

GAO

Report to the Honorable  
John E. Porter, House of  
Representatives

December 1990

# SOCIAL SECURITY

## Analysis of a Proposal to Privatize Trust Fund Reserves



142927

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United States  
General Accounting Office  
Washington, D.C. 20548

Human Resources Division

B-241862

December 12, 1990

The Honorable John E. Porter  
House of Representatives

Dear Mr. Porter:

In response to your June 15, 1989 letter, and later discussions with you and your staff, we are reporting our analysis of your proposal to create a new system of Individual Social Security Retirement Accounts (ISSRAS). Under this proposal, the accumulating reserves of the Social Security Trust Funds would be returned to workers and placed in ISSRAS where they would be invested in the private sector and held for individuals until their retirement. In effect, the proposal would partially and temporarily privatize Social Security.

You have stated that the objectives of this proposal include:

- unmasking the general fund deficit, that is, the shortfall in revenues for financing the operations of the federal government, excluding trust fund activities;
- increasing the national savings rate and American competitiveness; and
- providing individuals an opportunity to improve their overall retirement income by earning a higher return on their contributions in the private sector than under Social Security.

At your request, we examined the potential of your proposal to accomplish these objectives.<sup>1</sup> We found that, conceptually, the ISSRA proposal could be integrated with the existing progressive benefit structure and, given favorable financial market conditions, could improve retirement incomes. If implemented, the ISSRA may change the mix of public and private saving but not necessarily the magnitude of national saving. The proposal also raises numerous administrative difficulties and policy issues that need to be resolved before ISSRAS could be considered a fully operational alternative for the use of trust fund reserves.

As part of our analysis, we expanded on our previous work on the reserve accumulation issue and its relation to the budget deficit and

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<sup>1</sup>We found that the proposal would have unmasked the non-Social Security portion of the deficit as the federal deficit was defined before the passage of the Omnibus Budget Reconciliation Act of 1990. As you know, the act removes Social Security from the deficit calculation previously employed under the Balanced Budget and Emergency Deficit Control Act of 1985 (i.e., Gramm-Rudman-Hollings). As such, the 1990 act sets a path for reducing the non-Social Security deficit and potentially making the Social Security surplus economically meaningful by increasing national savings.

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national savings.<sup>2</sup> We also reviewed the literature on Social Security financing and discussed ways to divert Social Security taxes to private accounts with public- and private-sector experts.

In this letter, we present the basic elements underlying the ISSRA proposal and summarize our analysis and conclusions. In appendixes I through III we present additional discussion concerning: (1) a method for adjusting Social Security benefits to account for diversion of payroll taxes to ISSRAs (app. I), (2) the historical rates of return in the private market and how these might affect the retirement benefit levels of individuals under the ISSRA program (app. II), and (3) issues surrounding the administration and implementation of the ISSRA proposal (app. III).

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## Background

Since the 1983 policy changes that led to the reserve accumulation, many Members of Congress had become concerned about the Social Security reserves concealing the worsening deficit in federal operations. We testified in February 1990<sup>3</sup> that the large and continuing federal deficit is limiting the nation's ability to increase national savings and promote more rapid economic growth—growth that could improve living standards and lessen the economic burden of paying retirement benefits to a larger elderly population. The ISSRA proposal was aimed at focusing the debate on ways to ensure that the growing Social Security reserves would contribute to national saving. It also renewed a longstanding debate concerning the relative role of the private sector versus the public sector in providing retirement income security.

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## The Trust Fund Reserve Accumulation

The Social Security Amendments of 1977 and 1983 moved the Old-Age, Survivors, and Disability Insurance (OASDI) trust funds away from their traditional, pay-as-you-go financing basis toward the accumulation of a substantial, though temporary, reserve. The primary purpose of these changes was to correct both the short- and long-term financial problems of the OASDI trust funds. In doing so, however, the changes had the effect of causing a large buildup of reserves that would continue over the next four decades. Projections are that the reserves will peak in about 2025 at \$9 trillion (about \$2 trillion in today's dollars).

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<sup>2</sup>Social Security: The Trust Fund Reserve Accumulation, the Economy, and the Federal Budget (GAO/HRD-89-44, Jan. 19, 1989).

<sup>3</sup>The Question of Rolling Back the Payroll Tax: Unmasking the Deficit Illusion (GAO/T-HRD-90-10, Feb. 5, 1990).

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Some see the accumulation of reserves beyond contingency levels<sup>4</sup> as an attempt to deal with an abrupt and permanent shift in American demographic patterns expected early in the twenty-first century. When the baby-boom generation starts to retire, around 2010, there will be a declining ratio of workers to retirees. Whereas today 3.4 workers support each Social Security retiree, by 2030 each beneficiary will be supported by only 2 workers. The reserve will be drawn down to pay benefits to a continuing higher number of retirees. By around 2040, the reserves will have declined to the pay-as-you-go level. Thereafter, increased revenues (most likely higher Social Security payroll taxes) will be needed to maintain benefit levels.

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## The Reserve Accumulation and National Savings

The future impact on workers from the increased burden of supporting retirees depends largely on the behavior of our economy over the next several decades. Fundamentally, future workers will have to provide goods and services both for themselves and for relatively more retirees. But workers can shoulder this burden while also experiencing higher living standards if the economy undergoes sustained and steady growth leading to higher real incomes. As we previously reported, increasing our national savings rate may be the single most important step we can take to achieve this result.

In recent years, however, the United States has had relatively low rates of national saving, net investment, and productivity growth compared with other major industrial countries. In the 1980s, the low rate of saving has been depressed further by our very large budget deficits.

In principle, a higher rate of national saving could come about in several different ways. The only one directly subject to government control, however, is the federal budget. Just as budget deficits are a drain on saving, a budget surplus adds to national saving. In this regard, the Social Security reserve accumulation provides a potential source for such an overall budget surplus that can raise our national savings rate as long as we continue to achieve reductions in the non-Social Security deficit. The 1990 budget agreement is an important step toward achieving this goal.

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<sup>4</sup>A contingency reserve level is an amount adequate to cover periods of recession or other relatively short-term fluctuations in income or expenditures. By the mid-1990s, a contingency reserve of 100 to 150 percent of annual outlays is expected to be reached.

## The ISSRA Proposal

The ISSRA proposal seeks to allocate the reserve accumulation by channeling part of the Social Security payroll tax into private individual accounts.<sup>5</sup> An important condition of the proposal is that Social Security benefits be adjusted to account for the diversion of payroll taxes in a way that retains the underlying progressive structure of the system.<sup>6</sup>

Based on Social Security projections, we determined that from 1990 until about 2015,<sup>7</sup> Social Security will collect contributions that exceed benefit costs by about 2 percent of taxable payroll. Applying this figure, about 24 percent of the contributions made toward retirement benefits alone (not including survivor and dependent benefits) could be placed in a special account created for each worker. These ISSRAs would then be managed and invested in the private sector where they would earn a private market return and be held until retirement.

Under the proposal, Social Security benefits would be reduced to compensate for the mandatory and temporary diversion of Social Security contributions to the private-sector ISSRA. At retirement, benefits would then come from two sources—the reduced Social Security benefit and the balance accumulated in the ISSRA. The worker's total Social Security retirement income would continue to come mostly from Social Security benefits but would be supplemented by the ISSRA.

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<sup>5</sup>You have presented the basic elements of the ISSRA proposal in the article "Let Workers Own Their Retirement Funds. . ." in *The Wall Street Journal*, February 1, 1990; in testimony before the Senate Finance Committee, February 15, 1990; and in a luncheon speech before the Cato Institute on March 14, 1990. Senator Symms, in S.2026, has proposed creating private retirement accounts without reducing Social Security benefits, and Merrill Lynch, Morgan Guaranty, and others in the private sector have also suggested diversion of funds to private-sector accounts. For example, see Morgan Guaranty Trust Company, "U.S. Social Security Surpluses: Pitfall or Opportunity?", *World Financial Markets*, July 1988 and, Enid A. Borden and Bruce D. Schobel, "Meeting the Future Needs of the Elderly", Report to Merrill Lynch (undated).

<sup>6</sup>Included in the 1990 Budget Act are so-called Social Security "firewall" procedures to inhibit changes in Social Security revenues and benefits arising from new legislation. Different procedures are established for the House of Representatives and the Senate. The House procedures permit members to block legislation that changes the 75-year actuarial balance by more than 0.02 percent of taxable payroll or results in net benefit increases or net tax decreases that within a 5-year period exceed \$250 million. The Senate procedures permit members to block a budget resolution that would decrease the excess of Social Security revenues over outlays over a 5-year period.

<sup>7</sup>After about 2015, the payroll tax rate will no longer exceed the program's benefit costs as a percentage of taxable payroll. Also note that the discussion here is in terms of the combined employer and employee contributions.

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The ISSRA proposal is targeted at the excess<sup>8</sup> payroll tax contributions for retirement benefits (not including survivors and dependents benefits) and not at altering the social objectives of the Social Security program. It does not affect the financing and structure of the disability insurance and Medicare programs. Moreover, under the proposal the benefit adjustments made in the retirement component of the program would continue to be progressive, affording low earners proportionally higher benefits (relative to preretirement earnings) than high earners in the same way the Social Security program does now.

In addition, to ensure the financial soundness of investments, ISSRA trustees would be required to invest funds according to specified rules, could not release funds until retirement, and would be liable for breaches of fiduciary rules.<sup>9</sup> Within these guidelines, workers would own and control their ISSRAs and could choose their own trustees, which would most likely be banks, insurance companies, and other money management firms. ISSRAs could become part of the estate of a deceased worker or retiree.

Using ISSRA funds, individuals would be required to purchase a Social Security-like annuity upon retirement. This annuity, plus the reduced Social Security benefit, would represent the individual's retirement benefit. Depending on the market return on the ISSRA, an individual's combined retirement income (Social Security plus ISSRA) might be the same, higher, or lower than under the existing program.

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## GAO's Analysis

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### Effect of Proposal on National Saving Is Unclear

As noted earlier, the low rate of national saving has been depressed by our very large budget deficits in the 1980s. Savings come from individuals, or personal savings; businesses, chiefly in the form of retained earnings; and government, in the form of budget surpluses. The Social Security surpluses provide an opportunity to raise our saving rate if the significant budget deficit reductions programmed in the Omnibus Budget

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<sup>8</sup>In this report, reference to "excess" payroll taxes or revenues (i.e., surpluses) pertains to those annual payroll tax revenues that exceed annual Social Security costs, after allowing for an adequate contingency reserve in the Trust Fund. For discussion of different Social Security financing concepts, see GAO/HRD-89-44.

<sup>9</sup>For further discussion of fiduciary responsibilities see appendix III.

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Reconciliation Act of 1990 are achieved, resulting in an overall government budget surplus.<sup>10</sup>

By itself, the ISSRA proposal may alter the mix of public and private saving but not necessarily the magnitude of national saving. By requiring the trust fund to pay excess revenues back to workers via their ISSRAS, the proposal reduces the trust fund surplus and overall government saving. At the same time, moving the excess revenues to the private sector increases personal saving.

