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STUDY BY THE STAFF OF THE U S

General Accounting Office

Investment Policies, Practices, And Performance Of Federal Retirement Systems

As a general rule, laws require the Government's retirement systems to invest their funds in Federal securities an investment often perceived as offering more limited earnings than other securities Some of the Government's retirement funds have no legal restriction on investments and are managed like private pension funds

This study examines the pros and cons of the Treasury Department's investment policy and gives basic information on systems investment performance to policymakers and other persons responsible for Federal retirement systems It makes no conclusions or recommendations but does disclose that, in a recent 5 year period, the average rate of return on funds fully invested in Federal securities was higher than that on funds with more diversified investments

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PREFACE

The growing costs and liabilities of retirement programs in the United States are an important national concern. Certain congressional committees, the President, and private groups have initiated studies addressing various aspects of this issue. We have issued a number of reports showing a need for better management of retirement programs for Federal personnel. Some of our recent reports have stressed the substantial long-term liabilities being accumulated for Federal retirement programs and the need for full recognition and funding of the cost of retirement benefits for the Federal work force.

A significant aspect of any discussion on retirement funding is the rate of return being received on investments. It has been estimated that if a retirement system is fully funded, investment earnings may cover up to 60 percent of the contributions that would otherwise be required.

In general, the Government's funded retirement systems are required by law to invest their assets in Federal securities--an investment often perceived as offering more limited earnings than other available securities. There are exceptions to this investment policy, however, and certain Federal retirement funds have no legal restrictions on investments.

Because of the importance of investment earnings to retirement system financing, we examined the investment policies and practices of six Federal retirement systems that invest funds.

This study does not draw any conclusions nor does it make any recommendations for changes to the investment policies and practices. It does provide basic information on the:

--Nature of retirement systems and their investments. (See ch. 1.)

--Investment policies and performance of Federal retirement systems. (See ch. 2.)

--Pros and cons of the Treasury Department's investment policy. (See ch. 3.)

Four of the six retirement systems in this study were established by law. These four--the civil service retirement and disability system, the Foreign Service retirement and disability system, the judicial survivors' system, and the U.S. Tax Court judges' survivors' system--are required by law to invest only in Federal securities or other securities guaranteed by the United States. Receipts, including employee and agency contributions, are transmitted to Treasury and credited to trust funds maintained there for each retirement system. The other two retirement systems--the Federal Reserve System and the Tennessee Valley Authority--were self-initiated and manage their funds like private pension funds. They independently establish investment policies and accumulate assets that can be converted to cash when needed. (See p. 5.)

Treasury's investment policy is to sell special nonmarketable issues (see footnote on p. 5) to the four Federal retirement trust funds which by law must invest in Federal securities. These trust funds had about $47 billion invested in such issues at the end of 1977.

There are pros and cons to Treasury's investment policy. The arguments favoring it include:

--Annual cash requirements are limited to benefits paid to retirees.

--The procedures for purchasing and redeeming securities are simple.

--Most financial transactions offset each other and have minimum impact on the current budget.

--Investments are backed by the full faith and credit of the U.S. Government.

--Assets can be readily converted to cash with little risk of loss.

--Rates of return are stable.

--The average rate of return for the 5-year period 1973 through 1977 was higher for the four retirement systems investing only in Federal securities than for the two with diversified investments. (See p. iv.)

The arguments against it include:

--Funds for paying future benefits are not accumulated as liabilities are incurred. The securities accumulated in such funds represent Federal Government debts.

--Investing in debt securities eliminates the possibility of increasing the asset value through price appreciation which comes with equity securities.

--Average annual rates of return for Treasury securities are somewhat less than for long-term corporate bonds and much less than those for common stocks.

The Government's practice of investing most of its retirement funds in Federal debt securities bears significantly on another issue now under consideration--whether social security coverage should be extended to all Federal personnel.

Some supporters of integrating social security with Federal staff retirement plans maintain that the staff retirement funds could be used to alleviate social security's financial difficulties. As shown by our study, such arguments have little substance since most of the funds consist of Government debt securities rather than tangible assets. Therefore, only minimal assets could be transferred to social security to help meet its obligations.

In a previous report, "Need for Overall Policy and Coordinated Management of Federal Retirement Systems," FPCD-78-49, December 29, 1978, we supported the concept of universal social security coverage as a means for the Government to provide comparable and equitable retirement benefits to all its personnel. We believe, however, that it is important to recognize that the issue must be decided on its own merits rather than as a means of rescuing the social security system.

This study was prepared by our compensation group. Please direct any questions to Robert Shelton, Assistant Director, or James Waters, Team Leader, on 202-275-5743.

H. L. Krieger

H. L. Krieger
Director

Average Rates of Return on Federal Retirement Fund Investments During 1973-1977

Funds invested exclusively in Federal securities	Average percentage rate of return
Civil service retirement and disability fund	6.52
Foreign Service retirement and disability fund	6.58
Judicial survivors' annuities fund	6.13
U.S. Tax Court judges' survivors' annuity fund	5.57

Funds invested in diversified securities	Average percentage rate of return: Excluding realized and unrealized gains and losses	Average percentage rate of return: Including realized and unrealized gains and losses
Federal Reserve System retirement fund	5.20	2.81
Tennessee Valley Authority:		
Fixed-benefit fund	4.05	-0.02
Variable annuity fund	2.41	-4.49

Contents

ABBREVIATIONS

OPM Office of Personnel Management

TVA Tennessee Valley Authority

AGC00699
AGC00013
AGC00108
AGC00031
AGC 00203
DLG00825

CHAPTER 1

THE NATURE OF RETIREMENT SYSTEMS AND THEIR INVESTMENTS

In creating a retirement program, the sponsoring organization establishes long-term financial commitments. Accumulating and distributing a retirement system's resources usually takes many years. Costs to the system, when measured by benefits paid, are generally low in the early years but become much higher 20 to 30 years later as the number of beneficiaries increases. Because of this, a retirement system's financial condition and the accumulated assets to cover future benefit payments should be reviewed periodically.

