



Cato Institute Social Security Choice Paper No. 1: Dismantling the Pyramid: The How & Why of Privitizing Social Security

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Executive Summary

Social Security is an unfunded pay-as-you-go system, fundamentally flawed and analogous in design to illegal pyramid government's own actuaries predict the system will be bankrupt by 2030, but Social Security could face financial crisis as early as 2014. Moreover, Social Security's relatively poor rate of return makes the program an increasingly worse investment for today's young worker.

The liabilities already created, which are unrecognized by the government accounting system, represent sunk costs that cannot be recovered. Only adjustments in spending patterns can pay for those commitments. Short-term fixes to increase revenue or reduce benefits will be unsuccessful in the long run. The system design itself is fatally flawed and cannot be repaired. It must instead be replaced by one derived from free markets and operated by a free citizenry making individual economic decisions in their own self-interest. The choice remaining is between continuing to support a bankrupt system and building a financially sound structure for the future.

Reform is long overdue. If we fail to act soon, our children will either inherit a bankrupt system or be forced to pay an impossibly high level of taxes. Only private pensions with individual property rights to accumulated fund balances can create a secure pension system. Chile, which privatized its system in 1981, provides evidence of such a system's effectiveness. Chile's new system has been both successful and popular, but it stops short of full privatization. Various plans have been proposed for the United States, including recent legislation by Sens. Alan Simpson (R-Wyo.) and Bob Kerrey (D-Neb.), but each suffers the effects of compromise with central-planning approaches.

A much bolder approach is called for. A plan that achieves the dual objectives of security and personal liberty would divert current Old-Age and Survivors and Disability Insurance payments to private personal retirement accounts, similar to individual retirement accounts, managed by the financial securities industry. Modern risk-management methods should be used for the portion of the account necessary to finance minimum retirement needs. Personal risk preferences should be allowed to guide the investment of fund balances in excess of the minimum. Individuals should be free to choose their own retirement age. Government intervention and regulation should be minimized.

Transition to a new system requires the recognition of current intergenerational commitments and the making of choices that minimize transaction costs as we liquidate obligations to ourselves and integrate system liabilities into a privatized financial structure.

Introduction

According to a recent public opinion poll, more young Americans believe in UFOs than believe they will receive

Social Security benefits.^[1] The unfortunate fact is that, while their views on extraterrestrial visitation may be problematic, their opinion of Social Security may be perilously close to correct.

Recently, the government's own actuaries reported that Social Security's Old-Age and Survivors Insurance and Disability Trust Funds will go broke in 2030.^[2] However, the new estimate may be unduly optimistic because those trust funds are really little more than a polite fiction. For years the federal government has used the trust funds to disguise the actual size of the federal budget deficit, borrowing money from them to pay current operating expenses and replacing the money with government bonds. The real crisis starts, therefore, not when the trust funds run out, but when they peak and start to decline (Figure 1). At that point the trust funds must start turning in bonds to the federal government to obtain the cash needed to finance benefits. But the federal government has no cash or other assets with which to pay off those bonds. It can obtain the needed cash only by borrowing and running a bigger deficit, increasing taxes, or cutting other government spending.

Increasing the deficit is no longer a viable option, and Congress is already struggling with spending cuts. Making additional cuts in the future will be very difficult. In the past Congress has resorted to increasing the payroll tax to postpone Social Security's financial reckoning. However, there are limits to how much more the already burdensome payroll tax can be raised. The Social Security Administration's own pessimistic estimates indicate that by 2040 a combined employer-employee payroll tax of 40 percent could be required to pay benefits.^[3]

Clearly, the Social Security system is not sustainable.

Why Social Security Cannot Work

Beyond all the accounting data demonstrating that the Social Security system will be coming back to taxpayers, tin cup in hand, for another financial fix in a few more years; beyond the projections demonstrating that, for instance, a median-income African-American worker today will receive an effective rate of return on his "investment" in Social Security below 0 percent; beyond the widespread belief among young Americans that Social Security will not be there for them when they retire; beyond all the pessimistic forecasts are more fundamental economic truths. Social Security will not fail just because the accounting numbers do not add up. It will fail because it violates basic principles of financial economics.

Social Security Is an "Unfunded" Retirement Plan

The characterization of the excess in government OASDI receipts over expenditures as a "surplus" that is somehow invested by a government-managed trust fund and available to finance future benefits payouts is central to the flawed design of the current Social Security system. In fact, no such fund exists in any meaningful economic sense.

Turning to the Social Security system . . . large "surpluses" . . . are building up in the wake of the numerous payroll tax increases factored in over the last dozen years. On the face of it, these increases seem to make eminent sense. . . . Once you get beyond the euphemisms of "trust funds" and "surpluses," however, the reality is something far different. These excess funds are not being "saved"; rather they are being lent to the U.S. Treasury in return for IOUs giving the Social Security system future authority to spend up to the amount of the trust fund.^[4]

Surplus OASDI receipts are accumulated in a government "fund." But the trust must by law invest in a single category of asset: a special class of U.S. Treasury securities. Those securities in turn serve to finance the government's deficit spending and are secured, like all U.S. government instruments, only by the government's power to tax future wealth generated by the private economy.

Figure 1 Social Security Revenues vs. Outlays

[Graph Omitted]

Source: Bipartisan Commission on Entitlement and Tax Reform, Final Report to the President (Washington: Government Printing Office, 1995), p. 22.

The Social Security trust funds are thus fundamentally different from private pension plans that invest in private-sector financial assets (equity and debt instruments that provide a claim against real assets capable of producing wealth themselves). The distinction between government securities and private securities is one that accounting systems ignore, but it has real economic consequences. Private financial securities in all cases represent a claim against real assets.

Real assets may be either tangible (drill presses, buildings, computers) or intangible (copyrights, patents), but they are always real. The claim on those assets may be direct or indirect (in the case of derivative securities), but the current value of the security is grounded in the market's perception of the ability of that asset to produce future wealth. The value of the security exists in the present as an expression of the future cash flows the asset is capable of producing. Citizens who own private securities are holding a piece of the nation's wealth that currently exists; it is wealth that they, as current participants in the nation's economy, helped to create. In theory, and in some cases in reality, if the firm issuing the security is liquidated, the holder of the security may claim the real assets and realize their value as they are sold and redistributed.

Government securities are fundamentally different. No real assets underlie their value. Rather, they represent a claim based on the government's ability to tax wealth created at some later time by the next generation of participants in the economy.

The result of investing the "trust funds' " assets in government securities is the creation of an accounting illusion. A positive balance is maintained for the trusts in the government's bookkeeping system, but the tax receipts deposited in the funds are lent to other government agencies to finance current government consumption.^[5] It is only by taxing future generations' wealth that the obligations can be liquidated.

The system is, in fact, not unlike that created by a Ponzi scheme. In a Ponzi scheme (also known as a pyramid financing scheme and illegal in all 50 states) early investors are paid off with cash taken in from later investors. The system creates no real growth, but accounting data can create the illusion of wealth as long as the base of investors keeps growing. The system collapses when the demands of increasing numbers of expectant recipients confront the limited resources of decreasing numbers of new participants.

The Government as Fund Manager

In practice it is virtually impossible for the government to maintain any true permanent trust fund. The government system does not actually accumulate trust funds at all. The unified budget system merely uses all current cash receipts to meet current expenditures, and excess contributions to any of the so-called trust funds are used to mask a portion of the deficit. In the private sector, such future obligations would be capitalized on the company's balance sheet as a liability. In the world of government accounting, future liability remains in fact but is ignored on the record.

Government funds, however, cannot be invested in the private economy for several reasons. Suppose that the government did, in fact, accrue a real trust fund for future Social Security payouts. Allowing a fund of such magnitude to be invested by government bureaucrats is asking the government to make risk assessments in the private sector and subjects the fund to political influence.^[6]

We have only to consider recent suggestions by the Clinton administration that private pension funds be required to invest a portion of their assets in "socially responsible" projects, or to consider the effects of the community reinvestment requirements the government has placed on the banking system, to realize that politicians cannot be trusted to invest fund assets with the objective of wealth maximization for fund participants.

In any case, even were we to allow the government to invest in private securities, the result would be a gradual government takeover of business as the growing trust funds assumed an ever-larger ownership of the private sector. Some estimates put the future value of the trust funds in the early part of the next century at over \$12 trillion, an

amount that would represent a major ownership interest in the American stock market and, in effect, economic socialism.^[7]

Roller-Coaster Economics

One fundamental principle of financial economics is that short-term and long-term obligations need to be matched with similar-duration sources of financing. Corporations' cash cycles are generally financed with funds from short-term sources and long-term investments in plant and equipment are financed with long-term bonds and equity. Although the analogy with the Social Security system is imperfect, the principle is relevant: the cash cycles associated with revenue sources and obligations need to be synchronized.