Given that the general fund is in deficit, taking revenue away from the Treasury increases the amount that the Treasury must borrow from other sources. Indeed, if no revenue or spending changes are made in the general fund portion of the budget, much of the ISSRA money may end up being loaned back to the Treasury just as if it had been kept in the trust fund.

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### Benefit Adjustment Retains Progressivity

Through its benefit formula, the Social Security program pays benefits that implicitly redistribute income from high earners to low earners. This progressive benefit structure is essential to the social adequacy function of Social Security, which aims to provide all retirees with a minimum level of support. As a result, high earners implicitly receive a lower rate of return on their Social Security contributions than low earners.

Under the ISSRA proposal, when high earners divert some of their Social Security contributions into their ISSRAS, these diverted funds are no longer available for redistribution. We devised a benefit adjustment that recovers the amount of the subsidy that high earners would have provided to low earners.<sup>11</sup> First, we determined the average implicit rate of return each age group would earn from Social Security.<sup>12</sup> We then adjusted benefits by subtracting for each worker an amount equivalent to the annuity that the worker's diverted taxes would have purchased if

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<sup>10</sup>In the short run, this shift to a more restrictive budget policy could have effects on aggregate demand leading toward lowered growth of output and employment and in turn decreased total saving. Other policy adjustments, such as less restrictive monetary policy may be necessary to maintain the level of aggregate demand and mitigate the effects of restrictive budget policy.

<sup>11</sup>To the extent that this adjustment under the ISSRA proposal makes more apparent the implicit subsidy that high earners contribute, the acceptance of the current system by high earners might be undermined.

<sup>12</sup>The rate of return varies by age group because of changing tax rates, benefit rules, and actuarial factors that reflect mortality rates.



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they had earned this age group rate of return. Thus, by applying the same age group rate to everyone's benefit reduction, even though everyone actually earns different rates of return under Social Security, the adjustment achieves exactly the current system's redistribution of income. Appendix I explains how our adjustment preserves Social Security's current progressivity.

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### Advantage to Individuals Depends on Market Interest Rate

The proposal's impact on individual retirement incomes depends largely on how the return on ISSRA investments compares with the return on Social Security. Examining historical rates of return on various investments, only stock market investments would offer the potential for a significant improvement over Social Security. Also, any improvement could vary substantially across different age groups.

The ISSRA proposal reflects, in part, the belief that workers could earn a higher return from private-sector investments than what Social Security offers. Using our benefit adjustment, workers' ISSRA rate of return must exceed the Social Security age group rate of return in order for them to be better off under the proposal. Our analysis suggests that average age-group Social Security rates of return, adjusted for inflation, range from more than 3 percent for those born in 1930 to about 2 percent for those born after 1960.

Our research shows that whether workers would do better with their ISSRAs than with receiving an inflation-adjusted 2 percent rate of return is likely to depend on the types of investments the program would allow, the actual investments made, and the particular years over which the worker participates.<sup>13</sup> (See app. II for more details on historical investment data and for illustrative examples of outcomes in retirement incomes under various assumptions.)

For the purposes of our analysis, we assume that the private market will offer annuities comparable to the Social Security benefit.<sup>14</sup> That is, retirees would be able to use their ISSRAs to purchase annuities at unisex rates that are adjusted for cost-of-living increases. Moreover, we assume negligible load factors; that is, charges by the annuity provider for

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<sup>13</sup>In our analysis, we use market rates of return before taxes. Any taxation of ISSRA income would reduce the effective rate of return and the ISSRA annuity. The same is true for fees paid to those who manage the accounts. The extent of administrative costs will depend on the specific structure and provisions of the ISSRA program. If, for example, the cost of managing ISSRAs was analogous to mutual funds, such costs could reduce rates of return by about 1 percentage point.

<sup>14</sup>As noted earlier, the ISSRA proposal excludes survivors, dependents, and disability benefits.

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profit, risk, and administrative costs. Also, we calculate annuity prices using the interest rate earned on the Trust Funds.

In practice, however, we cannot presume what annuity features the private market would offer under the ISSRA proposal. Currently, the private market does not offer annuities at unisex rates with cost-of-living adjustments and does have substantial load factors.<sup>15</sup> On the other hand, private annuity prices reflect higher interest rates than those earned by the Trust Funds, which would make private annuities more generous. Any judgments about the likely net effect of these offsetting factors would be speculative.

Since 1957, inflation-adjusted returns on the Standard and Poor (S&P) 500 stocks have averaged 5.5 percent. Over the same period, returns on highly graded corporate bonds have averaged 1.6 percent. (See fig. 1.) Over shorter periods, returns on these assets have varied markedly. For example, over the decade of the 1970s, stocks and bonds earned returns of -1.4 and -1.1 percent, respectively. In contrast, during the 1980s, returns averaged 11.8 and 7.5 percent, respectively.

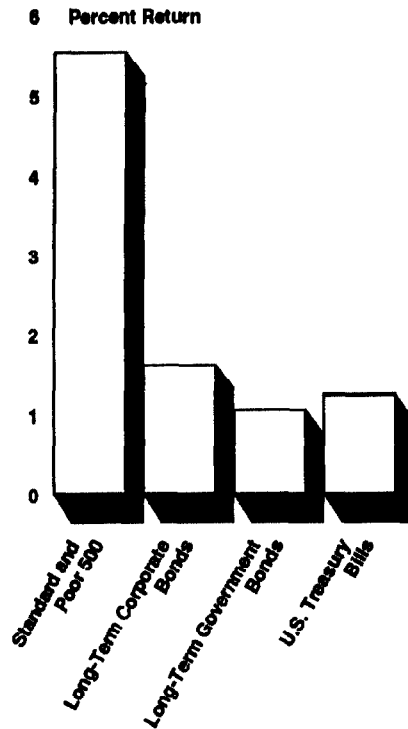
Because ISSRAS will be expected to exist over long periods of time, we also examined the compound annual returns over rolling 20-year periods. Again, we found that earnings varied widely with the time period used. For rolling 20-year periods since 1957, inflation-adjusted annual returns for S&P 500 stocks ranged from about 1 percent to over 5 percent. For corporate bonds they ranged from about -2.7 percent to roughly 3.2 percent.

This degree of variation affects workers retiring in slightly different years. If an ISSRA earned interest at the inflation-adjusted rate that the S&P 500 earned from 1967 to 1986, for instance, it would earn 3.7 percent; but another worker's ISSRA earning interest at the rate from the 20-year period 1965 to 1984 would earn only 1.4 percent. Using inflation-adjusted rates for corporate bonds, an ISSRA earning interest at the rate from 1970 to 1989 would earn 3.2 percent; but another ISSRA earning interest at the rate from the 20-year period starting just 5 years earlier, 1965 to 1984, would earn -1 percent.

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<sup>15</sup>For information on loading factors see Benjamin M. Friedman and Mark Warshawsky, "Annuity Prices and Saving Behavior in the United States" in National Bureau of Economic Research, Pensions in the U.S. Economy, Bodie, Shoven, and Wise, eds. University of Chicago Press, 1988.

**Figure 1: Compound Annual Rates of Return, Inflation-Adjusted (1957-89)**



Note: Data for Standard and Poor 500 before 1957 are not available.

Source: Roger G. Ibbotson and Rex A. Sinquefeld, Stocks, Bonds, Bills, and Inflation. Chicago: Ibbotson Associates, 1990.

While some deposits will accumulate interest for more than 20 years, others will accumulate it for less. ISSRAS will pay interest on deposits from 1 to 45+ years; that is, from deposits made in the last possible year to those made in the first year of work. But if the program exists only as long as annual revenues exceed outgo, under the current Social Security financing schedule roughly one-fourth of the accounts will accrue interest for no more than 25 years. Thus, workers' benefits from the program depend on how long they participated and whether they participated during a period of relatively high or low investment returns.

We analyzed the effects of ISSRAS on retirement income using optimistic, pessimistic, and moderate assumptions about private rates of return. For most age groups Social Security pays a rate of return of about 2 percent, adjusted for inflation. If ISSRAS were to pay, on average, a rate somewhat higher than bonds have paid historically, they would earn 3

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percent.<sup>16</sup> We have characterized this as a moderate market-rate-of-return assumption. In this case, we find that the ISSRA program would improve retirees' incomes by 2.7 percent compared with current Social Security benefits.<sup>17</sup> (See fig. 2.)

A more optimistic assumption might be that ISSRAS would earn a 7-percent return, which would reflect the historical performance of S&P 500 stocks; this would result in a 24-percent increase in retirement income for an average earner. A more pessimistic assumption might be that ISSRAS would earn only a 1-percent rate of return, which would lie between the performance of S&P 500 stocks over the worst 20-year holding period since 1957 and the worst such performance for bonds over the same period. This pessimistic assumption yields a 2-percent decrease in income for an average earner. Further, for those who are not working over the entire length of the program, the advantage (or disadvantage) will be proportionally less.

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## Potential Losses Raise Benefit Security Concerns

The likely variation in market returns could result in some retirees being worse off under the ISSRA program than they would be under Social Security. This, in turn, could generate pressure for the government to guarantee that every retiree would be at least as well off under the ISSRA system as the retiree would have been by remaining on Social Security. Social Security was created in part to assure a floor of income protection to those whose earnings cease as a result of retirement. Without a guarantee, unfavorable investment experience could erode this floor.

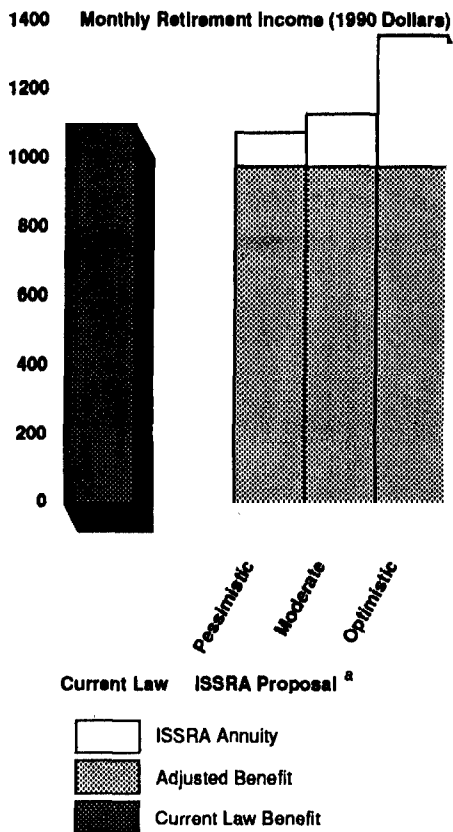
A guarantee should be viewed with great caution, however, since it could encourage ISSRA holders to make risky investments. They would know that a loss on their ISSRA investment would be offset by increased Social Security benefits, while an investment gain would yield them greater retirement incomes. While investment restrictions may mitigate this problem, the possibility that losses may still occur could expose the government to significant costs (see app. III).