The periodic appraisal of a retirement system's financial condition is called an actuarial valuation. It includes computing the estimated value of the benefits that will be paid to participants (both current and future retirees) and the value of future contributions from employers and employees. It considers such things as salary progression; the rates of disability, retirement, and withdrawals by active participants; and the rates of mortality among active and retired participants. Such valuations are generally done annually, but some are done less frequently. However, the assumptions used are generally not revised more often than every 3 years since valuations attempt to anticipate long-term rather than short-term trends.

The principal product of an actuarial valuation is an estimate of a retirement system's normal cost. Normal cost is commonly expressed as a percentage of payroll and from a financing point of view represents an estimate of the amount of funds which, if accumulated annually and invested over covered employees' careers, will be enough to meet their future benefit payments.

One of the most important factors included in an actuarial valuation is the interest-rate assumption. It is used when computing both the value of future benefits to be paid by a system and the value of future receipts. Generally, other things being equal, the higher the interest-rate assumption, the lower will be the projected contributions to cover systems' costs. Conversely, it is commonly said that one-fourth of a percent increase in the interest assumption will produce a 6- or 7-percent increase in the level of benefits which could be provided by a given pension contribution. While this rule may apply in some cases, it will vary in others, depending on the average age of participants, their length of past service, the type of benefits, and the amount in the retirement fund.

A realistic interest-rate assumption should be based on a realistic estimate of the long-term average annual rate of return on investments. The assumption generally reflects the current rate of return on investments, expectations of changes in the market value, guaranteed rates of return on fixed-income contracts, and the objectives and preferences of the sponoring organizations.

The primary objective of a retirement fund's investment program--whether in the public or private sector--is to earn a reasonable long-term annual rate of return. Inherent in this objective, particularly for public retirement funds, is preserving capital through effective investment policies and practices.

Investment policies can specify the desired percentage of equity securities (stocks) and fixed-income securities (notes and bonds), accepted variability in rates of return, or minimum investment income. Policies provide the basis for particular investment practices and will control the characteristics of the fund. They vary depending on such things as the system's size and age, the benefits it provides, the age of its beneficiaries, and the dependability of future contributions.

An important task for policymakers is to set the fund's investment ratio between debt securities and equity securities. Debt securities are loans at a specific rate for a specific period of time. Equity securities provide ownership in a company without a guaranteed return but with the opportunity to share in its profits. The lack of a guaranteed rate of return is offset by possible greater rewards through price appreciation and dividends.

Policymakers can use studies of past and future rates of return on various investment alternatives as an aid in selecting a debt-to-equity ratio. For example, a University of Chicago study published in 1968 shows that the average annual rate of return for all common stocks listed on the New York Stock Exchange was 9.3 percent between 1926 and 1965. Another study published in 1977 by the Financial Analysts Research Foundation compared the rates of return on different securities between 1926 and 1976. It showed that common stocks earned 9.2 percent a year; long-term corporate bonds, 4.1 percent; long-term Government bonds, 3.4 percent; and Treasury bills, 2.4 percent. The 1977 study also forecasted the average rates of return between 1977 and 2000. The expected annual rates of return were: common stocks, 12.5 percent; long-term corporate bonds, 7.6 percent; long-term U.S. Government bonds, 7.1 percent; and Treasury bills, 5.5 percent.

These studies also showed that returns within this period for the various investment alternatives varied significantly. For example, the first study showed that the mean return was 12.6 percent between December 1945 and February 1965 and a minus 0.5 percent from December 1929 to February 1941. The 1977 study noted that stock returns were positive in 34 of the 51 years included in the study, long-term Government bonds were positive in 38, and long-term corporate bonds were positive in 41. Although stocks outperformed the other assets, stock returns varied widely from a plus 54 percent to a minus 43.3 percent. On the other hand long-term U.S. Government bonds ranged from a plus 16.8 percent to a minus 9.2 percent, and long-term corporate bonds from a plus 18.7 percent to a minus 8.1 percent.

Because of the large number of securities studied, the rates of return do not necessarily represent a retirement system's portfolio. The first study included all common stocks listed on the New York Stock Exchange, and the 1977 study included securities on a number of indexes such as the Standard and Poor's 500 Stock Composite Index and the Salomon Brothers High Grade Long-Term Corporate Bond Index.

It is generally accepted that higher rates of return may be earned by assuming greater levels of risk. Risk is generally defined as the uncertainty of variability of returns over time. It consists of two elements: financial risk and interest risk. Financial risk is the risk of default; interest risk is the variability in rate of return.

In terms of interest risk, investments fall into three major categories:

1. Government and corporate bonds and Treasury bills--investments with fixed rates of return on the initial investment and uncertain rates of return on reinvestment of interest and principal over the life of the security.

2. Annuity contracts--investments with fixed rates of return over the complete life of the security being funded.

3. Common stocks--investments with no certainty as to rates of return.

Unlike corporate bonds, Federal securities are assumed to contain no financial risk. The interest risk associated with Federal securities is the chance that interest rates will fluctuate after a security is purchased. If a security matures during a period of declining interest rates, and the interest earned or principal are reinvested, the funds reinvested will earn a lesser rate of interest. On the other hand if a security is sold before maturity during a period of rising interest rates, it may be sold at a discount with a resultant loss of principal.

In recent years private pension funds have increased the percentage of their assets invested in Federal securities. In 1974, only 4 percent of uninsured pension fund assets were invested in such securities. By 1976 this had increased to 9 percent, and by 1977 to 11 percent. In contrast, common stocks accounted for 64 percent of all pension fund assets in 1973 and declined to 53 percent in 1977. Corporate bond investments, which represented 31 percent of pension fund assets in 1970, declined to 26 percent in 1974 and to 25 percent in 1977.

CHAPTER 2

FEDERAL RETIREMENT FUNDS'

INVESTMENT POLICY AND PERFORMANCE

At least 12 separate retirement systems serve various groups of Federal personnel. 1/ Six of these systems, or parts of them, invest assets. Four systems--the civil service retirement and disability system, the Foreign Service retirement and disability system, the judicial survivors' system, and the U.S. Tax Court judges' survivors' system--were established by law and are required to invest only in Federal securities or other securities guaranteed by the United States. Receipts, including employee and agency contributions, are transmitted to Treasury and credited to trust funds there. The two other retirement systems--the Federal Reserve System and the Tennessee Valley Authority--were self-initiated and manage their funds like private pension funds. They establish investment policies independently and accumulate assets that can be converted to cash when needed.