The Social Security system--not having developed any reservoir of real value from which to draw during lean times and unable to tie individual benefits to wealth created and saved by individual system participants--is perpetually subject to the roller-coaster ride of the business cycle. The cash demands of the system are relatively stable with an upward inflationary trend and quite predictable in the short run. But the economy that produces cash for the government to spend is neither stable nor predictable, even in the short run.

Because Social Security benefits are inflation adjusted, expenditures continue to rise at a steady pace even during recessionary times. The result is inevitable periods of short-run increases in government deficits, resulting from insufficient cash inflows to the system, followed by temporary cash receipt windfalls that mask the government's true deficit spending.

No Right to Social Security

Contrary to popular belief, no American has any vested rights to Social Security benefits. Social Security essentially represents an intergenerational "social contract," whereby the next generation implicitly promises to pay for the retirement of the previous generation. Unlike participants in funded private pension plans, system participants have no property right to their benefits. System payouts, as well as eligibility requirements, are entirely in the hands of the Congress elected by the next generation, which may choose to change the rules to meet current economic necessity as it sees fit. In *Fleming v. Nestor* (1960), the U.S. Supreme Court settled the matter of Social Security property rights, ruling that workers do not have any accrued property rights associated with the system, and they have no legal claim to either their accrued contributions or their anticipated benefits.

The Principle of Marginal Analysis

A second fundamental principle of financial economics is that financial decisions must be based on incremental benefits and costs. That means that the value of choosing a particular course of action is determined by whatever changes the action will make in the future outcome--changes from what the outcome would have been if the alternative had not been chosen. The term "incremental" is very important: only the difference in the outcomes with and without the decision is relevant to the decision's value.

One of the most difficult complications associated with considering Social Security alternatives is that the system has been used for years to mask large increases in the federal government's expenditures.^[8]

The prospect of revealing to the public the true extent of the government's deficit spending (again, recognizing that spending "fund" balances is an accounting transaction and in no way relieves the government of the accumulating liability for future Social Security payouts) is a major barrier to effective Social Security reform.

Thus, according to Robert Myers, chief actuary for the U.S. Social Security Administration from 1947 to 1970 and professor emeritus at Temple University, the problem with privatizing Social Security is that "any phasing out of OASDI so that individual accounts would be used as the underlying basis would involve huge general revenue costs to the government. That would be necessary in order to finance the benefits for those now on the rolls and for those within a decade or two of retirement age, whose individual accounts based on future contributions could not provide adequate benefits."^[9]

However, linking system reform to current deficit spending fails to recognize the principle of marginal analysis: only the changes that result from a decision are relevant to the decision. The logical flaw is the fact that the government's obligation to current (and even future) retirees is unchanged by a decision to privatize the system. What does change is a ready cash source the government can and does use to finance other spending.

The current Social Security system is especially pernicious because it is leaving us with the illusion that fund balances are sufficient to meet obligations and with the barrier to reform that results from the fact that excessive government expenditures are being financed by Social Security payroll taxes. But the commitments entered into by the federal government as a result of spending current Social Security receipts are what financial economists call a sunk cost. The liability has already accrued and exists whether we privatize the system or not. The accounting figures obscure the truth, but the obligation remains. And we only make the situation worse, not better, by continuing to consume current receipts rather than allowing them to be channeled into real, wealth-producing investments.

The barriers to reform that have been created by our past profligacy are really twofold: the awful realization that there is no painless way out of the obligations to current and future system participants and the unwillingness to recognize that we must reduce government expenditures in other areas.

The current government accounting system creates the illusion of fund balances to finance the obligation, but in the future the government, if it is to honor its commitments, will be forced to either raise taxes or borrow additional funds from the private sector to finance the cash outflows necessary to meet its obligations. We may pay those obligations in one, or a combination, of only three ways: by borrowing from private capital (and experiencing the explicit accounting costs of interest), by taxing private capital (and experiencing the implicit costs of lower economic growth), and by reducing other government expenditures. There are no other choices.

Principles for Reform

The only effective means of addressing our Social Security problem is to reduce other government expenditures and develop a new national retirement system based on the financial principles that should apply to any sound retirement program. Those principles may be summarized as follows:

1. The system must build a reservoir of financial assets that represents claims against real assets used in the private sector to produce wealth.
3. The system must tie individual account balances to retirement benefits so that each retiree's pension is financed by a store of wealth accumulated by that individual's productive contribution to the economy during his or her working lifetime.^[10]
5. The system must provide individual participants with property rights to the value of their own contributions.
7. The system must minimize restrictions on individual participants' making individual decisions regarding the allocation of the capital reservoir to wealth-producing opportunities.
9. The system must leave the decision about which financial securities to hold dispersed throughout the economic system in order to maximize the efficiency of market pricing mechanisms.

Chile: A Case Study in Privatization

In 1924 Chile became the first country in the Western Hemisphere to initiate a government-sponsored social security

program. In 1981 the Chilean government became the first in the world to replace its public system with a mandatory, privately funded, privately administered plan.

It is worth examining in detail key elements of the Chilean plan for several reasons. First, it is the only experience available from which to learn about the practicality of moving from a public to a private pension system. Second, it is hard to find even a passing reference to the possibility of privatization of the U.S. system without encountering mention of Chile's experience. And third, those references are almost universally incomplete in their understanding of what Chile did and of the consequences for the Chilean social security system and economy.

It is not necessary to detail here the elements and problems of the old Chilean pay-as-you-go system that was replaced in 1981. It suffered from many of the same conceptual flaws as our own system, as well as several others flaws that we have avoided. It is instructive to know that "by the late 1970s, [Chilean] social security expenditures began to outstrip social security revenues. This was primarily due to the gradual aging of the Chilean population, which substantially reduced the ratio of social security contributors to beneficiaries."^[11] Depending on which figures you believe and whether you are optimistic or pessimistic, our own system will reach that stage somewhere between 2005 and 2012. We have already seen that the "trust funds" that are supposed to take up the shortfall thereafter are an accounting chimera.

The new Chilean system, which went into effect on May 1, 1981, is a true "defined contribution" pension plan with mandatory contributions of 10 percent of earnings for program participants. The pension available from the system is simply that which is actuarially computed from the accumulated contributions.

When the new system began, participants in the old system were given the option of switching to the new. After 1982 all new employees were required to join the new system. As of 1992 approximately 90 to 95 percent of all persons under the old system had shifted.^[12]

Contributions to the system are paid entirely by the employee; there is no employer payroll tax. At the initiation of the system, however, all employers were required to increase all employees' wages by 18 percent, which approximated the increased cost of the new system to the worker but was less than the reduced cost to the employer.^[13]

Pension funds are invested in security portfolios administered by private organizations known as administradoras de fondos de pensiones (administrators of pension funds, or AFPs). Twenty-one AFPs, which compete with each other on the basis of investment returns and service, are closely regulated; they must comply with government-mandated financial and investment requirements.^[14] Each worker chooses the AFP in which he wants to participate and may transfer fund balances at his own discretion up to four times per year.^[15] Like any other mutual fund, an AFP invests fund balances in a portfolio of securities and charges the portfolio an administrative fee for its services. Fees are a combination of a flat monthly percentage plus a percentage of earnings, and the AFP fee charges are well-publicized so that individual workers may consider the charges in their choice of funds. Fees average 1 percent of total wages, down from more than 2 percent since the system was started.^[16] Several of the funds, in fact, are owned and operated by U.S. investment firms. Provida, with 25 percent of the system's assets and the largest AFP, is 42 percent owned by New York-based Bankers Trust (acquired as part of a \$45 million debt-for-equity swap in 1986), and Santa Maria, the second largest AFP, is 51 percent owned by Aetna Life & Casualty of Hartford, Connecticut.^[17]

AFP asset allocation, however, is strictly regulated by the government. Portfolios must consist of no less than 50 percent investment in government obligations and "agency" issues of other government-guaranteed securities, leaving no more than 50 percent of the portfolio that may be invested in private-sector securities. Common stocks may make up a maximum of 30 percent of the portfolio; no more than 7 percent of the portfolio may be invested in any one company, and the portfolio can have no more than 7 percent of the capital stock outstanding of any one company). Finally, only stocks on a government-approved list may be purchased. No foreign securities have made the list.