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<sup>16</sup>As noted earlier, any taxation of ISSRA interest income or administrative costs would reduce the effective rate of return and the ISSRA annuity.

<sup>17</sup>These results are for average steady earners. See appendix I for descriptions of these illustrative workers.

**Figure 2: Total Retirement Incomes, by Market Interest Rate** (Average Steady Earners Born in 1960)

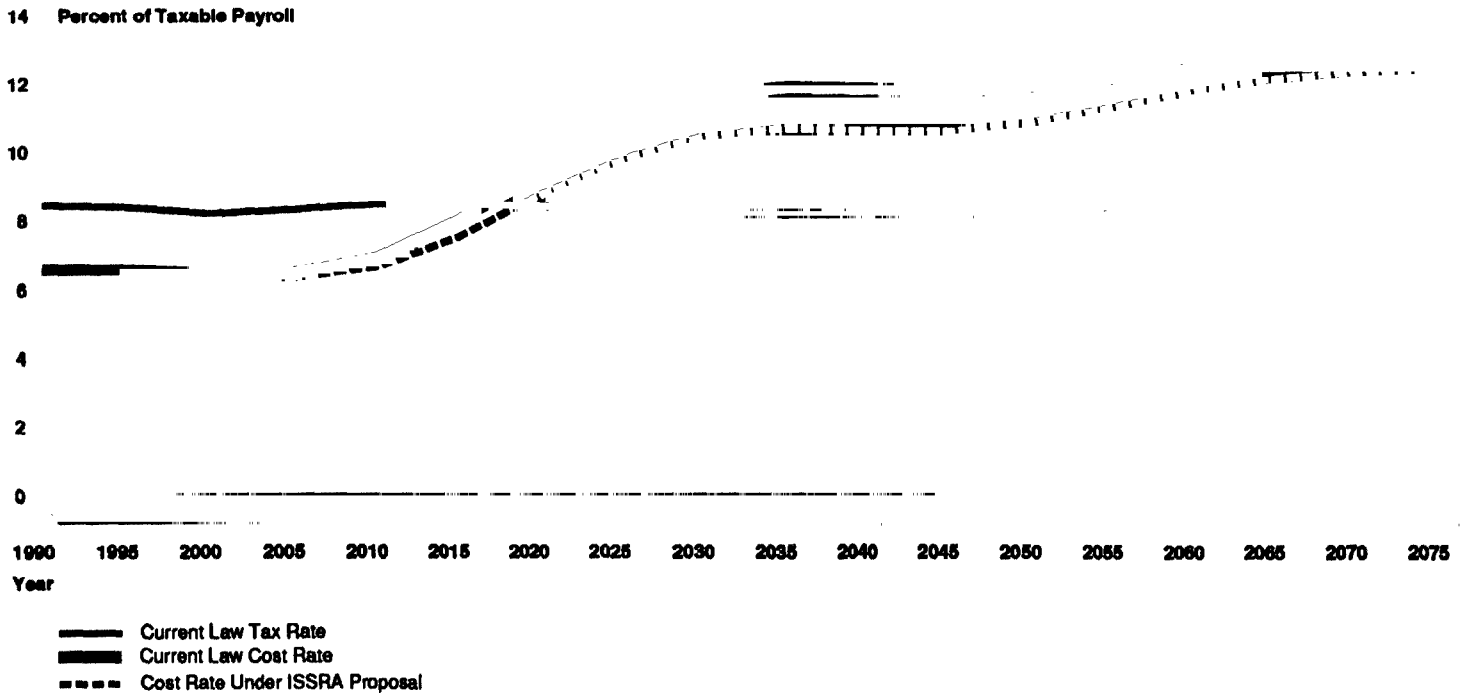


<sup>a</sup>Bars show alternative market interest rate assumptions. Benefit adjustment assumes inflation-adjusted age group rate of return of 2 percent under Social Security.

## Implementation Challenges Numerous and Complex

While the benefit adjustment overcomes a significant conceptual hurdle, many serious technical and administrative problems require solutions before the ISSRA proposal can be implemented. (See app. III.) Among these problems are the following:

- The rules or restrictions on investment that might be applied to ISSRAS could affect the program’s advantages. For example, following fiduciary guidelines may limit the kinds of institutions that can offer ISSRAS and impose conservative investment strategies. Similarly, legislative restrictions on investment of ISSRA funds could limit the returns to workers under the program.
- Administration of accounts may be complex. Initially, over 130 million accounts would have to be set up and maintained by Social Security and

**Figure 3: Effect of ISSRA Proposal on Social Security Costs (Retired Worker Benefits Only)**

Note: Assumes ISSRA diversions stop in 2015.

the private sector; ultimately, there could be as many as 230 million. Many accounts might be small, particularly for part-time or occasional workers or those with small amounts of covered earnings. Some individuals might not select an institution to receive their ISSRA deposits.

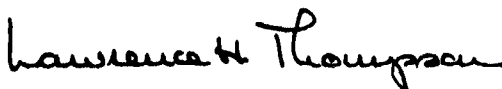
- The Social Security Administration (SSA) would have to complete processing of employers' annual statements and crediting of earnings shortly after the calendar year in order to determine ISSRA deposits. This may be difficult and could entail a substantial lag in the timely deposit of ISSRA funds. Also, the Department of the Treasury would have to make these deposits at a large number of financial institutions and the timing of these deposits could entail some very large cash transactions. Data would have to be reconciled between SSA and Treasury and between Treasury and private-sector institutions.
- Whether ISSRAS should be taxed needs to be explored. For example, making ISSRA benefits tax exempt would result in a loss of tax revenues because some Social Security benefits currently are taxed.

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- Because the Social Security surplus is projected to end around 2015, at about that time ISSRA deposits will cease. It does not appear that the benefit adjustments under the program will be sufficient to generate continued surpluses for very long after 2015. After the ISSRA diversions end, the benefit reductions under the ISSRA plan will continue to have a cost-reducing effect on Social Security for a considerable time. But eventually, as the last cohorts to participate in the ISSRA program die out, all other things being equal, the costs of the system will return to the long-term cost path shown in figure 3. Continuation of the program or movement toward a larger role for privatization, in light of projected increased costs for Social Security, may present serious challenges for maintaining future benefit levels and for financing past benefit promises.
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As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time, we will send copies to cognizant congressional committees; the Secretary of Health and Human Services; the Secretary of the Treasury; the Director, Office of Management and Budget; and other interested parties.

This report was prepared under the direction of Joseph F. Delfico, Director of Income Security Issues, who can be reached on (202) 275-6193. Other major contributors are listed in appendix IV.

Sincerely yours,



Lawrence H. Thompson  
Assistant Comptroller General

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# Contents

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Letter		1
Appendix I		16
The Benefit	Progressive Benefit Formula Promotes Adequate Retirement Incomes	16
Adjustment Under the ISSRA Proposal	Benefit Adjustment Retains Subsidy	18
	An Alternative to the Age Group Rate	23
Appendix II		24
Proposal's Advantage to Individuals Depends on Market Interest Rate	Historical Rates of Return Depend on Risk and Inflation	24
	Returns Vary Widely Over Rolling 20-Year Periods	27
	Effect of ISSRA Plan on Typical Beneficiaries	29
Appendix III		36
Considerations in Implementing an ISSRA Program	Treasury Transfer of Funds to ISSRAs	36
	Management and Investment of ISSRAs	38
Appendix IV		40
Major Contributors to This Report		
Tables		
	Table I.1: Replacement Rates and Implicit Rates of Return, by Income Level (Workers Born in 1960, Single Earner Families)	17
	Table I.2: Proposal's Impact on Retiree Incomes When ISSRAs Earn Social Security Age-Group Rate of Return (By Income Level for Workers Born in 1960)	23
	Table II.1: ISSRA Proposal's Impact on Retiree Incomes by Market Interest Rate Assumption (Average Steady Earners Born in 1960)	29
	Table II.2: ISSRA Proposal's Impact on Retiree Incomes Using Moderate Market Rate Assumption (by Age Group for Average Steady Earners)	31



**Figures**

Figure 1: Compound Annual Rates of Return, Inflation-Adjusted (1957-89)	9
Figure 2: Total Retirement Incomes, by Market Interest Rate (Average Steady Earners Born in 1960)	11
Figure 3: Effect of ISSRA Proposal on Social Security Costs (Retired Worker Benefits Only)	12
Figure I.1: The Adjusted Social Security Benefit and the ISSRA Annuity	20
Figure I.2: Total Retirement Incomes, by Earnings Level, When ISSRAs Earn Social Security Age-Group Rate of Return (Workers Born in 1960)	22
Figure II.1: Compound Annual Rates of Return, Inflation-Adjusted (1957-89)	25
Figure II.2: Compound Annual Returns for the Decades, Large Company Stocks (1926-89)	26
Figure II.3: Compound Annual Returns for the Decades, Long-Term Corporate Bonds (1926-89)	27
Figure II.4: Compound Annual Returns, Inflation-Adjusted, for 20-Year Holding Periods	28
Figure II.5: Total Retirement Incomes, by Market Interest Rate (Average Steady Earners, Born in 1960)	30
Figure II.6: Workers With ISSRAs by Number of Years With Deposits	32
Figure II.7: Total Retirement Incomes, by Age Group, Using Moderate Market Interest Rate Assumptions	34

**Abbreviations**

AIME	Average Indexed Monthly Earnings
IRA	individual retirement account
IRS	Internal Revenue Service
ISSRA	Individual Social Security Retirement Account
OASDI	Old-Age, Survivors and Disability Insurance
PIA	Primary Insurance Amount
SSA	Social Security Administration

# The Benefit Adjustment Under the ISSRA Proposal

The Individual Social Security Retirement Account proposal specifies two important features regarding Social Security benefit levels: (1) because individuals diverting contributions to ISSRAs would pay less into the Social Security system, their Social Security benefits would be reduced, and (2) the resulting benefit adjustments would retain the progressive redistribution of income embodied in the current system. We examined a variety of benefit adjustment approaches and developed one that would maintain the system's progressivity. In appendix II we use this approach to analyze the effect of the ISSRA proposal on the benefit levels of representative individuals.

## Progressive Benefit Formula Promotes Adequate Retirement Incomes

The current benefit formula is constructed so that individuals who are less able to provide for their retirement privately are more likely to receive a "socially adequate" public benefit. This progressive benefit formula yields benefit levels that are proportionally higher for low earners than for high earners and that, in effect, redistribute income from high earners to low earners.