It is Treasury's policy, in response to various statutes, to invest its major trust funds--including the civil service and Foreign Service trust funds--in par-valued special issues 2/ rather than in marketable Federal securities. The interest rate payable on these special issues is the average market yield on outstanding Treasury securities that will not mature for at least 4 years. This policy (1) avoids disrupting the securities market that would result from buying and selling large cash amounts of securities and (2) prevents trust funds from incurring losses or making profits upon redemption.

1/See our report, "Need For Overall Policy and Coordinated Management of Federal Retirement Systems," FPCD-78-49, Dec. 29, 1978.

2/Special issues are nonmarketable special Government securities designed for direct issuance to trust funds by Treasury. (Treasury does not issue a security in the form of a certificate, note, or bond, but maintains records showing for each trust fund the amounts issued, redeemed, and outstanding by classification of security.) Par-valued specials are purchased and redeemed by Treasury at par or face value. There are no premiums and discounts when purchased, or gains and losses when sold.

The judicial and U.S. Tax Court judges' survivors' systems invest in market-based specials. 1/ Before market-based specials were created in 1974, Treasury permitted its smaller trust funds--including the judicial and Tax Court judges' survivors' trust funds--to invest in marketable Treasury securities as long as the cash amounts were not large enough to disrupt the securities market. Market-based specials (like marketable Treasury securities) are purchased and sold at prevailing market prices. Therefore, premiums and discounts are paid when purchased, and gains and losses incurred when sold.

The four retirement trust funds, established by law, generally do not receive cash. Bookkeeping entries are made crediting the funds with agency contributions and other appropriations, employee withholdings, and investment income. 2/ Similarly, only bookkeeping entries are made when the trust funds purchase and sell Federal securities. Cash is disbursed from Treasury only when benefit payments are made.

Although they affect each agency's budget, certain financial transactions relating to these retirement trust funds are offsetting intragovernmental transfers and do not affect the overall Federal budget. For example, an agency contribution is income to the trust fund but an expense for the employing agency. 3/ Likewise, interest payments are an expense to Treasury but income to a trust fund. On the other hand, employee contributions and benefit payments do affect the budget. Payroll deductions for employee contributions reduce budget outlays and claims against Treasury revenues, while benefit payments increase budget outlays and claims against Treasury.

1/Treasury buys and sells these market-based specials at prices and interest rates identical to marketable Treasury securities.

2/Certain Federal agencies covered by the civil service system do not receive appropriations. Some operate on a self-supporting basis; others sell products or services and are expected to recover costs incurred. These agencies' and their employees' contributions to the retirement fund are made in cash.

3/Cash contributions made by nonappropriated fund agencies (see footnote 2) are not intragovernmental transfers and have the effect of reducing the overall budget.

The two other retirement systems in our review--the Tennessee Valley Authority (TVA) and Federal Reserve System--basically operate without Federal appropriations. TVA's power programs--which accounted for about 97 percent of its fiscal year 1977 program receipts--are completely self-supporting. Its nonpower programs depend primarily on appropriated funds, except for its fertilizer sales program, which is partially supported through charges to users. The Federal Reserve Board under the Federal Reserve System (see p. 22) meets its expenses and pays its salaries by assessing the 12 Federal Reserve banks semiannually.

The investment policies of TVA and the Federal Reserve System are independently established; that is, they are not restricted by law. Contributions are charged to operations and recovered from customers served. Agency and employee contributions are invested according to trust fund administrators' investment policies. Funds flow from the sponsoring organization to their trustee or depository--a commercial bank--and to the seller of the security.

CIVIL SERVICE RETIREMENT AND DISABILITY FUND

Treasury and the Office of Personnel Management (OPM) manage the civil service retirement and disability system. Treasury is responsible for investment activities, and OPM determines the amounts to be invested or redeemed.

The Secretary of the Treasury invests most of the system's funds in par-valued special issues. Marketable Federal securities have been purchased when necessary to help stabilize the securities market. When such securities are purchased they are held to maturity or exchanged for other marketable Federal securities without being sold in the open market. The following table shows the trust fund's assets at the end of fiscal years 1973 through 1977.

The Civil Service Retirement and Disability Trust Fund
Comparative Statement of Assets

	FY 1973		FY 1974		FY 1975		FY 1976		FY 1977	
	Amount (millions)	Percent	Amount (millions)	Percent	Amount (millions)	Percent	Amount (millions)	Percent	Amount (millions)	Percent
Cash	$ 205	-	$ 26	-	$ 40	-	$ 11	-	$ a/-4	-
Special issues										
Certificate of indebtedness	-	-	-	-	-	-	409	-	9,108	18
Notes	23,008	74	21,249	62	19,621	51	16,502	39	12,233	25
Bonds	4,822	16	9,848	29	15,752	41	22,520	53	25,021	50
Marketable Federal securities (note b)	3,036	10	3,234	9	3,234	8	3,234	8	3,234	7
Total	$31,071	100	$34,357	100	$38,647	100	$42,676	100	$49,592	100

a/Cash in transit from OPM was not included on Treasury records at the end of FY 1977 Consequently, the civil service retirement and disability fund showed a negative cash balance

b/Includes $375 million of agency securities

Note The end of the fiscal year was changed from June 30 to September 30, 1976

The law establishes the basis for computing the interest rate on par-valued special securities purchased for this trust fund. It specifies that it be the average market yield on Treasury securities outstanding at the end of the previous month. The law requires that only Treasury securities maturing or callable in more than 4 years be included in computing the average. When marketable Federal securities are purchased, Treasury's practice is that the interest rate must be at least as high as the interest rate that would have been assigned to par-valued special issues purchased on the same date. The following table compares the trust fund's income and rates of return for fiscal years 1973 through 1977.