The entire system provides for automatic market indexation by translating contributions into investment units. Investment unit value is calculated much like mutual fund net asset value: the total current value (in pesos) of the total funds of the AFP is divided by the total number of investment units of all members at a given point in time.

Minimum retirement ages are 65 for men and 60 for women. Participants may, however, retire earlier if the pensions payable are at least 50 percent of their average earnings over the previous 10 years and 100 percent of the legal minimum monthly wage. Three alternative methods for determining the pension value are available at the participant's discretion:

- The accumulated contributions may be used to purchase a life annuity from a private insurance company. Annuities must be government approved and must include survivor benefits for dependents.
- The retiree may elect to receive a pension paid directly from the AFP. It is calculated using the life expectancy of the family group applied to the balance remaining in the account, which continues to earn income based on the AFP's performance.
- A partial withdrawal may be used to purchase a private annuity with the remainder paid out directly from the AFP.

Perhaps the most innovative feature was the means by which the Chilean government sought to provide for transition to the new system. The government issues bonos de reconocimiento (recognition bonds), which effectively recognize the value of the obligation incurred by the government (the taxpayers) to those who have participated in the old system.

Bonos are available to any worker who had at least 12 months of contributions to, or coverage under the old system in the 60 months preceding the start of, the new system. The calculation of the bonos due an individual system participant is technically complex but provides the financial mechanism for the transition to the new system. An alternative method of calculation allows anyone who contributed to the old system after July 1970 to receive value for participation. Bonos are essentially government bonds that pay 4 percent annual interest and add to the accumulated contribution value of the AFPs at the time of retirement.^[18] Interest on the bonds is paid out of the government's general revenue fund and is in no way supported by the new pension system.

Finally, a minimum retirement pension is payable to individuals with at least 20 years of contributions to the old and new systems combined. Disability cases have a two-year contribution requirement. The minimum pension is set at 85 percent of the government-mandated monthly minimum wage but does not apply to workers in the "informal" labor market who have never contributed to a plan.^[19] Disability and survivor benefits are not paid from the 10 percent contribution to the AFP. An additional required contribution (which varies by AFP and averages about 1.5 percent) is collected by the AFPs and paid to private insurance companies to purchase private insurance coverage for the group of workers contributing to that AFP.

The Chilean plan is not true privatization. In many ways, in fact, it merely rearranges the accounting system to remove the retirement liability from the government's books; it leaves with the nation's taxpayers the ultimate responsibility for the provision of a minimum pension. Nevertheless, it is by far the most radical move toward privatization that any nation has taken yet, and it serves to reduce some of the anxiety of those who have little faith in private markets to regulate human behavior.

Outcomes that have been attributed to the new system include lower overall cost of labor, higher net wages, increased national savings, greater retirement system equitability, and a large infusion of capital into domestic financial markets. A few simple facts paint the real picture:

1. It may seem irrational that both the cost of labor and net wages could improve under the new system, but that in fact seems to be the case. Increasing workers' pay by 18 percent, eliminating the old worker social security tax of 8 percent, and subsequently requiring a 17 percent (approximate) contribution to social insurance programs result in a net wage increase of 6.46 percent-- $[(1.00-0.08)/(1.18 * (1-0.17)) (1.00-0.08)] = 6.46$. But eliminating the 29 percent social security payroll tax for employers and substituting an 18 percent wage increase results in

an approximate 4.86 percent reduction in the cost of labor. The shared savings for employer and employee can be explained by the large reduction in the costs of the inefficient government administration of the old system.

3. Admirers of the new system often claim large increases in the Chilean national savings rate. "The buildup of funds in the workers' retirement accounts has produced a 29 percent savings rate. . . . Instead of resenting the rich, Chile's workers themselves are becoming rich."^[21]
5. Such claims, however, are probably exaggerated and may be misleading. Marco Santamaria, an economist at the Federal Reserve Bank of New York who studied the plan, points out that the effect on both private and public savings must be taken into account. "Investment in an economy must be financed by the sum of national and foreign saving. . . . The effect of the new private pension system on Chilean public savings can be expected to be negative . . . [as] the elimination of social security taxes . . . was not matched by an immediate reduction in social security expenditures, which thereby reduced the government's ability to save."^[22] His conclusion, important to several criticisms of plans to privatize the U.S. system that point to reduced public savings consequences, is that the net effect of changes in private and public savings is probably zero. "Thus, although there seems to have been a shift in the type of saving from public to private, there is little evidence to support the claim that, to date, there has been an increase in overall saving."^[23]
7. Also common to admirers of the system is the observation that rates of return on AFP portfolios have far exceeded what would have been achieved under the old system, generating substantial fund balances and promising generous pensions to program participants. In a decade in which the Chilean economy averaged 7 percent real annual growth, the average AFP achieved a 13.0 percent real annualized rate of return on investments.^[24]

Such rates of return, however, are unlikely to continue for several reasons. First, as long as fund assets are required to be invested within the Chilean economy, it is not reasonable to assume that long-term rates of growth will exceed those of the Chilean economy as a whole. Throughout the 1980s, Chile's economy grew at a rate of 6 to 7 percent per year at the same time that AFP portfolios were realizing 13 percent rates of return. Those relative rates of return are obviously not sustainable.

Second, the average AFP portfolio at the end of 1990 consisted of 44.1 percent government issues (treasury or central bank securities), 17.4 percent bank time deposits, 16.1 percent mortgage bonds, 11.3 percent common stocks, and 11.1 percent private-sector bonds and debentures. Almost two-thirds (61.5 percent) of the portfolio is invested in government securities or government-guaranteed bank time deposits, the implications of which should not be ignored.^[25] Low-risk government securities provide stable returns but cannot outperform equity markets in the long run. The high rates of return that AFPs have achieved to date result from normal variances in fund performance over time. More realistic long-term rates of return for such a low-risk portfolio will likely return to the 2 to 4 percent (real) range.^[26]

Lessons from Chile

Some conclusions can be drawn from the Chilean experiment. First, we should recognize that the Chilean plan is not true privatization. The government is still responsible for the provision of a minimum pension to all participants, and the government is maintaining a heavy hand in the capital allocation process. If portfolio growth rates slow down, Chilean taxpayers will finally be responsible for the guarantee. The plan ignores the basic financial principle that systematic risk cannot be reduced, only shifted, in a zero-sum game.

In another attempt to reduce risk, the Chilean plan has managed only to minimize returns in the long run. The requirement that at least half of portfolio assets be held in government securities is an improvement over the U.S.

system (where 100 percent of the "fund" assets are in government securities) and at least removes positive fund balances from governmental accounts where they can mask current deficits. But the requirement leaves taxpayers with significant responsibility and condemns the portfolios to low rates of return on investment. A strong government hand in the choice of allowable private-sector securities, including a de facto exclusion of foreign securities, means the almost inevitable politicizing of the capital allocation process. Low rates of return are inevitable as the bureaucrats charged with maintaining the list of permissible investments will not want to include risky alternatives. What is more, they are likely to shy away from securities that may have a significant amount of nonsystematic risk, which is easily diversified away in an investment portfolio but very politically observable when an individual company fails.

In addition, the current exclusion of foreign companies from the list means that the portfolio returns are tied to the strength of the Chilean economy, ignoring the benefits of international economic diversification and the ability of fund managers to direct capital toward rapidly growing economies.

On the positive side, the innovation of issuing Chilean government bonds to recognize the government's current obligations is a significant step forward and should be examined by U.S. planners. In addition, the plan has an innovative solution to the determination of an optimal retirement age. Allowing individual participants to act on their own preferences leaves them the freedom to choose a retirement age as long as their plan accumulations have reached a minimum level. It is impossible to predict whether the result will be a lower or a higher average retirement age for the population as a whole, but the rule is an unusual recognition of the value of maximizing individual liberty.

Another advantage is the use of the private insurance market to provide the annuitized value of pension benefits, which is a true privatization element of the plan. Including the alternative of a plan-calculated annuitization is also a rational alternative, mirroring the means by which an accumulated individual retirement account (IRA) value would be paid out in the United States.

Elimination of the employer contribution is economically rational thinking, even though it may pose political problems for the plan. Total compensation for labor in a free labor market will settle on the demand/supply equilibrium point regardless of whether compensation is paid to the individual or to the government in the form of payroll taxes. That is to say, an employer considers all costs associated with an employee in determining the compensation of the employee. Payroll taxes are as much a part of the cost of hiring a worker as are the actual wages paid to the worker. Having determined the maximum cost that he is willing to pay for each worker, an employer will reduce potential wages by the amount paid in taxes. Thus, payroll taxes ultimately are paid by the employee.