When workers retire, Social Security uses their lifetime earnings records to determine each workers' Primary Insurance Amount (PIA), on which the initial benefit and auxiliary benefits are based.<sup>1</sup> PIA is the product of two factors—the Average Indexed Monthly Earnings (AIME) and the benefit formula. The AIME is determined by taking the lifetime earnings record, indexing it, and taking the average. To determine PIA, AIME is then applied to a step-like benefit formula, shown here for 1990:<sup>2</sup>

$$\begin{aligned} \text{PIA} = & 0.90 \times (\text{AIME up to } \$356) \\ & + 0.32 \times (\text{AIME between } \$357 \text{ and } \$2,145) \\ & + 0.15 \times (\text{AIME over } \$2,145). \end{aligned}$$

The percentages in this formula replace a smaller proportion of income as incomes rise and make it progressive. That is, a high percentage (90%) of AIME is replaced for the first several hundred dollars of AIME. A lower percentage (32%) is replaced for the next bracket and a still lower percentage (15%) is replaced for the highest bracket of AIME.

<sup>1</sup>PIA is the key element used in determining not only the retired worker's benefit but also the amount of dependent and survivors benefits. However, as noted earlier in this report, the ISSRA proposal applies only to retired worker benefits.

<sup>2</sup>AIME brackets are updated annually (i.e., indexed) based on the change in annual average covered wages.

The ratio of PIA to the worker's earnings in the year before retirement is referred to as the "replacement rate." For example, a worker who always earned the average wage and retired in September 1990 at age 65 would have an AIME of \$1,424. The worker's PIA would, therefore, be \$720.70, and the replacement rate would be 40.2 percent.

Replacement rates provide one way of illustrating the formula's progressivity. Table I.1 shows that replacement rates are higher for low earners than for high earners. The table shows three earnings levels for hypothetical steady earners born in 1960 and retiring in 2027:

- Low earners have credited earnings equal to 45 percent of the average steady earner's earnings; in 1990, this earnings level would be \$9,692 per year.
- Average earners have credited earnings in each year equal to the average of all wages covered by Social Security for that year; in 1990, this earnings level would be \$21,537 per year.
- High (maximum) earners have credited earnings equal to the maximum earnings subject to Social Security taxes in each year; for example, in 1990, the first \$51,300 of annual earnings is subject to Social Security taxes.

**Table I.1: Replacement Rates and Implicit Rates of Return, by Income Level**  
(Workers Born in 1960, Single Earner Families)

	Income level		
	Low	Average	Maximum
Replacement rate	54.95	40.98	27.08
Implicit rate of return (Inflation-adjusted)	4.14	2.98	1.24

Implicit rates of return paid by Social Security also illustrate the formula's progressivity. Although workers do not actually have their own Social Security accounts in which their contributions earn interest, they do implicitly earn a rate of return based on the benefits they receive relative to the contributions they made (including those made by employers on their behalf). In effect, workers "purchase" their Social Security benefits at retirement with their lifetime contributions. Table I.1 shows that these implicit rates of return are higher for low earners than for high earners.

Thus, as a result of the progressive benefit formula, higher earners subsidize the benefit levels of lower earners by effectively receiving lower rates of return on their Social Security contributions and, at the same

time, lower replacement rates. Conversely, lower earners receive higher rates of return and higher replacement rates to help them achieve adequate retirement incomes.

Because the ISSRA proposal affects only retired workers' benefits (not dependents' or survivors' benefits), the relevant implicit rates of return reflect the value of these benefits relative to the contributions for these benefits. In practice, however, Social Security combines the contributions for retired workers', dependents', and survivors' benefits. To reflect the limitation to workers' benefits, our analysis assumes that contributions for dependents' and survivors' benefits are separate from those for workers' benefits and collected on a pay-as-you-go basis.<sup>3</sup> This leaves the entire reserve accumulation in the worker benefit portion of the program. The appropriate implicit rate of return reflects the value of workers' benefits alone relative to the contributions for them alone, including the reserve accumulation.

---

## **Benefit Adjustment Retains Subsidy**

Under the ISSRA proposal, Social Security would pay reduced benefits to compensate for the contributions diverted to workers' ISSRAs. At the same time, Social Security would preserve the subsidies that workers either give or receive under the current system's progressivity. After exploring several approaches, we devised a workable benefit adjustment that meets these requirements and uses the concept of Social Security's implicit rate of return.

Because Social Security benefits reflect workers' contributions and implicit interest earnings, the benefit adjustment should also reflect both the diverted contributions and the implicit interest they would have earned from Social Security. The amount of the annuity that these diverted contributions and interest earnings would have "purchased" from Social Security would be the amount of the benefit reduction. However, to preserve the subsidies, the adjustment calculates the implicit interest earnings using the rate of return for the age group as a whole. Thus, the adjustment applies the same implicit rate of return for each worker in an age group even though everyone earns different rates, as discussed above.

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<sup>3</sup>The implicit rate of return on contributions for dependents' and survivors' benefits depends on household configuration as well as income, reflecting Social Security's redistribution of income among various household configurations.

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**Appendix I  
The Benefit Adjustment Under the  
ISSRA Proposal**

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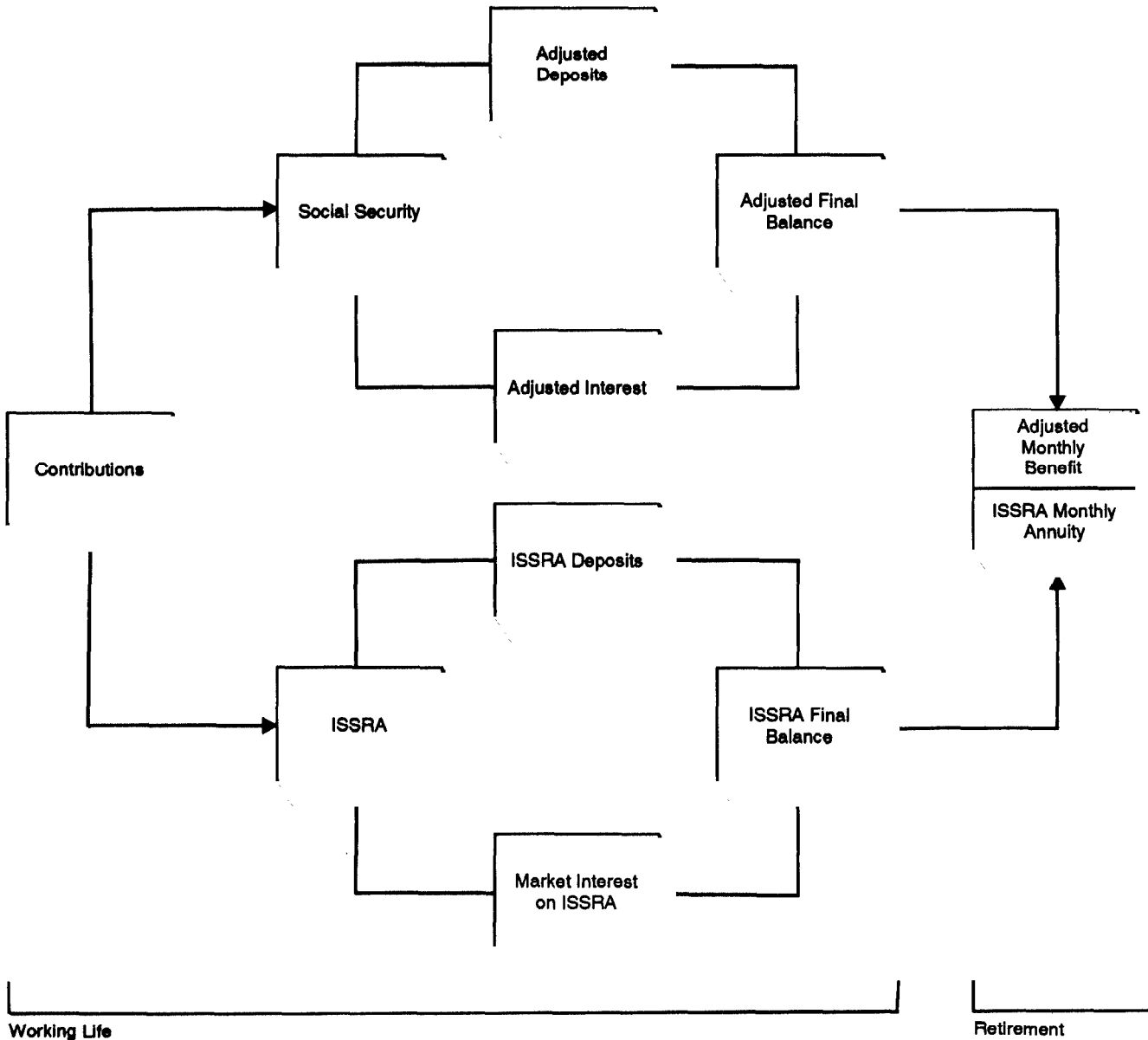
In effect, instead of depositing their diverted contributions with Social Security, workers would deposit them in their private-sector ISSRA. Figure I.1 diagrams the combined effect of the benefit adjustment and ISSRA annuity.<sup>4</sup>

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<sup>4</sup>To illustrate the effect of the benefit adjustment, we are assuming that people will be able to and do purchase annuities with their ISSRAs that have exactly the same features as the Social Security annuity, especially unisex pricing with cost-of-living adjustments. See appendix II for further discussion.

Appendix I  
 The Benefit Adjustment Under the  
 ISSRA Proposal

Figure I.1: The Adjusted Social Security Benefit and the ISSRA Annuity



This benefit adjustment would give everyone an equal opportunity to benefit from the ISSRA program. To be better off with the ISSRA program, everyone would have to earn rates on their ISSRAs better than those of their age group as a whole will earn from Social Security; they would be

worse off if they did not earn at least as much as the average Social Security return for their age group.

To demonstrate that the benefit adjustment retains progressivity, consider what happens if ISSRA rates of return are exactly the same as the implicit Social Security age group rate. The correct benefit adjustment should leave retired workers as well off as they would be under the current program. If the benefit adjustment yields this result, the current program's redistribution of income must be intact.

Figure I.2 and table I.2 illustrate this hypothetical case. They show the ISSRA proposal's effect on retirement incomes for low, average, and high earners.<sup>5</sup> Under the ISSRA program, a worker's combined Social Security and ISSRA retirement income would be as follows:

$$\begin{aligned} \text{Total income} = & \text{Current law Social Security benefit} \\ & - \text{Benefit adjustment} \\ & + \text{Annuity on ISSRA.} \end{aligned}$$

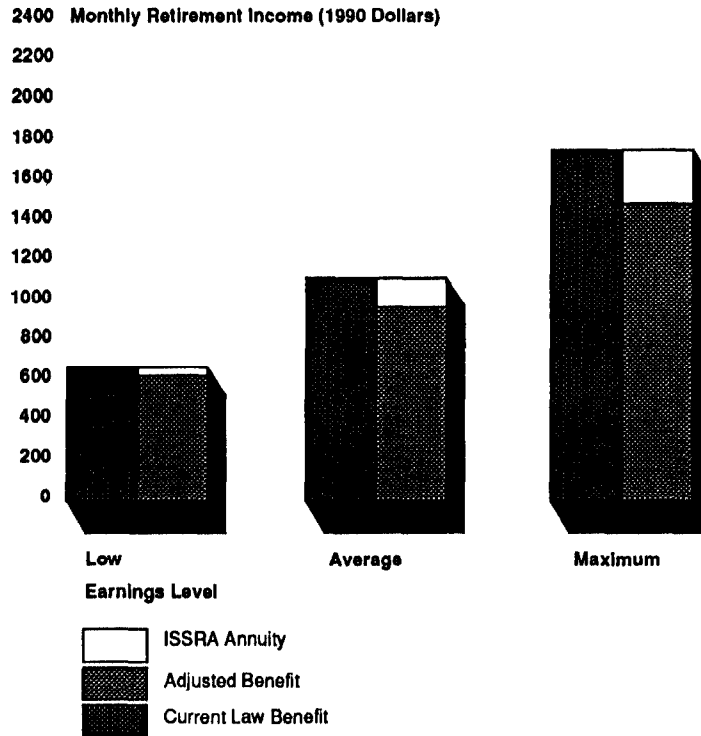
The figure and table show that if the private-sector rate exactly matches the benefit adjustment rate the ISSRA annuity offsets the benefit adjustment and no one's retirement income changes. Thus, the benefit adjustment accomplishes the same redistribution of income that current law provides.