Civil Service Retirement and Disability Trust Fund
Comparative Statement of Investment
Income and Rates of Return

FY	Investment income (note a)	Rate of return (note b)
	(millions)	(percent)
1973	$1,566	5.61
1974	1,838	5.79
1975	2,136	6.80
1976	2,534	7.69
1977	2,841	6.69
5-year average	2,183	6.52

a/Investment income consists of interest income. The realized or unrealized capital gains and losses for fiscal years 1973-77 are insignificant and have been excluded from the investment income.

b/We computed the rate of return. It is a weighted average rate for the special issues, marketable Treasury securities, and Government agency securities. The rate of return on the special issues and the agency securities was computed by dividing investment income by the average face amount. The rate of return on the marketable Treasury securities was computed by dividing investment income by the average market value of the securities.

Note: The end of the fiscal year was changed from June 30 to September 30 in 1976. Therefore, the 1976 investment income and rate of return applies to 15 months.

The Secretary of the Treasury has delegated his investment authority to the Fiscal Assistant Secretary. The Department of the Treasury's Appropriation and Investment Branch within the Bureau of Government Financial Operations maintains a trust account and a record of fund transactions. Investment purchases and redemptions are made according to applicable legislation and policies and procedures designed by the Fiscal Assistant Secretary or OPM.

Funds are invested on the day received. Each day, OPM tells Treasury's Appropriation and Investment Branch the amounts to be invested in certificates of indebtedness maturing on the following June 30. On that date each year, amounts obtained from maturing certificates of indebtedness, notes, and bonds are reinvested in notes and bonds that will mature within 1 to 15 years. In assigning these maturity dates, Treasury intends to eventually have nearly equal amounts maturing annually. For example, on June 30, 1977, the civil service retirement and disability trust fund had $39.7 billion in special securities. Of this amount $23.1 billion, or about $1.9 billion annually, will mature on June 30 of each year from 1981 to 1992. The remaining $16.6 billion matures between June 30, 1978, and June 30, 1980, in amounts of $6.7, $4.9, and $4.9 billion, respectively.

Fund disbursements and redemptions are generally made monthly. A separate redemption to pay annuities is made on the first day of the month, and another to pay Federal income taxes withheld from annuitants is made on the third workday of each month. Each Monday OPM estimates all other disbursements for the coming week and instructs Treasury to redeem the amounts needed.

Treasury's policy is to redeem special issues maturing in the current fiscal year, including those purchased during the current year, at face value in the ascending order of interest rates. If additional amounts are needed, special issues maturing in the next fiscal year and if necessary in following years are redeemed at face value in the same order.

The trust fund's administrators do not use outside investment or financial consultants to implement or evaluate investment decisions, and inhouse investment expertise and review are unnecessary because the law specifies which securities to purchase. Rates of return on investments are reported to the OPM Board of Actuaries and published in the Annual Report of the Board of Actuaries of the Civil Service Retirement System.

FOREIGN SERVICE RETIREMENT AND DISABILITY FUND

The Departments of State and the Treasury manage the Foreign Service retirement and disability system. The Secretary of State is responsible for administrative matters, and the Secretary of the Treasury for investment activities.

The Secretary of the Treasury is required by law (22 U.S.C. 1103) to invest in Federal securities. He invests those funds that, in his judgment, are not immediately required for paying annuities, refunds, and other expenses. The trust fund only invests in par-valued special issues, the same kind of securities purchased for the civil service retirement and disability trust fund. Purchases and redemptions are made at face value. Therefore, no premiums and discounts occur on purchases, or gains and losses on sales. The following table shows the trust fund's assets at the end of fiscal year 1973 through 1977.

Foreign Service Retirement and Disability Trust Fund
Comparative Statement of Assets

Assets	FY 1973 Amount (000 omitted)	FY 1973 Percent	FY 1974 Amount (000 omitted)	FY 1974 Percent	FY 1975 Amount (000 omitted)	FY 1975 Percent	FY 1976 Amount (000 omitted)	FY 1976 Percent	FY 1977 Amount (000 omitted)	FY 1977 Percent
Cash	$ 3,841	6	$ 733	-	$ 1,841	1	$ 614	-	$ 587	-
Special issues										
Certificates of indebtedness	-	-	-	-	-	-	-	-	68,804	26
Notes	40,426	59	37,359	36	36,574	24	24,771	14	20,317	7
Bonds	24,136	35	66,087	64	115,531	75	150,837	86	178,827	67
Total assets	$68,403	100	$104,179	100	$153,946	100	$176,222	100	$268,535	100

Note. The end of the fiscal year was changed from June 30 to September 30 in 1976

The basis for computing the interest rates on par-valued special issues is identical to that used for the civil service retirement and disability trust fund--the average market yield on Treasury securities outstanding at the end of the previous month. In computing this average, only Treasury securities due or callable in more than 4 years are included. The following table compares the trust fund's investment income and rates of return for fiscal years 1973 through 1977.

Foreign Service Retirement and Disability Trust Fund
Comparative Statement of Investment
Income and Rates of Return

FY	Investment income (excluding unrealized gains and losses)	Rate of return (note a)
	(000 omitted)	(percent)
1973	$ 2,986	5.14
1974	3,752	5.59
1975	7,162	6.54
1976	10,505	8.61
1977	13,487	7.01
5-year average	7,578	6.58

a/We computed the rate of return. It is a weighted average rate arrived at by dividing interest earned by the average face amount.

Note: The end of the fiscal year was changed from June 30 to September 30 in 1976. Therefore, the 1976 investment income and rate of return apply to a 15-month period.

The Treasury's Appropriation and Investment Branch invests funds on the 1st and 25th of each month. These amounts, including interest income credited to the trust fund on June 30 and December 31 of each year, are invested in certificates of indebtedness that mature on the June 30 following the investment date. Each June 30 the proceeds from the matured certificates of indebtedness and other available funds are reinvested in bonds. Like the civil service system's securities, the maturity dates assigned to these securities generally range between 1 and 15 years.