Transaction costs are reduced by requiring only one accounting method to move funds into the pension system (as opposed to contributions by both the employee and employer). However, public understanding of that principle is often limited, and perceptions of employers' "getting away" without paying seem to be rising in the Chilean political environment.^[27] It is certainly true that as new employees are hired, the 18 percent increase in wages will be inconsistently awarded across the marketplace, depending on the supply of, and demand for, different labor skills. The overall result, however, should be an increase in labor market efficiency.

The requirement of an automatic increase in wage rates of 18 percent may grate on free-market ears, but it is probably a necessary transitional element of the plan. The ultimate increase in labor market efficiency as new hires replace old and labor contracts are renegotiated will in short order erase temporary market inefficiencies caused by the rule.

The conclusion that there is probably no net effect on the national savings rate from privatization is both technically correct and conceptually flawed. It is technically correct because there has merely been a change in the method of accounting for social security receipts, creating another accounting illusion that looks like increased savings. Santamaria concludes that, "essentially, there was a change in accounting of social security contributions. Under the old system, contributions were classified as taxes. Under the new system, they are classified as contributions to saving."^[28]

But other elements of a true privatization plan should in fact increase savings and, ultimately, national wealth. To the extent that social security contributions are shifted to private investments (limited in the Chilean plan), economywide capital allocation should become more efficient and rates of return for the economy should increase. Since we can

never know what would have been the case without the new system, it is not possible to provide the skeptics with proof of the superiority of free-market capital allocation; but anecdotal evidence abounds. The Chilean AFPs have provided a third of the capital for the Compañía de Telefonos de Chile's \$1.6 billion expansion and Celulosa Arauco's \$1 billion forestry and pulp project. Hydroelectric projects throughout the nation have been financed with AFP bonds, and the Santiago stock exchange has outperformed any other in Latin America over the past decade.^[29]

Governments are incapable of consistently and efficiently allocating capital. When all the hits and all the misses are added up, private markets allocate capital more efficiently to investment opportunities with higher rates of return to the economy. In the short run, we may be able to offset "public" dissavings with "private" savings and conclude that no net quantitative change in national savings has taken place. But there is a resultant qualitative change in national savings that is inevitable.

It is that qualitative change that finally produces the growth rates in private retirement plans that are capable of both eliminating the long-term need for government subsidy and increasing expected pension benefits. Without such a qualitative assumption, there is no basis for the privatization alternative. One must logically either accept it as a premise or reject privatization as a policy choice.

In the final analysis, the Chilean plan must be viewed as a great step forward. It has moved pension plans outside the direct control of government, has placed at least a portion of the funds in the hands of the private sector where capital allocation processes are qualitatively superior, and has created individual property rights to accumulated system reserves. Government control is still significant, but there is reason to believe the system will move toward a larger allocation of assets to private securities in the future.^[30] Even the country's trade unions, which initially denounced the system, have changed their position: the leader of the nation's textile workers' union admitted that their original position was "a mistake" and that the private system is "very popular among workers."^[31]

Perhaps most important, Chilean officials chose to bite the bullet and recognize the sunk costs of past liabilities to current participants and contributors to the old system. Rather than continue the payroll tax system that supported those payments, Chile has transferred current cash obligations to the general fund and lived with the impact of those obligations on current and future national budgets. The obligation had, and will continue to have, a decreasing effect on national accounting as the private plan assumes a larger role in the nation's economy, but in the meantime the Chilean government is recognizing both its liability (in the form of bonos) and the explicit cost of liquidating that liability.

Chile has sparked a privatization revolution in social security systems worldwide. Within the last two years Peru, Argentina, Colombia, and Italy have all, to greater or lesser extents, privatized significant portions of their social security systems along the lines of the Chilean model.^[32] And Mexico has implemented a new, privatized system operating alongside the old, state-run model.^[33]

As Augusto Iglesias, chief economist for the pension fund Habitat, states,

The Chilean social security system is based on very simple and reasonable principles: that people care about their money, that they will work harder if they see the benefit to themselves and that putting it in private hands is more efficient than with the government.^[34]

Privatization Proposals in the United States

Proposals to privatize the U.S. Social Security system have not exactly proliferated, but there has certainly been a relatively recent increase in the frequency of such thinking. Peter Ferrera, writing for the Cato Institute, was one of the earliest and most persuasive voices arguing for privatization, starting in the early 1980s.^[35] John C. Goodman, president of the National Center for Policy Analysis, a Dallas-based think tank, wrote a 1992 study that recommended supplanting Social Security with a fully funded private system. Robert Genetski, a private economist, sketched the broad outlines of a plan in a 1993 Wall Street Journal article, and Sen. Robert Kerrey and former senator John Danforth in 1995 issued the final report of their Bipartisan Commission on Entitlement and Tax Reform, which, while

it was unable to arrive at a consensus conclusion, did contain a series of reform proposals by commission members, many of which contained privatization elements.^[36]

The term "privatization" is not always attached to proposals that in fact argue for privatization reform, and such is certainly the case with both the proposals of Rep. John Porter (R-Ill.) and those of several members of the Kerrey-Danforth commission. Special interests have done an effective job in recent years of characterizing private enterprise, and in particular private capital, as antithetical to the interests of the public. The result is that straightforward references to privatization can be a political liability that dooms a proposal to marginalization from its birth. The lack of such explicit reference to "privatization," or even the explicit denial of such intent, however, should not prevent informed analysts from recognizing and applauding such efforts under any name.

Moreover, the political climate may be changing at last. Even Time now recognizes the problems inherent in the current Social Security system and discusses privatization as a legitimate option for reform.^[37]

Three proposals have been put forward in sufficient detail to warrant closer examination here: those of Representative Porter; Sen. J. Robert Kerrey (D-Neb.) and former senator John Danforth (R-Mo.); and Sen. Alan K. Simpson (R-Wyo.), former representative J. Alex McMillan (R-N.C.), and Rep. Porter J. Goss (R-Fla.). Senators Kerrey and Simpson have subsequently introduced legislation that draws from both of their previous proposals. Each of these plans contains privatization elements that advance the case for serious systemic reform.

The Porter Plan

Representative Porter introduced his proposal to Congress in 1990 and again, in modified form, in 1994. At the time he first introduced it, his plan represented the boldest congressional attempt to date to reform the system in a manner consistent with free-market principles. The objections voiced by critics of his plan need to be addressed as they presage those that we can expect to be raised in response to other privatization proposals.

Porter's plan can be summarized as follows:

1. Cut Social Security payroll taxes by 1 percent each for both employers and employees (a total of two percentage points of taxable payroll).
3. This tax cut would be saved in mandatory Individual Social Security Retirement Accounts, or ISSRAs. These IRA-like accounts would be held in private-sector entities and would accrue tax-free interest over the working lifetime of the individual.
5. Individual recipients would own the accounts and [would] direct bonded ISSRA trustees--banks, insurance companies, brokers, or other money managers--in investment of ISSRA monies . . . limited by law to safe, non-speculative investments such as time deposits, government obligations, AAA corporate bonds, and certain mutual funds.
7. An individual's Social Security benefits would consist of two parts: an annuity purchased with the person's ISSRA funds and an adjusted payment from the Social Security Trust Fund itself.^[38]

In short, "the Porter Plan would take from Congress the reserve funds it is supposed to save but which it instead spends on present-day deficit spending. . . . It would prevent the need for enormous future cuts in government programs to finance redemption of Social Security's special issue bonds. . . . Finally, it would force the federal government to borrow more from public markets to finance the deficit and thereby make the enormity of our fiscal problems far more readily apparent to the general public than it is today."^[39]

The Porter plan would not truly privatize the Social Security system, but it contains a partial privatization move that is echoed in both the Kerrey-Danforth and the Simpson-McMillan-Goss plans: the redirection of at least a portion of the "excess" OASDI contributions to private securities accounts directed by individuals with property rights to account assets.

The Porter plan would leave in place the Social Security benefit structure; the two versions (1990 and 1994) are inconsistent about whether future benefits would be reduced or supplemented by payouts from ISSRAs. In addition, the channeling of funds into the private ISSRAs was originally scheduled to correspond to the period of excess payments to the trust funds (and matched to the excess income rate over the cost rate), ending at the point where trust fund payouts exceed income. H.R. 306 (the 1994 version) dropped that restriction, but Porter's congressional testimony indicates that he will reinstate it in future versions of the plan. The GAO correctly criticizes the second version for not providing for a benefit reduction corresponding to participants' payroll tax diversion to the ISSRA, and Porter in his testimony indicates that such a feature will be reinstated in future versions.^[40]

The Kerrey-Danforth Plan

The Kerrey-Danforth plan is, in every respect, a broader approach to the problem of "entitlement" spending than is the Porter plan. In addition to addressing the problem of OASDI payments and benefits, the plan also suggests alterations in Medicare Part B funding and benefits, the Federal Employee Retirement System, congressional pensions, and military retirement benefits that are germane to the larger economic issues our nation faces. However, some of the most controversial proposals relate to Social Security.