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<sup>5</sup>These examples are only for households with one wage earner. Households with two earners may have two ISSRAs but may collect benefits based on only one spouse's earnings. In this event, the benefit reduction would have to reflect the ISSRA diversions of both wage earners to retain the current system's redistribution of income among various household configurations. However, as discussed earlier in this report, the benefit adjustment always applies to the benefits only of the retired worker, not of survivors or dependents.

**Appendix I  
The Benefit Adjustment Under the  
ISSRA Proposal**

**Figure I.2: Total Retirement Incomes, by Earnings Level, When ISSRAs Earn Social Security Age-Group Rate of Return (Workers Born in 1960)**



The following numerical example shows how the adjustment preserves the subsidy when

- an age group's implicit rate of return under Social Security is 2 percent, adjusted for inflation;
- high earners implicitly earn a 1-percent return from Social Security;
- low earners implicitly earn a 3-percent return from Social Security.

Using the age group rate, the benefit adjustment calculates interest on the diverted contributions as if all workers would have earned 2 percent from Social Security. In fact, high earners only would have earned 1 percent; thus, the adjustment takes away more interest than these earners actually would have earned, and they continue to subsidize the system. Conversely, low earners would have earned a full 3 percent; thus, the adjustment takes away less interest than these earners would have earned, and they continue to receive their full subsidy. Thus, by applying the same age group rate, even though everyone actually earns



**Appendix I  
The Benefit Adjustment Under the  
ISSRA Proposal**

different implicit rates from Social Security, the adjustment achieves the current system's redistribution of income.

**Table I.2: Proposal's Impact on Retiree Incomes When ISSRAs Earn Social Security Age-Group Rate of Return (by Income Level for Workers Born in 1960)**

Monthly dollar results (1990 dollars)	Income level		
	Low	Average	Maximum
Current law benefit	\$660.91	\$1,095.30	\$1,730.82
Benefit reduction <sup>a</sup>	-53.47	-118.82	-283.87
ISSRA annuity	+53.47	+118.82	+283.87
<b>New retirement income</b>	<b>\$660.91</b>	<b>\$1,095.30</b>	<b>\$1,730.82</b>
Percentage results			
Benefit reduction	8.09%	10.85%	16.40%
Change in income	0.00%	0.00%	0.00%
ISSRA as a percent of income	8.09%	10.85%	16.40%

<sup>a</sup>Assumes inflation-adjusted age group rate of 2 percent.

## An Alternative to the Age Group Rate

As an alternative, the benefit adjustment could use the interest rate earned on the Social Security Trust Fund in calculating interest on the diverted contributions. This alternative would have the same distributional properties as those discussed above. If ISSRAs were to earn exactly the Trust Fund rate, the ISSRA annuity would exactly offset the benefit adjustment; retirement incomes would not change.

Under this alternative, however, if the Treasury rates differ significantly from an age group's implicit rate of return on Social Security, there would also be a cost effect to the system. If the Treasury rate is greater than the age group rate, benefits on average will be reduced too much and the Social Security system will have lower benefit costs. Alternatively, if the Treasury rate is less than the age group rate, benefits will be adjusted too little and the system will incur higher costs.

# Proposal's Advantage to Individuals Depends on Market Interest Rate

Whether the Individual Social Security Retirement Account proposal will improve retirement incomes depends entirely on whether the investments made by individuals yield higher rates of return than the implicit rate of return to Social Security. More specifically, if everyone under the ISSRA program earns a higher rate of return in the private sector than the rate used in the benefit reduction (that is, the age group's rate), then the ISSRA annuity will more than offset the benefit reduction. As a result, ISSRAS will contribute to higher retirement income. ISSRAS could also yield lower rates of return, however, resulting in lower retirement incomes compared with current law Social Security benefits.

For this analysis, we use estimates of the age group return ranging from more than 3 percent for those born in 1930 to 2 percent for those born in 1960 or later.<sup>1</sup> The rate of return varies by age group because of changing tax rates, benefit rules, and actuarial factors that reflect mortality rates. We focus our analysis on the difference between private market rates and the age group rates, as detailed below.

## Historical Rates of Return Depend on Risk and Inflation

To analyze how individuals might fare with ISSRAS, we examined rates of return earned over the last 70 years on typical investments that would be available to retirees.<sup>2</sup> As a rule, the market offers higher rates of interest on riskier investments. Rates of return will, therefore, depend on how retirees invest their ISSRAS. If the ISSRA proposal precludes riskier investments to enhance the security of private retirement income, it also limits the gains individuals can expect from the program (see app. III).

Figure II.1 shows the compound annual rates of return<sup>3</sup> for various types of investments since 1957,<sup>4</sup> adjusted for inflation. As government securities are traditionally considered the least risky investment, their returns are historically the lowest. Annual returns on private securities are more volatile than those on Treasury securities. However, on

<sup>1</sup>Our age group rate estimates are broadly consistent with estimates in the academic literature. See Michael D. Hurd and John B. Shoven, "The Distributional Impact of Social Security," in *Pensions, Labor, and Individual Choice*, David A. Wise, ed., National Bureau of Economic Research, University of Chicago Press, 1985, pp. 193-221. Comparable results are found in, M. Boskin, L. Kotlikoff, D. Puffert, and J. Shoven, "Social Security: A Financial Appraisal Across and Within Generations," *National Tax Journal*, Vol. XL, No. 1, March 1987, pp. 19-34.

<sup>2</sup>Data on historical rates of return are from Roger G. Ibbotson and Rex A. Sinquefeld, *Stocks, Bonds, Bills, and Inflation*. Chicago: Ibbotson Associates, 1990.

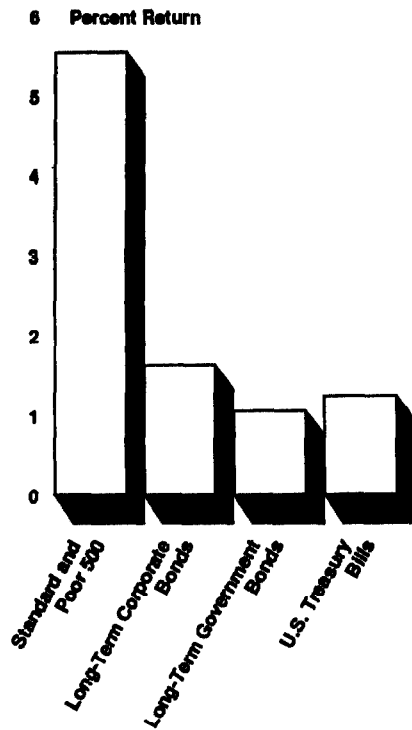
<sup>3</sup>Compound annual rates reflect the return on an investment over a number of years, figured on a constant annual basis; this is not the same as the arithmetic average of rates for each year.

<sup>4</sup>The first year for which data are available on the Standard & Poor 500 stocks is 1957.

**Appendix II  
Proposal's Advantage to Individuals Depends  
on Market Interest Rate**

average, the market compensates for this greater risk by offering higher returns on investment in private securities.

**Figure II.1: Compound Annual Rates of Return, Inflation-Adjusted (1957-89)**



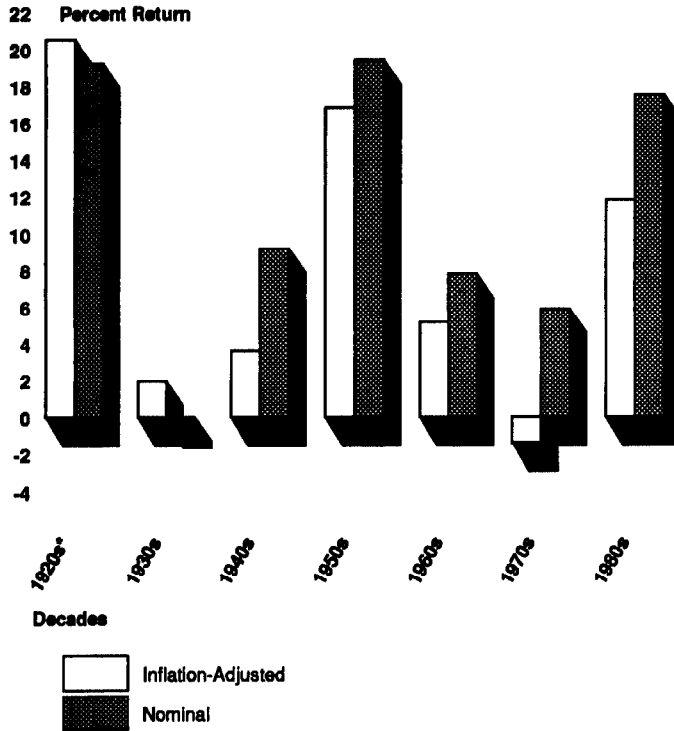
Note: Data for Standard and Poor 500 before 1957 are not available.

Source: Roger G. Ibbotson and Rex A. Sinquefeld, Stocks, Bonds, Bills, and Inflation. Chicago: Ibbotson Associates, 1990.

Figures II.2 and II.3 show the compound annual rates of return by decade for stocks and corporate bonds, in both nominal and inflation-adjusted terms. Nominal rates reflect the actual dollar payout of an investment. Because inflation reduces the value of those dollars, however, we focus on inflation-adjusted rates to reflect the payout in terms of real purchasing power.