Investment performance is not evaluated nor are investment advisers or consultants used. Legislation limits the securities that can be purchased, and the Secretary of the Treasury has established the basis for interest earnings. The Secretary of State and the Secretary of the Treasury report the systems' activities and balances to the Congress annually.

JUDICIAL SURVIVORS' ANNUITIES FUND

The judicial survivors' annuities fund is managed by the Administration Office of the U.S. Courts and the Department of the Treasury. Treasury's role is limited to maintaining the trust account and purchasing securities at the highest interest rate available when instructed to do so by the Administrative Office. Legislation (28 U.S.C. 376 (f)) requires the Secretary of the Treasury to invest in Federal securities or Federal farm loan bonds.

Before March 1975 the trust fund invested in marketable Treasury securities. Early in 1975 Treasury developed an investment procedure for those trust funds that invested in marketable Treasury securities. The new procedure eliminated (1) the trust fund's dependence on the availability in the market of desired securities and (2) the adverse effects of the trust fund's own operations in the market. Treasury introduced special securities--referred to as market-based special issues. They are identical in every respect (except in transferability) to Treasury marketable securities and are issued to retirement systems upon request. If a marketable security is trading in the market, the special issue can be purchased at the mean of the bid and asked prices quoted by the Federal Reserve Bank of New York as of noon on the date the security is acquired.

Because of these changes, the trust fund has invested in market-based specials since March 1975. The following table shows the trust fund's assets at the end of fiscal years 1973 through 1977.

Judicial Survivors' Annuities Fund
Comparative Statement of Assets

Assets	FY 1973 Amount (000 omitted)	FY 1973 Percent	FY 1974 Amount (000 omitted)	FY 1974 Percent	FY 1975 Amount (000 omitted)	FY 1975 Percent	FY 1976 Amount (000 omitted)	FY 1976 Percent	FY 1977 Amount (000 omitted)	FY 1977 Percent
Cash	$ -	-	$ 1	-	$ (71)	-	$ 26	-	$ 225	-
Marketable securities										
Notes	2,479	30	2,479	27	1,526	15	1,246	11	696	2
Bonds	5,669	70	6,576	73	7,672	78	7,672	70	7,672	18
Market-based special bonds	-	-	-	-	758	7	2,003	19	33,101	80
Total assets	$8,148	100	$9,056	100	$9,885	100	$10,947	100	$41,694	a/ 100

a/Includes $31 1 million appropriated to the fund by Public Law 95-26 (91 Stat 91), May 4, 1977

Note The end of the fiscal year was changed from June 30 to September 30 in 1976

The Chief, Division of Financial Management of the Administrative Office, is advised monthly by his accounting branch of the funds available for investment. After his approval, the accounting branch notifies Treasury of the amount to be invested, requesting that securities yielding the most favorable interest rate available be purchased. Treasury's Appropiration and Investment Branch then invests the appropriate amount in market-based special issues with the highest yield for the period the funds are invested. The following table compares the trust fund's investment income and rates of return for fiscal years 1973 through 1977.

Judicial Survivors' Annuities Fund
Comparative Statement of Investment
Income and Rates of Return

FY	Investment income (excluding gains and losses)	Rate of return: Excluding realized and unrealized gains and losses (note a)	Rate of return: Including realized and unrealized gains and losses (note b)
	(000 omitted)	(percent)	
1973	$ 360	5.27	2.07
1974	428	5.44	2.09
1975	586	6.49	10.97
1976	808	7.92	11.58
1977	1,908	3.65	c/ 3.94
5-year average	818	5.75	6.13

a/We computed the rate of return from Treasury records. Investment income was divided by the average market value of investments.

b/We computed the rate of return from Treasury records. Investment income, plus realized and unrealized gains and losses, was divided by the average market value of investments.

c/The acquisition in May 1977 of over $30 million in market-based special bonds substantially increased the average market value of investments for FY 1977. The stated rate of interest on these bonds was 8-3/8 percent; however, interest was earned for only about one-third of the fiscal year. Consequently, the annual rate for fiscal year 1977 was 3.94 percent because of the method used to compute the rate of return.

Note: The end of the fiscal year was changed from June 30 to September 30 in 1976. Therefore, the 1976 investment income and rate of return applies to 15 months.

This fund has no procedures for monitoring performance, and it has not been audited. Fund balances and transactions are included in the annual report of the Administrative Office of the U.S. Courts.

TAX COURT JUDGES' SURVIVORS' ANNUITY FUND

The Tax Court judges' survivors' annuity fund is managed by the Tax Court's investment committee--consisting of three judges appointed by the Chief Judge. Treasury maintains the trust account and invests funds according to the Tax Court's decisions.

This fund is restricted by law to invest in Federal securities or Federal farm loan bonds. Before February 1975 only marketable Treasury securities were purchased. As we previously noted, Treasury introduced market-based specials early in 1975. Since then the system has invested almost exclusively in market-based specials. The following table shows the fund's assets at the end of fiscal years 1973 through 1977.

U S Tax Court Judges' Survivors' Annuity Fund
Comparative Statement of Assets

	FY 1973		FY 1974		FY 1975		FY 1976		FY 1977	
	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent
Cash	$ 28	7	$ 28	7	$ 25	5	$ 1	-	$ -	-
Market-based special issue bonds	-	-	-	-	70	14	102	18	258	43
Marketable Federal securities										
Notes	104	28	104	24	47	10	122	22	-	-
Bonds	234	62	284	67	341	69	341	60	341	57
Treasury bills	10	3	10	2	10	2	-	-	-	-
Total	$376	100	$426	100	$493	100	$566	100	$599	100

Note The end of the fiscal year was changed from June 30 to September 30 in 1976

When cash on hand minus the amount needed for near-term outlays is large enough to invest, the investment committee chairman obtains current yields on Federal securities from the Wall Street Journal. He recommends to committee members that the fund invest in the security with the highest yield. The Tax Court's Budget and Fiscal Office is then told of the investment decision. It notifies Treasury's Appropriation and Investment Branch which invests funds in the appropriate security. The following table compares the trust fund's investment income and rates of return for fiscal years 1973 through 1977.

