monumental paper. It gives a detailed account of the intricate convolutions that led to the complex new FERS, along with an excellent list of references. The paper will be a valuable source document over the years, giving information about how this important program evolved. I know of no other paper or report in which this information is available, because the legislative development arose in a most haphazard and disorganized manner.

Unfortunately, the legislation itself contains many undesirable features and represents a lost opportunity to provide a reasonable and equitable retirement system for federal employees. My discussion covers the areas of concern.

The development of the legislation can be analogized to the construction of a camel in the dark of night. This is well evidenced by the author's statement—"working from an outline at that stage, but an all-night effort produced a May 16 conference report giving full statutory language and the

statement of managers." The unorthodox and inadequate legislative procedure is illustrated by the fact that the final lengthy legislation was tacked on to a short bill to rename a post office in New Jersey!

The legislation became necessary because the Social Security Amendments of 1983 accomplished, at long last, what should have been done many years previously: Social Security coverage of new federal hires (beginning in 1984). That legislation was enacted in early 1983, and ample time existed before the initial coverage date of January 1, 1984 to develop a proper supplementary pension plan for the new federal hires, but this was not accomplished. Certainly, if a private employer had been faced with this situation of extension of Social Security coverage, action to develop a supplementary plan would most certainly have been done within the period before such coverage became effective.

As the author describes, it took until the middle of 1986 before this was done, and even then the result was extremely complex and, in many ways, undesirable. The basic reason for this was the weakness of the entire legislative procedure, including the uncoordinated efforts of the House and Senate committees involved, and the virtual abstinence of the Executive Branch from the legislative effort. In addition, there was the element of "too many cooks spoiling the broth," because also involved were the Congressional Research Service, the Congressional Budget Office, the Office of Personnel Management, the Office of Management and Budget, and several prominent actuarial firms.

What was missing most from the picture was the participation of organizations of persons representing the views of the real employer—the tax-paying public. The Executive Branch, through OPM and OMB, should have played this role, but—as indicated previously—largely abdicated responsibility.

Perhaps the greatest weakness was that the congressional committees involved, and the members who took the greatest interest, were made up from among those who represented districts where there were large numbers of federal employees. Thus, all the pressures were toward liberalization, rather than toward a reasonable and equitable plan that would well serve both the covered employees and the taxpayers at large. A much better procedure would have been to have a blue-ribbon commission study the matter over a short period and make recommendations.

Probably the greatest flaw in the retirement plans (CSRS and FERS) for federal employees is the much lower retirement ages than those generally applicable to employees in the private sector. The same weakness occurs in many plans for state and local government employees. Some private plans

are not free of such criticism when they offer golden parachutes and special temporary early-retirement provisions. My basis thesis is that what this country needs to restore its productivity and its economic role is more work and employment—not shortened work lifetimes through liberal early-out provisions.

I recognize that certain gestures in this direction were made in FERS, such as the small, phased-in increase in the early-retirement age of 55 (with 30 years of service) and the elimination of COLAs for regular retirees prior to age 62. However, these did not go nearly far enough.

The thrift plan established under FERS is a step in the wrong direction. I believe that employers should not “cop out” by substituting thrift plans or defined-contribution plans for defined-benefit plans, which fundamentally meet the purpose of providing retirement benefits, rather than primarily limiting and making definite the employer costs. Moreover, the thrift plan has antisocial elements in that, being voluntary, the lower-paid participants will be less likely to utilize it and will thereby receive relatively less in contributions from the employer than will higher-paid persons.

In summary then, FERS represents the loss of a rare opportunity to establish a supplementary pension plan for federal employees on the foundations of the Social Security program that would serve both the participants and the country as a whole in a desirable manner. I fear that it will be many years before greater rationale and reasonableness can be introduced into the plan, both because the federal employees have such strong political force and because the general public is not sufficiently aware or aroused about the situation. In any event, Mr. Schreitmueller has performed a great service in setting forth the factors clearly and succinctly, so that those debating the subject will all have the same facts, even if they have different opinions.

(AUTHOR'S REVIEW OF DISCUSSION)

RICHARD G. SCHREITMUELLER:

I am grateful to Messrs. Husted, Virga and Myers for their thoughtful discussions, which added substantially to the paper. They have worked with federal employee retirement for many years and bring a special insight to the subject.

I also wish to thank William David Smith for his valuable comments and encouragement before the paper was finished. Other actuaries who don't work with federal employee retirement may also find parts of the paper worth reading:

1. Experts who need to work with federal employees, such as actuaries in divorce cases or financial planners, may find Tables 3 and 8 helpful in explaining the benefit structure.
2. The section on the thrift plan explains advantages of index funds for common stock investments. Index funds make considerable sense, even for individual investors, but nobody is being paid to tell us that.
3. The section on defined benefits discusses replacement rates and other design features from first principles, especially as found in public employee retirement systems.
4. The historical section gets into national politics and shows how actuaries sometimes can play a part in the legislative process. The last two sections give an introduction to broad investment issues also faced by the Social Security and military retirement systems, that is, whether to keep all assets in government debt securities or invest them in privately issued securities.

Though the paper concentrated on facts, the discussions included strong opinions, and this reply will do no less.