**Appendix II  
Proposal's Advantage to Individuals Depends  
on Market Interest Rate**

**Figure II.2: Compound Annual Returns  
for the Decades, Common Stocks**  
(1926-89)



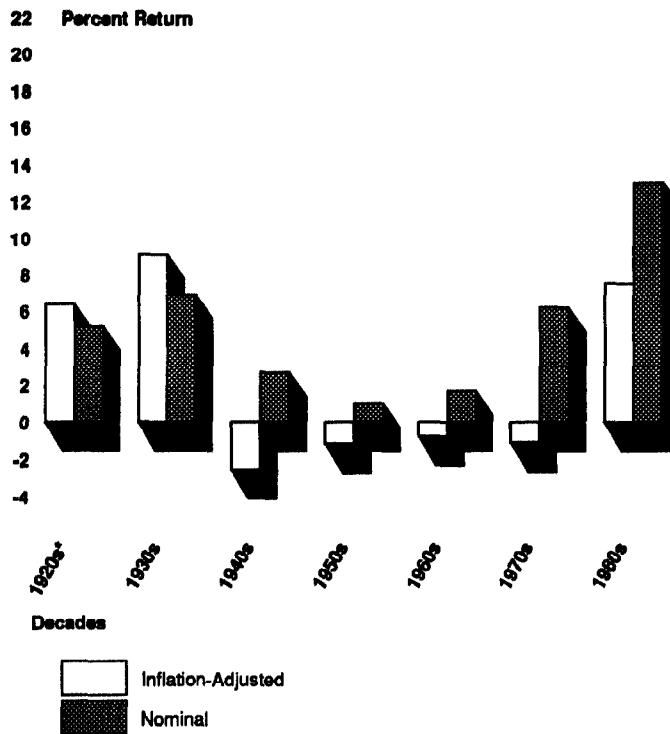
Note: 1920s data begin with 1926.

Data before 1957 are for Standard and Poor 90; after 1957, they are for Standard and Poor 500.

Source: Roger G. Ibbotson and Rex A. Sinquefeld, Stocks, Bonds, Bills, and Inflation. Chicago: Ibbotson Associates, 1990.

Appendix II  
**Proposal's Advantage to Individuals Depends  
on Market Interest Rate**

**Figure II.3: Compound Annual Returns  
for the Decades, Long-Term Corporate  
Bonds (1926-89)**



Note: 1920s data begin with 1926.

Source: Roger G. Ibbotson and Rex A. Sinquefeld, *Stocks, Bonds, Bills, and Inflation*. Chicago: Ibbotson Associates, 1990.

As the figures demonstrate, rates of return fluctuated considerably over time. While the experience of the 1980s suggests that ISSRAs might perform very well, the figures also show that, historically, these rates are atypically high. They cannot necessarily be expected to persist over several decades.

**Returns Vary Widely  
Over Rolling 20-Year  
Periods**

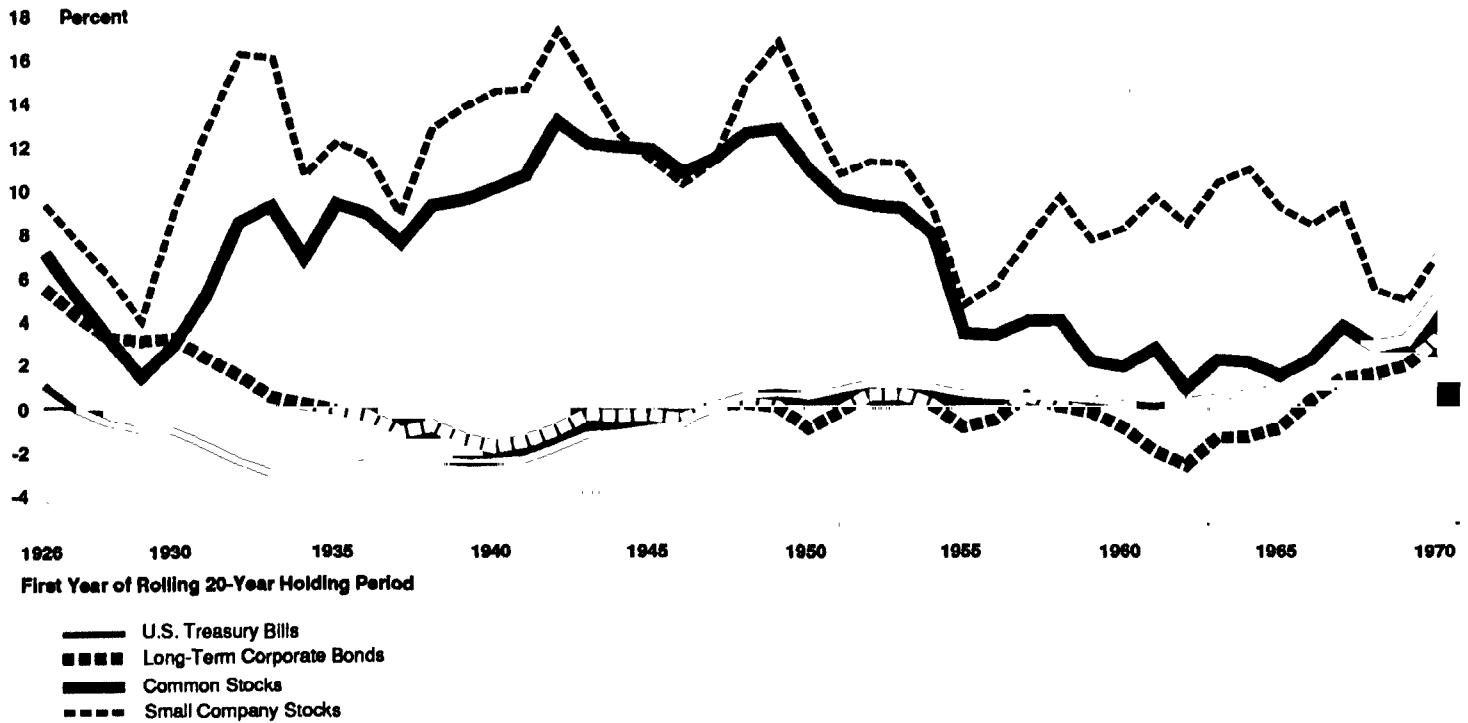
Ultimately, workers will hold ISSRAs over different years and for different lengths of time. For instance, some people will retire just a few years after their first ISSRA deposit. Others, who enter the work force just as the excess revenues diminish around 2015, will retire 40 or more years after their last ISSRA deposit. Roughly one-fourth of the ISSRAs will collect interest for no more than 25 years.

A retiree's advantage from the program will depend entirely on the returns earned by the individual ISSRAs from diversion to retirement. As a result, this advantage may vary considerably from worker to worker,

**Appendix II  
Proposal's Advantage to Individuals Depends  
on Market Interest Rate**

even for those holding accounts over periods just a few years apart. Figure II.4 shows that inflation-adjusted compound annual returns vary widely over rolling 20-year periods. Specifically, since 1957, they have ranged from about 1 to over 5 percent for Standard & Poor 500 stocks and from about -2.7 percent to roughly 3.2 percent for corporate bonds.

**Figure II.4: Compound Annual Returns, Inflation-Adjusted, for 20-Year Holding Periods**



Note: Data for common stocks before 1957 are for Standard and Poor 90; after 1957, they are for Standard and Poor 500.  
Source: Roger G. Ibbotson and Rex A. Sinquefeld, *Stocks, Bonds, Bills, and Inflation*. Chicago: Ibbotson Associates, 1990.

Such wide variation could have significant effects on the income of individuals retiring in slightly different years. For example, if an ISSRA earned interest at the rate the Standard & Poor 500 earned from 1967 to 1986, it would earn 3.7 percent; but, another worker's ISSRA that earned interest at the rate from 2 years earlier, 1965 to 1984, would earn only 1.4 percent. For corporate bonds, an ISSRA earning interest at the rate from 1970 to 1989 would earn 3.2 percent; but, another ISSRA earning at the rate from just 5 years earlier, 1965 to 1984, would earn -1 percent.

## Effect of ISSRA Plan on Typical Beneficiaries

We explored different assumptions concerning the market rate of return. If ISSRAs earn a moderate return, like that available historically for corporate bonds, small improvements in total retirement income are likely. If ISSRAs could obtain returns comparable to those historically earned in the stock market, substantial improvement in workers' retirement incomes is possible. Conversely, holding ISSRAs during an unlucky period, such as has occurred from time to time for both stocks and bonds, could actually reduce total retirement income compared with that available from Social Security. In addition, contributing less than the maximum number of years (26) moderates the effect of the plan on retirement incomes.

## Results Vary by Market Rate of Return

Using various assumptions about the rate of interest ISSRAs earn, figure II.5 compares the Social Security benefit under current law with the combined income from the ISSRA proposal's adjusted benefit and ISSRA annuity for an average earner born in 1960. Table II.1 provides numerical results, including the percentage increase in retirement income and the ISSRA annuity as a percent of total retirement income.

**Table II.1: ISSRA Proposal's Impact on Retiree Incomes by Market Interest Rate Assumption<sup>a</sup>** (Average Steady Earners Born in 1960)

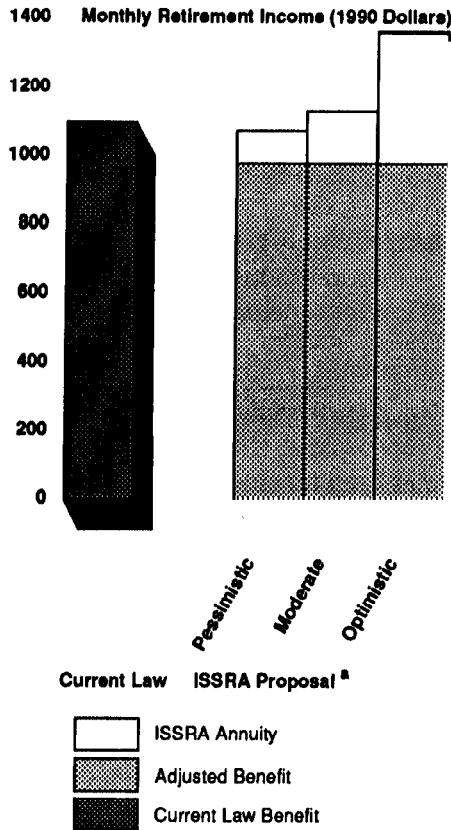
Monthly dollar results <sup>b</sup> (1990 dollars)	Interest rate assumption (inflation-adjusted)		
	Pessimistic (1%)	Moderate (3%)	Optimistic (7%)
Current law benefit	\$1,095.30	\$1,095.30	\$1,095.30
Benefit reduction	-118.82	-118.82	-118.82
ISSRA annuity	+94.18	+148.05	+377.58
<b>New retirement income</b>	<b>\$1,070.66</b>	<b>\$1,124.53</b>	<b>\$1,354.06</b>
<b>Percentage results</b>			
Benefit reduction	10.85%	10.85%	10.85%
Change in income	-2.25%	2.67%	23.63%
ISSRA as a percent of income	8.80%	13.17%	27.89%

<sup>a</sup>Assumes inflation-adjusted age group rate of 2 percent under Social Security.

<sup>b</sup>Numbers may not add due to rounding.

**Appendix II  
Proposal's Advantage to Individuals Depends  
on Market Interest Rate**

**Figure II.5: Total Retirement Incomes, by  
Market Interest Rate** (Average Steady  
Earners, Born in 1960)



<sup>a</sup>Bars show alternative market interest rate assumptions. Benefit adjustment assumes inflation-adjusted age-group rate of return of 2 percent.