U.S. Tax Court Judges' Survivors' Annuity Fund
Comparative Statement of Investment
Income and Rates of Return

FY	Investment income (excluding gains and losses)	Rate of return: Excluding realized and unrealized gains and losses (note a)	Rate of return: Including realized and unrealized gains and losses (note b)
	(000 omitted)	(percent)	
1973	$15	4.37	2.37
1974	24	4.66	1.71
1975	30	5.83	7.74
1976	45	7.87	9.94
1977	45	6.23	6.07
5-year average	32	5.79	5.57

a/We computed the rate of return from Treasury records. Investment income was divided by average market value of investments.

b/We computed the rate of return from Treasury records. Investment income, plus realized and unrealized gains and losses, was divided by the average market value of investments.

Note: The end of the fiscal year was changed from June 30 to September 30 in 1976. Therefore, the 1976 investment income and rate of return apply to 15 months.

The fund has no periodic procedure for monitoring investment performance, and it has not been audited. The Budget and Fiscal Office prepares fund status reports when requested by the investment committee.

FEDERAL RESERVE SYSTEM RETIREMENT FUND

The Federal Reserve System consists of a Board of Governors, 12 Federal Reserve banks and their branches, and about 6,000 privately owned commercial banks. The Board of Governors is a Federal agency, and the 12 Federal Reserve banks have both private and public characteristics.

The Federal Reserve System has two separate retirement plans--one for the Federal Reserve Board, the other for the Federal Reserve banks. Receipts from both retirement plans are commingled in the Federal Reserve System's trust fund.

Five groups within the Federal Reserve System are responsible for managing its retirement plans:

--The administrative board is responsible for general administration and, among other things, appoints the trustee.

--The executive committee interprets the retirement plans and approves actuarial and other tables used in calculations; prepares annual reports; and arranges for legal, actuarial, and investment advisory services it deems necessary to carry out the plans.

--The performance review committee is the primary in-house investment administrator. It has five members, all with investment experience. Four members are appointed by the presidents of the 12 Federal Reserve banks, and 1 member is appointed by the Board of Governors from its membership. The committee instructs the trustee on fund investments, selects outside investment managers, evaluates investment performance, and issues investment policies and guidelines.

--The Board of Governors, acting in its advisory role, approves the major decisions of the performance review committee.

--The trustee is the Federal Reserve Bank of New York. As the fund custodian, it is responsible for receipts and disbursements and for managing temporary cash balances. The trustee enters into contracts with investment managers according to instructions from the performance review committee and monitors managers' day-to-day activities.

According to Federal Reserve officials, an important principle guiding the administrators is avoiding actual or apparent conflicts between their roles as retirement system administrators, regulators of the Nation's cash flow, and as Treasury's fiscal agents. To avoid conflicts of interest, retirement system administrators--who are privy to more information about the securities market than the general public and make policy decisions affecting the market--do not select investments. Instead, the trust agreement requires investments to be made under contract with insurance companies and investment managers. The following table shows fund assets at December 31, 1973, through December 1977.

Federal Reserve System Retirement Fund's
Comparative Statement of Assets

	FY 1973		FY 1974		FY 1975		FY 1976		FY 1977	
	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent	Amount (000 omitted)	Percent
Cash	$ 263	-	$ 372	-	$ 372	-	$ 543	-	$ 375	-
Interest and other receivables	7,546	2	7,093	2	6,624	2	6,152	1	5,724	1
Treasury bills	2,120	-	2,483	-	7,322	2	2,115	-	5,565	1
Fixed income contracts	106,433	25	99,825	28	93,349	22	86,990	18	80,798	16
Diversified investment contracts	310,966	73	249,506	70	317,610	74	397,986	81	402,495	82
Total assets	$427,328	100	$359,279	100	$425,277	100	$493,786	100	$494,957	100

The Federal Reserve System has fixed-income contracts with two insurance companies. Each company was paid $60 million on March 1, 1971, which is being repaid at an 8.5-percent annual interest rate in 20 yearly installments that began on March 1, 1972. Also, during our review the system had six different investment contracts with investment managers. These companies invest retirement fund receipts in the same way as funds received from other clients.

The performance review committee provided the investment managers with several long-term objectives:

--The rate of return should consistently be at a level expected from prudent management.

--Investment securities should be high grade and yield the best available return, recognizing that quality of investments is as important as yield.

--Attention should be given to the degree of volatility of return on the investment portfolio.

Within these broad objectives investment managers must also consider the following:

--The investment portfolio must contain from 40 to 80 percent equity securities.

--Investment performance will be measured over a market cycle of at least 3 years. Equity performance will be compared to Standard and Poor's 500 common stock index, and debt performance compared to the Salomon Brothers high-grade corporate bond index.

--Investment performance should be consistent with volatility not significantly in excess of that in the Standard and Poor's common stock index.

Investment managers' decisions are subject to the following guidelines:

--Investment decisions should be consistent with the "prudent man" principle included in the Employee Retirement Income Security Act of 1974.

--Investments should be diversified unless it is clearly prudent not to do so.

--Assets may be sold regardless of the time held, whenever such action is advisable.

--Investments should not be concentrated in particular industries or a group of related industries.

--No more than 5 percent of the funds managed should be invested in securities issued by any one company.

--No investment should be made to gain control of the company that issued the securities.

--No investment should be made or continued in a company whose product or activities are subject to broad-based social or political censure.

--No money should be borrowed for the purpose of investment.

--Purchases should not be made on margin.

--Short sales should not be made.

--There should be no trading in foreign exchange, or puts or calls, or writing of options.

--Commodities or commodity contracts should not be purchased.

--Stock in banks, bank-holding companies, savings and loan associations, the Federal National Mortgage Associations, Government securities dealers, or in enterprises engaged substantially in mining or trading in gold should not be purchased.

--Securities of the portfolio manager's organization or the holding company of the portfolio manager's organization should not be purchased.

--Unregistered or lettered stock should not be purchased.

--All securities should be fully negotiable and marketable.