The Kerrey-Danforth OASDI proposals may be summarized as follows:

1. Retain the current benefit eligibility age at 62, but raise the age for full-benefit retirement from 67 to 70, phased in over 30 years.
3. Alter the formula by which cost of living adjustments (COLAs) are made to Social Security benefits. Two proposals are made: limit COLAs to the adjustment available for beneficiaries in the 20th percentile of benefits, or limit COLAs to the adjustment for the median beneficiary.
5. Further reduce the growth of benefits to middle- and upper-income workers by adding a third "bend point" to the benefit formula and using the Consumer Price Index (CPI) rather than past wages to adjust a worker's past wages for inflation. That would reduce benefits over time, as wages generally increase faster than consumer prices in an economy experiencing productivity growth. It would also have the ancillary effect of "means testing" some benefits, giving Kerrey-Danforth a slightly redistributionist orientation.
7. Adjust the CPI itself to better reflect inflation (effectively lowering the CPI calculation), thus reducing the increases in benefits caused by COLA adjustments.
9. Modify spousal benefits by reducing the basic benefit from 50 percent to 33 percent of the primary recipient's benefit, or by limiting the spousal benefit to 50 percent of the median retiree's benefit.
11. Include state and local workers in the Social Security system starting in 2000.
13. Provide a 1.5 percent Social Security payroll tax decrease and require contributions to personal savings or IRAs for all those under age 55, starting January 1, 2000.^[41]

To understand the nature and limitations of the Kerrey-Danforth proposal, it is necessary to remember the two fundamental but separate problems our nation faces regarding our Social Security system. The first is the question of how to design a system for the future that is based on sound financial economic principles. The second is how (and whether) to pay for the future liabilities the old, economically flawed system has created (and continues to create).

It cannot be overemphasized that those are two separate and distinct problems that must be conceptually separated in any analysis of proposed solutions. Sunk costs associated with current liabilities are essentially unrecoverable and must not be confused with plans to maximize future benefits.

The most valuable contribution the Kerrey-Danforth plan makes to the Social Security discussion may be in regard, not to the first problem, but to the second, about which the senators take the political risk of speaking the truth.

There are two ways to prevent insolvency: (1) raise taxes or (2) revise long-term promises to today's young workers. The Kerrey-Danforth approach chooses the second option.^[42]

That is an absolutely correct statement of the limited options available for dealing with the current unfunded liabilities the flawed system has created. Unfortunately, the senators then make the critical error of confusing their bold approach to the second problem with a solution to the first: "In so doing, the Kerrey-Danforth approach restores long-term solvency to Social Security."^[43]

The Kerrey-Danforth proposal consistently makes the same conceptual error, confusing an approach to liquidating current liabilities with solutions to the fundamental flaws in the old system. In fact, of the seven major proposals Kerrey and Danforth make regarding OASDI, the first six address the second question of liquidating unfunded liabilities, rather than the first question of designing a new, sound system.^[44] In addition, Kerrey and Danforth are disingenuous about their choice of solutions, claiming they want to "revise long-term promises" (lower benefits) rather than raise taxes. In fact, both the first and the sixth proposals (as listed above) significantly raise taxes, the first by requiring longer pay-ins for full benefits, the sixth by adding to the system very large numbers of new taxpayers who will receive zero or negative returns on their "investments."

As financial analyst William Shipman has pointed out, "From 1951 until now the payroll tax has not been stable. It has increased 17 times. . . . And most recently benefits have been cut by all sorts of tax code formulae as well as the raising of the retirement age. If this pattern is repeated, Social Security's returns will be worse. . . . Yet, tax increases and benefit cuts are again part of the political debate to save the system. They did not solve the problem in the past legislation of 1977 and 1983, and they will not in the future, for they do not address the fundamental flaws (in the system)."^[45]

The single element of the Kerrey-Danforth plan that, in fact, addresses fundamental flaws in the system is the proposal to mandate a 1.5 percent decrease in OASDI taxes, redirecting such payments to private IRAs. The senators, however, dilute their privatization proposal with a good dose of old-fashioned redistributionist economics; they base the reduction in future benefits associated with the mandatory redirection, not on the proportion of reduced Social Security taxes paid, but on a worker's wage level. Thus, workers in the lowest income categories would not experience significant reductions in excess of the reduction in OASDI taxation.^[46]

The Porter and Kerrey-Danforth approaches reflect very different economic philosophies. The Porter plan would allow individual system participants to make personal decisions regarding staying with, or opting out of, a portion of the Social Security system, relying on individual self-interested decisionmaking to optimize systemwide benefits. The Kerrey-Danforth plan is a central-planning approach that creates systemwide formulas applicable to everyone, regardless of individual perceptions of self-interest. Financial economic principles generally prefer decentralized approaches that rely on individual decisionmaking to centralized, "one-size-fits-all" plans.

The Simpson-McMillan-Goss Plan

The Simpson-McMillan-Goss plan, detailed in the Final Report of the Bipartisan Commission on Entitlement and Tax

Reform, chaired by Senators Kerrey and Danforth, basically represents a dissension from the Kerrey-Danforth plan in certain particulars. Again, concentrating on the elements of the proposal specific to OASDI, Simpson-McMillan-Goss differs from Kerrey-Danforth in the following provisions:

1. Eliminate the inclusion of state and local workers in Social Security. The authors correctly point out that "this proposal (to include) would bring new revenue into the Social Security system, but would also increase obligations in the long run, and is unrelated to the causes of Social Security cost growth. The system does not suffer in any total sense from the lack of coverage of state and local workers."^[47]
3. Alter the means by which benefit "bend points" and CPI calculation adjustments are made. That is a technical difference in the authors' approaches to the same problem (i.e., the rapid rise in benefits beyond actual inflation). Both proposals address the same problem and attempt to reduce promised benefits, but they choose different technical means of solving it.
5. Allow workers to choose to reduce their OASDI taxes by 1.5 percent and instead make mandatory contributions to their own personal retirement accounts. The decision to do so would be irrevocable and would also involve accepting lower Social Security benefits during retirement.

The Simpson-McMillan-Goss plan, similar to the Kerrey-Danforth plan, repeats the same conceptual error of confusing solutions to the current unfunded liability problem with long-term rectification of the system's flaws. Nevertheless, it is superior to the Kerrey-Danforth proposal in several respects. First, it (like the Porter plan) allows decentralized, individual decisionmaking to set the standard for opting out of the Social Security system and accepting a consequent reduction in benefits. Second, it goes beyond Porter's approach by retaining the Kerrey-Danforth reductions in systemwide benefits necessary to solve the unfunded liability problems of the system. And third, it avoids the higher taxes and further economic dislocation that would result from extending the current disastrous system to state and local employees.

The Kerrey-Simpson Legislation

Drawing on their previous proposals, Senators Kerrey and Simpson have introduced a three-bill legislative package of Social Security reforms that would accomplish the following.

1. Accelerate the currently scheduled increase in the age of eligibility for full Social Security benefits from 65 to 67 and further increase the age of eligibility to 70 by 2030. Increase the early retirement age from 62 to 65.^[48]
3. Limit COLAs for all Social Security beneficiaries to the CPI minus 0.5 percentage points. Further limit COLAs for all beneficiaries to no more than the adjustment for beneficiaries in the 30th percentile.^[49]
5. Reduce the Social Security spousal benefit from a maximum of 50 percent of the Primary Insurance Amount to a maximum of 33 percent of the PIA.^[50]
7. Allow up to 25 percent of the funds in the OASDI Trust Fund to be invested in commercial stocks and bonds.^[51]
9. Allow workers to invest 2 percentage points of their OASDI payroll taxes in their own personal investment plan (PIP). Employees would be permitted to choose one of two investment categories for their PIPs. The first option would allow employees to invest their PIP contribution in a low-, medium-, or high-risk investment fund, modeled after the Thrift Savings Plan for Federal Employees. The second option would be modeled after

individual retirement accounts, allowing employees to invest their PIP contributions in stocks, bonds, and mutual funds. The benefit formula for those who opted for the PIP would be actuarially reduced to offset the long-term cost of the payroll tax reduction.^[52]

The Kerrey-Simpson legislation combines several elements of the Kerrey-Danforth and Simpson-McMillan-Goss plans, tinkering with benefit eligibilities (effectively a limited default coupled with a tax increase, as system participants defer benefits and pay into the system longer), reducing COLA adjustments, and incorporating a change in spousal benefits that Kerrey had included in some earlier announcements of his proposal but had eliminated from his final plan. Kerrey's proposal to include state and local employees in the plan has been abandoned (an improvement), but otherwise these initial elements represent compromises between the original Kerrey and Simpson positions.