For our moderate case, we assumed that ISSRAs would earn an inflation-adjusted 3 percent, which is 1 percentage point more than the age-group rate of 2 percent.<sup>5</sup> In nominal terms, this translates to roughly 7 percent, using the Alternative II-B assumption of 4-percent inflation. This case approximates the historical performance of highly graded corporate bonds, which have earned 2 percent since 1960, and 4 percent during the unusually good bond market during the 1980s. Under this assumption, the ISSRA proposal increases retirees' income by 2.7 percent, and the ISSRA annuity constitutes 13 percent of total retirement income.

<sup>5</sup>As noted earlier, these private rates of return are before taxes and are not adjusted for administrative fees. Such adjustments would reduce the effective rate of return and the ISSRA annuity.



**Appendix II  
Proposal's Advantage to Individuals Depends  
on Market Interest Rate**

For our optimistic case, we assumed that the ISSRAs would earn 5 percentage points more than the age group rate, or an inflation-adjusted rate of 7 percent. This rate approximately reflects the performance of the Standard and Poor 500 stocks since 1957. For this assumption, the figure and table show that the ISSRA proposal results in a percentage increase in retirement income of 24 percent. The ISSRA annuity represents 28 percent of total retirement income.

For our pessimistic case, we assumed that the ISSRAs would earn 1 percentage point less than the age group rate, or 1 percent. We selected this spread to illustrate what could happen if a particular age group holds ISSRA accounts over an unlucky period; the above discussion of historical returns over rolling 20-year periods suggests that such unlucky periods might well occur for some age groups. An inflation-adjusted rate of slightly better than 3 percent reflects the performance for stocks over the worst 20-year period since 1957; but for corporate bonds, a rate of -1 percent reflects the worst such period. For this pessimistic assumption, figure II.5 and table II.1 show that the ISSRA proposal results in a decrease in retirement income of 2.3 percent. Here, the ISSRA annuity represents 9 percent of total retirement income but would not make up for the benefit reduction.

**Table II.2: ISSRA Proposal's Impact on Retiree Incomes Using Moderate Market Rate Assumption** (by Age Group for Average Steady Earners)

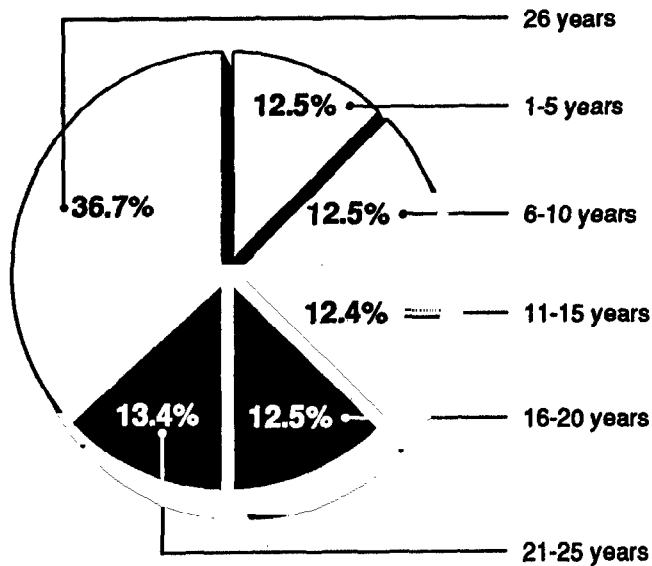
Age group attributes	Workers born in						
	1930	1940	1950	1960	1970	1980	1990
Number of years with ISSRA deposits	5	16	26	26	26	16	6
Inflation-adjusted age group return rate	3.51%	2.64%	2.32%	2.00%	2.00%	2.00%	2.00%
<b>Monthly dollar results<sup>a</sup> (1990 dollars)</b>							
Current law benefit	\$744.31	\$848.20	\$960.30	\$1,095.30	\$1,240.29	\$1,404.34	\$1,590.14
Benefit reduction	-13.43	-51.95	-98.23	-118.82	-142.12	-100.71	-43.56
ISSRA annuity	+13.59	+53.84	+106.80	+148.05	+193.06	+140.73	+63.44
<b>New retirement income</b>	<b>\$744.47</b>	<b>\$850.09</b>	<b>\$968.88</b>	<b>\$1,124.53</b>	<b>\$1,291.23</b>	<b>\$1,444.36</b>	<b>\$1,610.02</b>
<b>Percentage results</b>							
Benefit reduction	1.80%	6.12%	10.23%	10.85%	11.46%	7.17%	2.74%
Change in income	0.02%	0.22%	0.89%	2.67%	4.11%	2.85%	1.25%
ISSRA as percent of income	1.83%	6.33%	11.02%	13.17%	14.95%	9.74%	3.94%

<sup>a</sup>Numbers may not add due to rounding.

Results Vary by Age  
 Group

After about 2015, there will be no more excess revenues to divert to the ISSRAs. Table II.2 shows that, as a result, the number of years that any individual will contribute to an ISSRA will vary. Workers very near retirement when the diversions begin might contribute only 1 or 2 years to the ISSRA. Figure II.6 shows that 37 percent of the eligible workers would contribute the full 26 years, specifically those born between 1950 and 1970. Those entering the work force after the diversions begin would contribute for fewer years, but their ISSRAs would accumulate interest for a long period until their retirement. As a result, the ISSRA program phases out over a very long period of time, many years after the last diversion. For example, a newly entering worker in 2015 would contribute only 1 year, under our simplifying assumptions, but the (small) ISSRA would be held and accumulate interest for a working life of 45 or more years.

Figure II.6: Workers With ISSRAs by  
 Number of Years With Deposits



Note: Based on simplifying assumption that everyone retires at normal retirement age.

Table II.2 also shows that the inflation-adjusted age group rate of return on Social Security used in our benefit adjustment ranges from more than

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**Appendix II**  
**Proposal's Advantage to Individuals Depends**  
**on Market Interest Rate**

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3 percent for those born in 1930 to 2 percent for those born after 1960.<sup>6</sup> These rates of return imply that the impact of the ISSRA proposal on individual retirement incomes would vary considerably by age group.

Figure II.7 and table II.2 show this variation using our moderate assumption that ISSRAs will earn a 3-percent inflation-adjusted interest rate. Age groups born before 1960 do no better under the proposal because their benefits are reduced at up to a 3-percent rate for their age group rate of return. Later groups do better because their benefits are reduced at a lower age group rate, but the size of their benefits decline because they contribute for fewer and fewer years.<sup>7</sup>

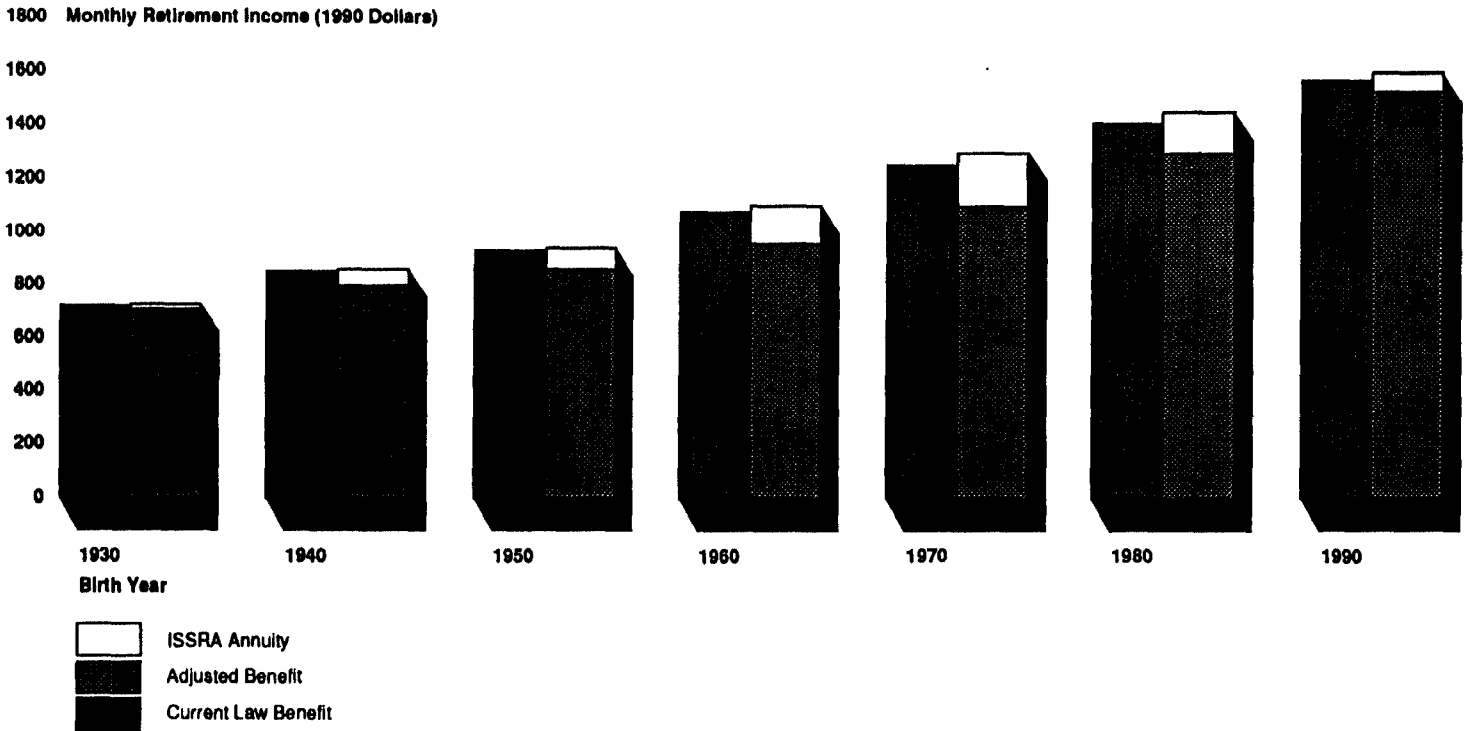
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<sup>6</sup>The implicit rates of return vary by age group because (1) payroll taxes have increased, so later age groups pay relatively more during their careers; (2) benefit levels and eligibility requirements have changed; and (3) the actuarial value, or "price," of these benefits changes as mortality rates and interest rates change.

<sup>7</sup>This analysis does not reflect the additional risk that earlier age groups run because they have held their ISSRAs over shorter periods. As discussed earlier, the combined returns earned over the life span of the ISSRAs ultimately determine the impact on an individual's income. For example, those retiring in the year 2000 will have been holding their ISSRAs for 10 years, but compound annual rates of return over 10-year holding periods fluctuate more than the 20-year periods examined above. Thus, this age group runs a greater risk of holding their ISSRAs over an unlucky period than those retiring in later periods.