The performance review committee monitors and evaluates investment managers' performance during periodic meetings and by analyzing their monthly statements and quarterly reports. Quarterly reports include rates of return, detailed financial analyses, and statements of managers' investment philosophies. The committee meets with each investment manager annually to discuss his or her performance. The performance of each diversified contract is reviewed quarterly on an informal basis and annually on a more thorough basis. The table on page 28 compares the fund's investment income and rates of return for 1973 through 1977.

No consultant or outside investment analyst has been used to evaluate investment performance. A certified public accountant audits the fund's financial statements annually. Reports of the executive committee, the performance review committee, the actuary, and the auditor are published as of each December 31 in the Annual Report of the Retirement Plan for Employees of the Federal Reserve System. These annual reports also contain financial statements and data on investment performance and activities during the year.

Federal Reserve System Retirement Fund's
Comparative Statement of Investment Income and Rates of Return

Calendar year	Investment income (excluding capital gains and losses)	Rate of return: Excluding realized and unrealized gains and losses (note a)	Rate of return: Including realized and unrealized gains and losses (note b)
	(000 omitted)	(percent)	
1973	10,680	4.98	- 4.27
1974	9,067	5.42	-13.11
1975	8,460	6.00	20.08
1976	7,556	4.98	13.81
1977	7,269	4.64	- 2.47
5-year average	8,606	5.20	2.81

a/Rates of return are as shown in the retirement fund's annual report. They were calculated by dividing investment income by the market value of the investments at the beginning of the year, plus one-half the net flow into the fund during the year.

b/Rates of return are as shown in the retirement fund's annual reports. They were calculated by dividing the total capital gains (realized and unrealized) and investment income by the market value of the investments at the beginning of the year, plus one-half of the net flow into the fund during the year.

TVA RETIREMENT FUNDS

TVA is an independent Government corporate agency. It is managed by a board of directors who are appointed by the President of the United States with the consent of the Senate. The TVA board established the retirement system and its governing regulations in 1939.

The TVA retirement system provides its members with a pension and an annuity in addition to their social security benefits with which the system is integrated. The pensions are derived from (1) TVA contributions to a fixed-benefit fund and (2) employee contributions to a variable annuity fund, the fixed-benefit fund, or both. The following tables show the funds' assets at the end of fiscal years 1973 through 1977.

TVA Retirement System's Fixed-Benefit Fund
Comparative Statement of Assets

Assets	FY 1973 Amount (000 omitted)	FY 1973 Percent	FY 1974 Amount (000 omitted)	FY 1974 Percent	FY 1975 Amount (000 omitted)	FY 1975 Percent	FY 1976 Amount (000 omitted)	FY 1976 Percent	FY 1977 Amount (000 omitted)	FY 1977 Percent
Cash	$ 399	-	$ 241	-	$ 662	-	$ 87	-	$ 19	-
Interest and other receivables	1,727	1	1,211	-	1,250	-	1,114	-	2,622	1
Bonds										
U S Government	3,300	1	3,300	1	3,300	1	4,100	1	-	-
Corporate	47,041	16	67,757	22	81,985	26	92,695	27	112,829	29
Stock	212,726	74	210,691	70	209,630	65	233,009	67	222,761	58
Other investments	22,619	8	19,459	7	24,340	8	17,698	5	44,333	12
Total assets	$287,812	100	$302,659	100	$321,167	100	$348,703	100	$382,564	100

Note The end of the fiscal year was changed from June 30 to September 30 in 1976

TVA Retirement System's Variable Annuity Fund
Comparative Statement of Assets

Assets	FY 1973 Amount (000 omitted)	FY 1973 Percent	FY 1974 Amount (000 omitted)	FY 1974 Percent	FY 1975 Amount (000 omitted)	FY 1975 Percent	FY 1976 Amount (000 omitted)	FY 1976 Percent	FY 1977 Amount (000 omitted)	FY 1977 Percent
Cash	$ 207	-	$ 232	-	$ 108	-	$ 2,171	2	$ 17	-
Interest and other receivables	2,034	3	743	1	235	-	173	-	363	-
Corporate bonds	2,039	3	1,559	2	1,604	2	-	-	-	-
Stock	68,089	90	58,027	88	69,957	90	75,293	84	76,630	94
Other investments	3,316	4	5,900	9	6,628	8	12,786	14	4,712	6
Total assets	$75,685	100	$66,461	100	$78,532	100	$90,423	100	$81,722	100

Note The end of the fiscal year was changed from June 30 to September 30 in 1976

A seven-member board of directors manages TVA's retirement system. Three are employees of TVA--its comptroller, general counsel, and director of personnel; three are elected by members of the system; and one is elected by a majority vote of the other six. The board elects a chairperson from its membership.

The board's responsibilities include

--designating an actuary to make annual valuations and to certify the tables and rates of contribution the actuary recommends for use by the board,

--maintaining accounts and data for actuarial valuations and financial statements, and

--determining benefits payable and beneficiaries.

The board contracts for services with analysts, trustees, and money managers. A well-known national firm has evaluated the system's performance for a number of years. Also, the board had contracts with three investment managers and trustees at September 30, 1977.

The board's investment committee--comprised of a chairman (currently the TVA comptroller) and two other board members--is responsible for monitoring investments. The executive secretary is responsible for the day-to-day administration of the system, arranging for actuarial services, and preparing annual and interim reports. The retirement system's trust agreements provide for trustees to manage funds on a fully discretionary basis, with certain prohibitions on investments in equity securities of foreign companies, in equities of private utility companies, and in foreign real estate. The system's policies on allocating assets take into account factors such as the average age of the members, their contributions, the availability of high-yielding securities, and the general price level of equity securities. The board and each of the trustees consider these factors at semiannual meetings at which the trustees' performance and outlooks are reviewed and their plans for the future are discussed.

The investment of retirement funds is the responsibility of commercial banks and trust companies who act as the investment managers and trustees. TVA and employee contributions are remitted twice monthly to them. Cash is generally invested in short-term securities before long-term investments are made. Some trustees manage one kind of security, such as common stock, while others are more diversified and invest in stocks, bonds, and real estate. The system's board of directors monitors trustees on a continual basis and has formal semiannual meetings with each. The following tables compare the investment income and rates of return of the two funds for fiscal years 1973 through 1977.