Mr. Husted rightly points out the importance of the political context in shaping the revised federal retirement program known as FERS, especially the agendas of different congressional committees. But he is only half right in saying that the committees responsible for federal employee retirement did not want to make major changes.

During 1985, while the House was proceeding slowly, the Senate took the lead and eventually pushed through reforms including lower costs and a thrift-savings plan with private-sector investment options. In reaching this goal, the Senate had to dilute the original Stevens proposal eliminating all defined-benefit pensions, discard proposed reforms in disability, and build a passive investment structure that withstood attack by the Administration (its only serious attempt to be a player in the legislative process).

As consulting actuary to the Congressional Research Service, Mr. Husted made the key recommendation to use the Social Security Administration's economic assumptions, which proved acceptable to all parties and cleared the way toward design of new benefits. Unfortunately, the actuarial methods portrayed certain cost-of-living increases as free of costs, and so that part of FERS is not a good example for other employers.

I join Mr. Husted in marveling at the inertia of federal employees who did not transfer to FERS when it was to their advantage. Most of the employees already covered by FERS showed inertia too, by not contributing to the thrift plan in early 1987 when the employer match temporarily was \$2 for every \$1 they paid in, a once-in-a-lifetime offer. Nobody predicted that enrollment rates would be nearly so low.

Evidently the main problem was communication, with too much complexity, too little time and too little commitment to employees. Retirement system costs may thus turn out to be lower than expected, with employees who leave the government in the next few years getting little or no benefit from the old CSRS program. But payroll costs in those years will be unnecessarily high, as too few current employees decide to leave, judging correctly that they stand to lose heavily from the CSRS's lack of portability. In that sense, communicating the new plan better could have achieved more for taxpayers.

Mr. Virga has long been an essential source of data on federal employee retirement coverage and costs. His normal cost estimates for regular federal employees in the defined benefit part of FERS based on new assumptions by Office of Personnel Management are close to the estimates made by the Congressional Research Service in the legislative process. Costs for special-class employees are higher, as one might expect, for uniformed and safety personnel in the public sector and for members of Congress. He also provides updated figures for transfers from CSRS to FERS during 1987; about 70,000 of the 2,150,000 federal employees who could have transferred did so, or only about 3 percent.

For many years Mr. Myers has served as a role model for actuaries by providing a permanent record of major changes in the Social Security law. Less well-known is that Mr. Myers has been a player in federal employee retirement legislation since the 1950s. So his kind words and provocative discussion are especially welcome.

One must agree that a private employer would have acted promptly to design a new retirement plan, unimpeded by the separation of powers built into our Constitution to prevent precipitate action. But the world of government revolves more slowly, and pension issues are little-understood.

Instead of calling for some kind of national commission, Senator Stevens and his staff got started long before Social Security coverage became inevitable, creating their own pension forums to help build consensus without losing control and staying the course despite much opposition. They used a convoluted legislative process to keep the FERS Act moving past obstacles that have stymied many other bills in recent years, getting virtual unanimity in the few votes taken. And after interested parties and the public had more time to understand the new retirement system, nobody proposed repeal or major change (despite many legislative vehicles provided by bills tinkering with the thrift plan's fiduciary rules). How many other retirement laws enacted in the 1980s get so much respect?

In retrospect, the second Reagan Administration's failure to play a part in designing FERS was consistent with its legislative record generally. The key government officials at the White House, OMB, and OPM who might have participated simply did not fill the shoes of the people they replaced in 1985, James Baker, David Stockman and Donald Devine, respectively. After enactment, Mr. Baker in his new job at Treasury helped solve the one tough problem that remained, transferring Francis Cavanaugh to get the Thrift Board off to a fine start administering the new defined-contribution plan.

As Mr. Myers points out, FERS raised the retirement ages for federal employees less than the demographics of an aging population may later require. Perhaps the rising cost of pensions and post-retirement health benefits, along with labor shortages in the 1990s, will cause more people to follow Mr. Myers' example of extending one's productive years indefinitely.

The federal thrift plan serves useful purposes in supplementing the defined benefit plan, as the paper indicates. It lets younger employees leave without losing benefits earned to date and lets older employees stay on without losing benefits for not working. Heavier participation on the thrift plan by higher-paid employees serves as a rough substitute for formal integration with Social Security, helping replace pre-retirement pay in a reasonably adequate way for employees up and down the line.

Mr. Myers reminds us that federal employees have strong political force and that the general public pays little attention. It is true, of course, that the congressional committees overseeing federal employee pay and benefits are biased toward generosity, much as are other committees responsible for agriculture, veterans, and so on. A really bad law such as we now have for federally insured savings & loans seems to have no political consequences, unless the lawmakers responsible get caught violating ethics rules. The public prefers to focus on symbols such as government ethics and pay, not on substance. Private pensions have the worst of both worlds, with major legislation controlled by adversaries instead of friends.

Although the FERS Act is not perfect, it stands as a successful effort to assure that federal employees stay covered by Society Security and to address long-standing problems with their retirement system. In the years ahead, actuaries wanting further changes in our pension system, public or private, may do a real public service and learn much by venturing into the legislative arena.