The option to allow workers to invest two percentage points of the OASDI payroll taxes in a PIP is, likewise, an elaboration of the concept proposed by Porter, Kerrey-Danforth, and Simpson-McMillan-Goss. It is an improvement in that it allows the individual to choose the option instead of forcing all participants into a single plan.

The big change in the new proposal is to be found in the provision to allow up to 25 percent of the funds in the OASDI Trust Fund to be invested in commercial stocks and bonds, an attempt to bring the benefits of real-asset investment in private markets to the Social Security system. On the surface, it represents a further movement toward a market-based system, allowing not only 2 percentage points of the current payroll taxes to move to private investments, but also to move 25 percent of the current fund balance to private investment as well.

In reality, however, the proposal represents one of the most thoughtless and dangerous ideas yet to come out of the Social Security debate. As discussed earlier, any attempt to allow the federal government to enter private markets with trust fund capital represents the effective socialization of the U.S. economy. Federal bureaucrats would be asked to make risk/return assessments to allocate trillions of dollars of capital in the private markets. Fund investments would inevitably be politicized (witness recent Clinton administration attempts to direct private pension fund investment decisions toward government-blessed "socially responsible" projects), and the government would wind up owning a large portion of America. The inclusion of this provision in the Kerrey-Simpson legislation demonstrates a lack of understanding of the fundamental problems with the government-managed Social Security system, and represents a flaw so large as to destroy the value of the entire legislative package. Senators Kerrey and Simpson have taken four small steps forward and one gigantic leap backwards.

Criticisms and Comments

The Porter plan, in one form or another, has now been on the table for almost five years, with plenty of opportunity for comment and criticism. The Kerrey-Danforth plan and the Simpson-McMillan-Goss plan are newer, but they contain many elements that are similar to the Porter plan and can be expected to attract similar criticisms. The Kerrey-Simpson legislation was introduced in May of this year.

However, all the proposals contain similar concepts, making it worthwhile to address the major criticisms that have emerged and separate those with merit from those that miss the point.

No Change in Net National Savings Is Likely

A frequent criticism of the Porter plan, and one that is likely to be repeated for Kerrey-Danforth, Simpson McMillan-Goss, and Kerrey-Simpson, is that no net change in the national savings rate is likely, that the plan merely represents a change in accounting methods with no real increase in national wealth. For example, the General Accounting Office says, "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 . . . money may end up being loaned back to the Treasury just as if it had been kept in the trust fund."^[53]

The objection that much of the money may be lent back to the Treasury misses the point. As discussed already in regard to the Chilean plan, the difference between public and private savings is less a question of the quantity of savings than of the quality of the investment decisions that result from savings. Private markets will base those decisions, not on a presumed need for government cash flow, but on the best interests of portfolio owners.

The quantity of government borrowing may or may not remain unchanged (given the possibility of Congress's not being willing to incur the political costs of higher reported deficits), but increased wealth for the economic system as a whole can be expected to derive from a combination of higher quality investment decisionmaking systemwide and the portfolio effects associated with asset allocations within individual ISSRA investment funds.^[54]

Private Market Returns Are Unreliable

The argument that private market rates of return are unreliable and may not provide adequate participant protection was summarized by the GAO as follows:

Workers' (private account) rate of return must exceed Social Security age group rate of return in order for them to be better off under the proposal (to allow private retirement account options). Our analysis suggests that average age-group Social Security rates of return . . . range from more than 3 percent for those born in 1930 to about 2 percent for those born after 1960. . . . Whether workers would do better with their (private accounts) . . . is likely to depend on the types of investments the program would allow.^[55]

The GAO analysis is flawed in several respects. The concern over variable rates of return for individual system participants is misplaced. The GAO goes into some detail concerning the high degree of variation in rates of return on a Standard and Poor's 500 portfolio or a corporate bond portfolio during successive 10- and 20-year periods and frets that the rates of return are not consistent. It is true that rates of return on individual portfolios would vary considerably. But that having been said, one is tempted to respond with a cavalier "So what?" The concern is premised on a belief that only a system that provides equal benefits to everyone is equitable. But that is not so. The variation in returns expected for an individual portfolio will be consistent with the risk of the securities within the portfolio, and a full range of risk options is available to participants. All participants do not have to accept all of the risks inherent in the marketplace of financial securities, and those who accept less risk can expect lower but more secure rates of return.^[56]

The second flaw in the GAO's criticism is the GAO's choice of the S&P 500 as its proxy for equity market rates of return; the choice itself suggests a low-risk investment strategy. The S&P 500, consisting primarily of high capitalization, blue-chip stocks, is not a broad market index. Rates of return on broader indices that include midcapitalization stocks and extend further back than 1942 (the base year to which the S&P 500 index is pegged) suggest real rates of return two to three percentage points higher than those indicated by the GAO.^[57]

Finally, the GAO has set a standard against which to judge private market returns that significantly overstates the benefits of Social Security system participation. It may be true that "average age-group rates of return for the system" are 3 percent for those born in the 1930s and 2 percent for those born in the 1960s, but how about the expected rate of return for an American worker born in the 1990s? Numerous studies have calculated that workers entering the system today will receive rates of return at or below 0 percent.^[58]

That should not surprise us. The end-game of any Ponzi scheme looks exactly like the Social Security system today, as new entrants' contributions to the system are used entirely to pay off the expectations of early system entrants. What is more, the GAO's concern over the possible inequity of a private system's rates of return to individuals ignores the widely disparate rates of return participants in the current system are likely to receive. Although there is "equity" in the calculation of benefits (everyone is subject to the same formulas), the rates of return on "investment" in the system will vary greatly depending on life expectancy and marital status, both of which are, in turn, disparate by socioeconomic status.

"Acceptable" Government Securities

Another objection to the Porter plan is that it is heavily weighted in favor of regulation and government oversight of

"acceptable" government securities. That objection to the Porter approach is valid. The Kerrey-Danforth and Simpson-McMillan-Goss plans, as published in the commission's Final Report, do not contain such regulatory restrictions. The Kerrey-Simpson legislation also appears to allow a wide range of investment options.

Reductions in Benefits

Some versions of the Porter plan did not contain reductions in benefits to balance the redirection of system receipts to private accounts. That objection is well-founded, as any approach to developing a truly privatized plan must not worsen the problem of our current unfunded liabilities. William A. Niskanen, chairman of the Cato Institute, stated the problem well when he said to Congress, "The Porter bill . . . would not reduce future Social Security benefits and it is not deficit-neutral. For that reason, it would increase the magnitude of the already huge transfer from future generations to the present generation, an intergenerational Ponzi scheme that cannot be sustained. . . . Privatizing a mature Social Security system is a difficult political challenge, primarily because of the large benefits promised to current and near-term retirees. The problem is similar to that of trying to stop a chain letter without causing any losses to those ahead in the chain."^[59]

The Kerrey-Danforth and Simpson-McMillan-Goss plans and the Kerrey-Simpson bills all address that objection with significant reductions in future benefits linked to the redirection of OASDI tax payments. As already pointed out, however, the Simpson-McMillan-Goss proposal uses a combination of reductions in individual benefit eligibility linked to a personal choice to redirect payments and across-the-board alterations in benefit formulas. Kerrey-Danforth relies entirely on mandated reductions in OASDI payments and one-size-fits-all changes in benefits. Financial economic principles generally suggest that the Simpson-McMillan-Goss and the Kerrey-Simpson approaches would achieve better results.

The Kerrey-Danforth Commission: Some Conclusions

The Bipartisan Commission on Entitlement and Tax Reform has added a significant amount of reason to the larger debate concerning entitlement spending and the specific discussion of Social Security reform. Though it is politically unacceptable to say so, the commission's recommendations for major reductions in future benefits amount to a partial default on Social Security promises. That default represents real reductions in the system's unfunded liabilities and answers the objections of Niskanen and others to some versions of the Porter plan.

In addition, the commission has added a strong voice to calls for partial privatization of the system by either allowing (Simpson-McMillan-Goss) or mandating (Kerrey-Danforth) the redirection of "excess" Social Security taxes to private pension plans. With the introduction of the Kerrey-Simpson package, academic discussion has advanced to the legislative process. That is a step forward.