TVA Retirement System's Fixed-Benefit Fund
Comparative Statement of Investment Income and Rates of Return

FY	Investment income (excluding capital gains and losses)	Rate of return: Excluding realized and unrealized gains and losses (note a)	Rate of return: Including realized and unrealized gains and losses (note b)
	(000 omitted)	(percent)	
1973	$ 8,376	3.08	0.07
1974	11,109	3.75	-13.57
1975	12,462	3.80	7.62
1976	16,181	4.91	- 3.52
1977	17,129	4.71	9.30
5-year average	13,051	4.05	- 0.02

a/TVA retirement system personnel computed this rate of return on the average book amount of investments.

b/The fund's performance evaluation consultant computed this rate of return.

Note: The end of the fiscal year was changed from June 30 to September 30 in 1976. Therefore, the 1976 investment income and rate of return apply to 15 months.

TVA Retirement System Variable Annuity Fund's
Comparative Statement of Investment Income and Rates of Return

FY	Investment income (excluding capital gains and losses)	Rate of return: Excluding realized and unrealized gains and losses (note a)	Rate of return: Including realized and unrealized gains and losses (note b)
	(000 omitted)	(percent)	
1973	$1,102	1.98	- 4.95
1974	1,230	2.02	-19.00
1975	1,591	2.47	9.51
1976	2,484	3.28	- 2.97
1977	1,932	2.30	- 5.06
5-year average	1,668	2.41	- 4.49

a/We computed the rate of return. Investment income was divided by the average book value.

b/We computed the rate of return. Total income was divided by the average market value of the fund.

Note: The end of the fiscal year was changed from June 30 to September 30 in 1976. Therefore, the 1976 investment income and rate of return applies to 15 months.

Internal and external auditors examine retirement system records periodically. Public accountants audit the financial statements annually, and the results are published in an annual report to members, retirees, and others.

AGENCY COMMENTS

Treasury and each of the agencies responsible for administering retirement systems included in this study provided written comments. Some comments concerned the 5-year period for which we compared investment earnings. They pointed out that 5 years' experience, particularly 1973-1977, may not indicate overall, long-term performance. The Federal Reserve stated, for example, that pension fund liabilities are built over extended periods, and investment policies generally are designed with longer term objectives. Similarly, TVA stated that equity investment was generally poor during the period reviewed, but pointed out that the rate of return on this type of investment has exceeded that of other available alternatives in the past. TVA added, however, that its investment in equity securities is decreasing in view of the opportunities available for participation in relatively high-yielding, fixed-income securities. Significant portions of TVA's retirement funds have been placed with two major insurance companies under guaranteed interest contracts.

We agree that a 5-year period is far too short to draw any meaningful conclusions on the long-term earnings of various investment alternatives and that a study of a different period could well produce completely different results. We do believe, however, that our comparisons show that investments in Federal securities are not necessarily detrimental to retirement systems whose investments are restricted to such securities and, in recent years, have been more advantageous than systems with more diversified investment policies.

CHAPTER 3

PROS AND CONS OF RESTRICTING RETIREMENT FUND

INVESTMENTS TO FEDERAL SECURITIES

Treasury's policy is to sell special nonmarketable issues to the four Federal retirement trust funds required by law to invest in Treasury or other Federal securities. These trust funds had investments totaling $49.9 billion at the end of 1977. Of this amount, $46.7 billion was invested in special nonmarketable Treasury issues. Arguments for and against Federal retirement systems investing in these securities are below.

Arguments favoring this policy include:

--Treasury's cash requirements are limited to benefit amounts paid to retirees.

--Procedures for purchasing and redeeming securities are simple. Most transactions are book entries for the trust fund, the Treasury, and the agency. No cash is involved.

--Most financial transactions offset each other and do not affect the current Federal budget. Those that do affect the budget also offset each other to a certain extent: payroll deductions for employee contributions reduce budget outlays, while benefit payments increase them.

--Investments are safe. They are backed by the full faith and credit of the U.S. Government and can be redeemed as needed.

--Assets are liquid; that is, they can readily be converted to cash with little risk of loss.

--Debt securities provide a stable rate of return based on market prices at the time of purchase.

--The four retirement systems which fully invested in Treasury securities had a higher 5-year (1973 through 1977) average rate of return than the two systems with diversified investments.

The arguments against this policy are:

--Funds for paying future benefits are not accumulated as liabilities are incurred. The securities accumulated in each fund represent debts of the Federal Government.

--Investing in debt securities eliminates the possibility of increasing the asset value through price appreciation which comes with equity securities.

--Past and forecasted average annual rates of return are somewhat less for long-term Government bonds than for long-term corporate bonds and much less than those for common stock.

In addition to retirement trust fund accounts, Treasury's investment policy also affects other accounts and Federal financial operations. Treasury maintains trust fund accounts and establishes investment policy for about 60 other Federal programs. The 14 largest, including those for Federal old-age and survivors' insurance, highways, and national service life insurance, have invested about $81 billion in Treasury's special issues.

With regard to Federal financial operations, Treasury's responsibilities include cash and debt management, banking and bookkeeping for the Federal Government, and collecting and disbursing public funds. These responsibilities are considered when establishing investment policy.

AGENCY COMMENTS

OPM stated that one of the main arguments supporting the investment of Federal retirement funds in Federal securities is the avoidance of political questions which would be involved in open investments. OPM stated that if the civil service retirement fund were available for any form of investment, there would be many who would argue that it should be used to achieve specific economic goals which, while in themselves may be desirable, might well run counter to the need to maximize income.

OPM stated that, even if the funds were invested in the more traditional areas, there could be problems. It stated that, if for instance the fund moved a billion dollars from one major corporation to another, the financial community could well make assumptions that would substantially disrupt the securities market.

The State Department said that investment in private securities would not always mean that current costs would be paid by current taxpayers. The State Department correctly pointed out that, in years with budget deficits, the Government would have to sell securities to raise funds to invest in private markets. Future taxpayers would have to pay interest and principal on these securities, like they do now for direct retirement system investments in Federal securities.

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