**Appendix II  
Proposal's Advantage to Individuals Depends  
on Market Interest Rate**

**Figure II.7: Total Retirement Incomes, by Age Group, Using Moderate Market Interest Rate Assumptions**



Note: Benefit adjustment assumes inflation-adjusted age group rate of return of 2 percent.

**Objectives, Scope, and Methodology**

Our objective was to analyze how hypothetical Social Security beneficiaries (retired workers only) might fare under the ISSRA plan. As discussed in appendix I, under the ISSRA program a person's total retirement income would be comprised of the current law Social Security benefit minus the benefit adjustment plus the annuity on the ISSRA. Our analysis illustrates the change in retirees' income under the ISSRA program by calculating these amounts using various assumptions about the market rate of interest and other factors.

For our analysis, we set the amount of the annual ISSRA deposits at 2 percent of taxable payroll for the 26-year period from 1990 through 2015. This is about the average amount of excess revenues in the portion of Social Security that represents retired worker benefits up until 2015. At about that time, according to the current Alternative II-B projections, the annual excess payroll tax will begin to decline rapidly. Both the size of the excess revenues and the exact time period over which

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**Appendix II**  
**Proposal's Advantage to Individuals Depends**  
**on Market Interest Rate**

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they occur could change considerably with future economic and demographic conditions.

Next, for our hypothetical workers we used "steady earner" cases in which workers start their career at age 20 and have the same relative inflation-adjusted earnings level throughout their lives.<sup>8</sup> To illustrate the ISSRA plan's impact by income level, we used the three hypothetical steady earners born in 1960 (see app. I). Workers born in 1960 fall in the middle of the age groups affected by the ISSRA proposal. Because they will work approximately from 1980 to 2027, they will be able to participate in all 26 years of the ISSRA diversions.

For each of our hypothetical workers we (1) generated the current law benefit (PIA) based on the Alternative II-B assumptions, (2) constructed ISSRAS that reflect the diverted contributions and the accumulated interest at various specified rates, and (3) arrived at the benefit adjustment (see app. I) and ISSRA annuities by converting final balances into annuities that have features identical to the Social Security benefit.<sup>9</sup>

As noted earlier, for interest on the ISSRAS, we used moderate, optimistic, and pessimistic rate-of-return assumptions. These roughly reflect the historical performance of different types of private market investments while also taking into account the alternative II-B assumptions about future economic performance. For the implicit Social Security age group returns, we used estimates that ranged from 2 to more than 3 percent, depending on the age group.

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<sup>8</sup>Analysts often use these steady earner cases, which reflect the range of Social Security benefit levels. They are not necessarily "typical," however, because many workers experience employment interruptions and greater variation in earnings during their careers.

<sup>9</sup>To simplify our comparison of the ISSRA with the current system, we assumed that the entire ISSRA balance is converted to an annuity that has features identical to the Social Security benefit. However, the Social Security benefit has features that may not be available in the private market. As a result, ISSRA annuities may be more or less generous than our analysis illustrates.

Specifically, the private market does not in general offer unisex benefits or benefits with cost-of-living adjustments. Further, private annuities cost over 30 percent more, on average, than their actuarially fair value, reflecting profits, administrative costs, and insurance risk, which would make the potential ISSRA annuities less generous. On the other hand, our analysis prices annuities using the interest rate paid on the Social Security Trust Fund while the private market could offer more generous annuities using higher rates of interest on other investments.

Thus, comparing the values of annuities in the private and public sector presents numerous problems of interpretation and valuation. For consistency and comparability, we have priced all annuities in our analysis using features identical to those a Social Security benefit offers, including private-sector annuities on the ISSRA balances. In essence, we have circumvented all the above issues by assuming, for the purposes of this illustration alone, that everyone ultimately purchases annuities on their ISSRAs from Social Security.

# Considerations in Implementing an ISSRA Program

The ISSRA proposal raises many issues concerning program design, structure, and implementation. Many operational and administrative challenges would have to be overcome before the ISSRA program could be considered a feasible alternative use of the Trust Fund reserves. In this section we highlight key aspects regarding Treasury transfer of funds and the management and investment of ISSRAs. Also, because of the potential for lower retirement income, the proposal raises questions that may need to be resolved through the political process.

## Treasury Transfer of Funds to ISSRAs

The ISSRA program would represent a large transfer of government funds to private-sector financial institutions. Fully implemented, approximately 24 percent of annual payroll taxes for the retirement portion of Old-Age, Survivors and Disability Insurance (OASDI) would flow into private ISSRAs held by various financial institutions. In 1990 this would be approximately \$48 billion.

Payroll taxes could be paid and flow into the Treasury as they now do, where they would be credited to the Trust Fund. However, unlike the current situation where the Trust Fund accumulates large amounts of Treasury securities, the Trust Fund accounts would be reduced as payments are made to financial institutions under the ISSRA program.

The ISSRA program would involve the creation of approximately 130 million separate accounts in the name of each worker covered under Social Security. These accounts would be held at a large number of financial institutions throughout the country. Presumably, individuals would have the opportunity to select the financial institution at which their account would be held. This could be done by completing a form and designating a direct deposit type of transfer. At least two concerns that arise are determining, at regular intervals, how much should be sent for each individual and the manner and frequency with which Treasury would forward these funds.

Payroll taxes are transmitted by employers directly to the Treasury throughout the year. Employers file quarterly tax reports with the Internal Revenue Service (IRS) where they report total employees' earnings and pay taxes due. Self-employed workers also report their earnings to the IRS.

Separately, on an annual basis, employers report summaries of workers earnings directly to SSA, and these data are used to credit the proper

earnings amount to workers' Social Security earnings records. IRS provides data from the tax returns of self-employed persons, and SSA uses these data to credit their earnings records. These earnings, however, are not credited immediately to workers' earnings records. Currently, completing the posting of earnings requires about 7 months. This task of posting earnings would have to be completed before SSA could determine the amount of ISSRA contribution for each worker and forward this information to Treasury. This could mean a delay of 8 months or more before ISSRA payments are received and credited to individual accounts by private-sector financial institutions.<sup>1</sup>

Even if the determination of the amount of ISSRA contribution could be done in a manner that reduces the lag between payment of taxes and crediting to ISSRA accounts, there may be some difficulty in the Treasury forwarding these funds. Treasury would have to sum up the individual contributions to each financial institution and then forward these funds accordingly. Although this appears to be a straightforward task, experts tell us that it is not and Treasury would encounter difficulty particularly if a large number of institutions receive ISSRA funds. Also, there could be cash management considerations because it is likely that transfer of funds to ISSRAs might not occur regularly throughout the year, but in one large annual payment.

One way to avoid problems associated with Treasury payments to ISSRAs is to have employers transmit part of the workers' payroll taxes to designated financial institutions directly. However, this moves away from the idea of allocating the Trust Fund reserves to private accounts because the ISSRA program would then become a kind of mandatory individual retirement account (IRA) system. This would also impose an additional administrative burden on private firms.

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<sup>1</sup>Also, there have been difficulties in reconciling reports of employers to the Treasury via tax-return data with data received by SSA via annual earnings reports. These difficulties would likely carry over to allocation of the ISSRAs. While this is a problem that is solvable administratively, some effort and resources would have to be expended to deal with it. See, *Social Security: More Must Be Done to Credit Earnings to Individuals' Accounts* (GAO/HRD-87-52, Sept. 1987); *Social Security: Resolving Errors in Wage Reporting* (GAO/HRD-90-11, Oct. 1989); *Social Security: Alternative Wage Reporting Processes* (GAO/HRD-90-35, Nov. 1989); and *Social Security: IRS Data Can Help SSA Credit More Wages* (GAO/HRD-90-112, Aug. 1990).

Another possible difficulty arises for those who, for whatever reason, do not designate an institution to receive their funds. A special account would have to be set up to hold these funds and provision would have to be made to determine how to allocate them.

Further complications might arise because many workers have multiple employers requiring reconciliation of data to determine the ISSRA contribution, and many ISSRA diversion amounts might be very small for part-time/part-year workers.

While administrative considerations such as these are not insurmountable, indications are that an ISSRA program would require developing new administrative systems, in both the public and private sectors or at least augmenting existing ones and dealing with numerous details and problems.

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## Management and Investment of ISSRAs

The ISSRA proposal raises questions concerning the rules under which funds would be invested, the investment performance of the accounts, and the security of these investments if ISSRAs are to achieve their purpose of providing a net addition to individuals' retirement income. Some of these issues raise questions that may need to be resolved through the political process.

While the development of a system of ISSRAs in the private sector does not appear to present any serious difficulty, there are potential complications that would need to be addressed. Banks and other financial institutions open up investment accounts for individuals on a regular basis. Individuals would designate the institution to hold their accounts and administrative provisions could be made to allow them to change institutions as appropriate. However, under the ISSRA plan the nature of these accounts would likely be more complex. Furthermore, assuring that these funds are managed and invested properly may require some degree of restrictions, government regulation, and oversight affecting the accounts.

One such provision mentioned in framing the ISSRA proposal is that financial institutions holding ISSRAs would be required to act as fiduciaries in managing the accounts.<sup>2</sup> This would not be unusual for many financial institutions that already function in this capacity. However, it could affect the desirability of handling ISSRAs for some financial institutions and possibly the cost of managing these accounts.

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<sup>2</sup>A fiduciary is defined as "an individual, corporation, or association, such as a bank, to whom certain property is given to hold in trust, according to an applicable trust agreement. The property is to be utilized or invested for the benefit of the property owner to the best ability of the fiduciary. Administrators and executors of estates and trustees of organizations are common examples of fiduciaries. Investment of trust funds are usually restricted by law." See Jerry M. Rosenberg, Dictionary of Banking and Finance, John Wiley and Sons, New York, 1982, p. 224.

Also, under the Employee Retirement Income Security Act various rules are applied to fiduciaries of pension plans. Civil penalties may be applied to individuals who violate the fiduciary requirements of the act. See Dan M. McGill, Fundamentals of Private Pensions, 5th ed., Richard D. Irwin, Inc., Homewood, Illinois, pp. 47-55.



Other provisions aimed at reducing market risk could be introduced through legislation to limit the types of financial assets in which ISSRAS could be invested. For example, investment in certain types of equities or bonds might be precluded. This could improve the security of ISSRA benefits but also reduce the potential of ISSRAS to improve retirement income through higher market returns.

Even with restrictions on ISSRAS, some individuals could be worse off than they are under the existing system. Higher earners might be in a better position financially to assume the risk of loss from poor investment performance. Those at lower earning levels, however, are likely to experience substantial reductions in their living standard if investments turn out poorly. This would erode retirement benefits and could be viewed as weakening the current provision of a minimum level of retirement income for all retirees through Social Security.

Poor investment performance could create constituent pressures to establish a federal guarantee that no one would be less well off with ISSRAS. But a guarantee would create incentives for investors to take risks they would not assume without the guarantee, since they would be compensated for any losses. This would drive up the government's costs and could result in a transfer of income from the working population to retirees.

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