None of the proposals presented so far, however, is sufficiently bold in addressing the long-term, congenital flaws in the Social Security system identified in the first section of this paper. It is time now to turn to a plan that would do so.

A Bolder Plan

Privatization should be guided by two basic principles. The first principle . . . is that there are certain functions or activities government should undertake, and certain others it should not. The second principle is that in what it does--in other words, those functions and activities it retains--government should be effective and efficient.^[60]

Those who seek a practical political position that retains the principle of maximizing human liberty should advocate the use of the least intrusive public policy mechanism that will ensure that all citizens have a minimum level of financial security in retirement. A good start on identifying the operating principles underpinning a practical privatization plan was provided by David Ranson, a general partner and senior economist at H.C. Wainwright & Co. Economics, in an article written for the Cato Institute in 1985.^[61] Ranson identified four "axioms" on which a privatization plan should be based and drew operational conclusions based on those axioms.

Economic Efficiency

The redesigned program should be actuarially sound and should impose a one-to-one link between future contributions and the actuarial value of benefits earned.^[62] That axiom led Ranson to the conclusions that in all cases any redesign of the system should rely on market solutions and that the system should be entirely removed from the government's tax base in order to avoid the capital allocation inefficiencies created by tax preferences.

Recognition of Sunk Costs

The program would not try to reverse past redistributions of income. That critical axiom applies the lesson learned in Chile and separates the privatization decision from any perceived need for a new system to carry the burden of the current system's failings. That is an important enough concept, and so frequently misunderstood, that a lengthier explanation is in order, and Ranson provides it.

One of our greatest political problems is the fate of the many individuals who already receive (and many of whom depend on) social security benefits. A powerful constituency opposes benefit cuts outright because it fears establishing a precedent for much larger cuts. On the other hand, it is sometimes argued that reforming the system would necessitate reducing future benefits.

This is untrue. Perhaps continuing the system as presently designed would require benefits to be cut. But the design of a new system has nothing to do with the liabilities that (rightly or wrongly) have been accrued in the past. Even though they have yet to be paid, these claims on the present system are a sunk cost. They have now taken their place in the distribution of wealth. Whether to interfere with this distribution of wealth by repudiating some of these liabilities or to finance them somehow is a political decision. Only if we insist on saddling a redesigned system with the liabilities of the past does this apparent dilemma arise.

In a way, this axiom is an application of the old proverb that two wrongs don't make a right. Sunk costs should not be allowed to influence future decisions.^[63]

The idea that sunk costs are irrelevant is identical to that discussed earlier as the financial economic principle of marginal analysis. The decisions we make about a new, redesigned system cannot affect the liabilities we have already incurred. Thus, the manner in which we choose to pay for (or repudiate) those liabilities is irrelevant to our decision about a redesigned system.

Depoliticization

The new system should be immune from short-term political changes. That axiom led Ranson to the conclusions that market prices must dominate in the new system's valuation processes and that the system must be as isolated as possible from the short-term political and fiscal decisions of the government.

Openness

The new system should be utterly simple and understood by the electorate, and nothing should be hidden. That principle implies that the system should be narrow in its focus, stripped of all "noninsurance" elements, and directed purely toward the provision of minimum pensions for the nation's retired population.

In addition, it should be simple in order to avoid general confusion and encourage broad, active public participation in the planning for and management of one's own retirement. One lesson we should learn from Chile is that, with sufficient public exposure and education, even a relatively uneducated and unsophisticated population can understand and accept the system's principles and enthusiastically embrace its operating philosophy.

A second implication is that participants should be kept well informed of their personal financial stake in, and property rights to, the accumulating fund balances of the system. Confidence in the system will be enhanced by individual participants' seeing growing fund balances that are their own to manage and, eventually, disburse.

Outline of a New System

With the mission clear and the foundation principles established, we may now identify certain operating elements of a rational private national pension plan for the United States. I would emphasize, however, that what follows is one of many approaches that can be developed within the confines of the mission and principles discussed. Consistent with Ranson's fourth axiom, the plan will not be a complex one. It is, however, deceptive in its simplicity, as its implementation would mean a radical change in the manner in which a major portion of our national economy is managed.

Establish PRAs

The 11.2 percent payroll tax that is the combined employer-employee contribution to the OASI and Disability Insurance Trust Funds portion of the Social Security program should be redirected toward personal retirement accounts (PRAs) that are chosen by individual employees.

PRAs would operate much like current IRAs. Contributions would be made with pretax dollars, accumulate tax-free, and be subject to tax only upon distribution, thus removing the accounts from the distorting effects of fiscal policy on capital allocation. Government tax receipts would be collected from national personal income or changed to another basis, but the manner of that collection process is an issue unrelated to the operation of an efficient national pension system.

Full property rights to PRA fund balances should accrue to owners, including the right to include fund balances in an estate. Whenever any fund balance is included in an estate, it will be immune from any estate or inheritance taxes if transferred directly into the PRA of the beneficiary.

Immunity from estate and inheritance taxes is an important component of the system, as "perverse incentives" arising from tax effects need to be avoided. The funds will be taxed on distribution, whether to the current owner or to his beneficiary, but allowing the funds to be taxed in an estate is a form of double taxation that encourages irrational spending rather than continued saving as death is anticipated.

Allow Excess Contributions

Voluntary contributions in excess of those mandated would be allowable up to 36.2 percent of total gross income per fiscal year, combining the current 11.2 percent OASDI payroll tax and the 25 percent current limitation on contributions to Keogh, 401k, 403b, and other tax-deferred retirement plans. No artificial limits to contributions based on income level or business ownership status, such as now exist for 401k plans, would be imposed.

Ensure Minimum Retirement Security

PRA fund balances would be of two kinds. All funds up to a calculated minimum requirement would be designated "basic" fund balances. Basic fund balances would be subject to asset allocation restrictions that would limit the risk to which they could be subjected.^[64] Basic fund balance limitations would be calculated by determining 110 percent of the present value of the actuarially determined retirement annuity necessary to provide a real monthly income after retirement equivalent to the current national minimum wage.^[65]

In practice, the private securities industry would inevitably develop a range of products that would provide a market price for the purchase of an annuity, given certain standard underwriting assumptions. Variable annuity products today, for instance, already provide a good market pricing mechanism that can be used to estimate the cost of insuring a portfolio against market downturns for survivors' benefits (with such insurance purchasable for as little as 0.006 percent of fund balances per year).

The result would be the development over time of a basic PRA fund balance that was restricted to low-risk investments but that guaranteed a minimum level of retirement security for all working Americans, fulfilling the basic mission of a privatized national pension plan.

Allow Personal Risk Preferences

Funds accumulated above the basic fund balance would be "discretionary" fund balances. Discretionary PRA balances would not be subject to the asset allocation restrictions on basic balances. Because the basic balance would ensure the accomplishment of the system's mission, no further limitations on personal liberty associated with the disposition of one's private property should be applied to discretionary balances. The full range of risky to risk-free investment alternatives for those balances should be available to system participants.

Choose Retirement Age

Any American worker would be allowed to retire and begin to withdraw retirement benefits from the system when his or her PRA basic fund balance reached a level equal to 110 percent of "full funding," thus assuring the individual of a life income equivalent to the real national minimum wage.

Rollover of IRAs

At the initiation of the system, all American citizens with fund balances in any defined contribution private pension plan, including 401k, 403b, Keogh, and IRA plans, would be eligible to close those accounts and roll over all vested balances to their new PRAs.

Simplify Distribution Options

PRA fund distribution options after retirement would differ for basic and discretionary balances. Basic balances would be available under three options:

1. A 100 percent payout to purchase a minimum-wage life annuity from the private insurance industry. Annuities would be required to include disability and survivors' benefits.
3. Withdrawals as desired with only one constraint: the amount remaining in the account after withdrawal must always be at least 110 percent of the amount necessary to purchase a life annuity guaranteeing a minimum-wage income.
5. A combination of 1 and 2 with the purchase of a partial annuity and voluntary withdrawals up to 110 percent of the amount necessary to purchase the remaining minimum-wage annuity.

PRA discretionary fund distributions would be unlimited after retirement and would be taxed when distributed to the plan participant. Once funds were removed from the PRA their immunity to taxation would end and any further investment income or transfers (such as gifts or inheritances) and would be subject to ordinary personal income tax regulations. In addition, the choice of official "retirement" would be a one-time, lifetime election. Once a person moved into "retired" status, no additional contributions to a PRA discretionary fund would be allowed, even if the participant chose to reenter the workforce. Should basic fund balances ever chance to fall below 110 percent of the actuarially appropriate amount required, however, additional pretax, tax-deferred contributions would be allowed to that account. Transfers from discretionary balances to the basic fund would be automatic to ensure maintenance of minimum required basic fund balances.

Minimize Government Regulation

PRAs would be managed by the same sector of the financial securities industry that today offers IRA and 401k plans to the investing public. In addition, they would be regulated by the government using standard audit techniques similar to those currently employed to audit 401k and IRA plans, with statistical samplings by employer and a range of fund alternatives required by employers. Rollovers from one employer's choice of available investment funds to another's would be automatic with a job shift. No government agency would manage or directly administer any plan, and the

role of the government would be limited to auditing compliance with a minimum set of government regulations consistent with those discussed here.

Transition

Despite Ranson's second axiom, the need for the recognition of sunk costs, it is really beyond the scope of this paper to provide for a smooth transition from the old system to a new, more economically rational one. That is because "The axiom of sunk costs means simply that we should acknowledge the liabilities that have accumulated up to now as a debt of the present, regardless of when they are to be paid off in the future. The accrued cash outflow should be regarded as something we have to deal with. But it is illogical to assume (as many do) that any system we build in the future must be saddled with this burden--perhaps in addition to the burden of being self-financing."^[66]

Nevertheless, some lessons can be learned from Chile's transition to a partially privatized system. "Recognition" of sunk costs means that in some manner our national accounting system must reflect the accrued liabilities we have to those who have, to date, participated in the system. And it is politically naive to think that a Social Security privatization proposal will receive a serious public hearing without at least some attention given to how to get from here to there.

Of course, one option is to operationalize the fact of the Supreme Court's 1960 Fleming v. Nestor decision and simply repudiate all our obligations to past system taxpayers. Such an option, however, would almost certainly be disastrous social policy and is no doubt politically unacceptable as well. Assuming, then, that we as a nation will accept our liability to a portion of our own number, how do we get from here to there?

There are two, nonmutually exclusive approaches to the problem. One has been partially addressed by proposals already discussed, and the other is a derivation from the Chilean plan.

Limited Defaults

The first answer to our current unfunded liability problem lies in recognizing that the choices available to us exist on a continuum between the extremes of defaulting on our intergenerational social contract and paying everyone everything they feel is due them. In practice, the entire process of liquidating our existing moral obligation is a zero-sum game of wealth transfer from taxpayers to system recipients. Since transaction costs are only increased with the number of transfers, it is more efficient to attempt to isolate the net winners and losers and limit transfers to those population segments that are net "winners."

That process can be approximated by "limited defaults" to those elements of our society that are more likely to contain large numbers of net losers. Such proposals include the Kerrey-Danforth plan to means test certain portions of Social Security benefits, as well as suggestions for payout limitations set at minimum-wage or minimum-wage-plus levels, or other formulas that would avoid the transaction costs of wealthy taxpayers' transferring funds to themselves.

My own preference is for a radical reduction in our liability to ourselves. Although I know of no study to support my conclusion, I suspect that the transaction costs associated with transfer payments to ourselves cut quite deeply into marginal wage cohorts, resulting in net system losers well down the economic scale. I would therefore propose that system payouts be limited to (and government bond issues described below made only to) those system participants now over the age of 50 for whom posttransition system accruals accumulate at the point of retirement to a balance less than the purchase price of a minimum wage lifetime annuity.

But any suggestion, however extreme or generous, that limits future benefit payouts is essentially a default and allows the reduction of current and future taxation to pay a portion of our own citizenry benefits we have promised them. Moving retirement ages upward, reducing spousal and survivors' benefits, altering COLA formulas and indexing by measures of inflation rather than wages, changing the definition of CPI calculations, and altering Disability Insurance eligibility and benefits are all variations on the same theme of limited defaults on our implied intergenerational contract. Political rhetoric will necessarily couch the reality in phrasing more acceptable to the voters' ears, but the reality of default remains.

Bonds

The second "solution" to the problem of unfunded liabilities is one that provides for the recognition of the present value of those liabilities in the form of government bonds to be issued to current system participants and taxpayers. Once we have decided on the extent of the limited defaults the system will tolerate, it is not a difficult calculation to determine the moral (if not legal) stake each working American currently has in the implied promise of the current Social Security system. The system currently calculates a PIA based on a review of the taxpayer's average monthly earnings from employment covered by the program. "The [PIA] is the benefit for a single retired worker who starts receiving his monthly Social Security check at the normal retirement age."^[67] Normal retirement age is now 65, but it will rise to 66 in 2008 and to 67 in 2027 (and could rise further with further system defaults). Benefit computations are based on earnings during the 35 years of highest covered earnings up to age 62 (or the worker's age when he applies for benefits, whichever is later), and the wages in each year of the earnings record before age 60 are multiplied by an index factor to take into account the growth in national average earnings since that year. The result is the individual's Average Indexed Monthly Earnings, which is then multiplied by percentages that are weighted to favor low-income earners to finally determine the Social Security benefit.

Average Indexed Monthly Earnings can be used to calculate for each American worker today his expected retirement benefit given tax "contributions" to the system to date. Current retirees' benefits are, of course, already determined. The present value of the actuarially calculated annuity due each system participant may then be easily calculated by discounting at the T-Bond rate, and each system participant can be issued zero-coupon T-Bonds maturing at his or her projected retirement date. The bonds would be placed in each individual's PRA.

It is important that those zero-coupon Treasury securities then be allowed, in turn, to trade on the secondary market. Within the limitations already described for basic fund balances, both current retirees and prospective retirees should immediately begin to personally manage their PRAs according to their own risk preferences, thus increasing the diversification benefits of individual PRA portfolios and maximizing personal liberty.

The proposal to issue government bonds that allow individual system participants to begin management of their portfolios is an important alternative to the new Kerrey-Simpson legislative package's provision for having 25 percent of the current Trust Fund balance invested in private securities. There are two basic flaws with the Kerrey-Simpson proposal: First, that it leaves the management of the huge trust fund capital account in the hands of the government. Second, it provides no property right to the fund balances to individual program participants. The first flaw is the most serious, as it hands a gigantic proportion of our national economy over to central-planning government bureaucrats and allows government entry into private capital markets, essentially socializing our economy. The second flaw destroys the opportunity for individuals to express their own risk preferences, and for the benefits of disbursed, self-interested decision-making to maximize market pricing efficiencies.

The bonos alternative, however, is available to Kerrey-Simpson. If they want to place 25 percent of the fund balance in private securities, simply issue 25 percent of the fund balance to system participants in the form of government T-bonds as described above. Allow individuals to place those T-bonds in their portfolios (PIPs), and to trade them for alternative private securities. With this one change, the Kerrey-Simpson proposal can take us 25 percent of the way to full privatization!

Transition to the new system, then, should further maximize personal choice by providing each system participant with a choice of two options:

1. Remain with the old Social Security plan, including the old tax schedule and old benefits schedule (altered to reflect any partial system defaults). COLA adjustments should be changed to more accurately reflect actual system inflation, but for those who choose this option, the 11.2 percent OASDI payment should simply be forwarded to the government as a tax payment. The income should be credited to the general fund, as it is out of that fund that all future system liabilities should be paid.
3. Accept an immediate payout of government zero-coupon T-Bonds, in an amount and with a maturity date

calculated as determined above. Those T-Bonds would be placed in the individual's PRA, accruing first to the basic fund accumulation and above that amount to the discretionary fund accumulation.

The results would be the immediate elimination of the accounting trick known as the Social Security "trust funds"; the capitalization on the government's balance sheet of liabilities in the form of long-term government bonds, thus recognizing real future outlays the system must make; the ability of each system participant to make decisions maximizing personal benefit; and the elimination of the "hidden deficit" associated with the portion of general fund expenditures being masked by Social Security receipts.

Conclusion

It is time to recognize that Social Security violates the fundamental principles of financial economics. It is not a government pension program offering retirees reasonable benefits in return for their taxes. Rather, it is an unfunded pay-as-you-go system, fundamentally flawed in concept and analogous in design to illegal pyramid schemes.

Government accounting creates the illusion of a trust fund, but excess receipts are, in fact, spent immediately. The liabilities already created, unrecognized by the government accounting system, represent sunk costs that cannot be recovered. Only adjustments in spending patterns can pay for those commitments. The choice now is between continuing to support a bankrupt system and building a financially sound structure for the future.

Short-term fixes to increase revenue or reduce benefits will be unsuccessful in the long run. The system design itself is fatally flawed and cannot be repaired. It must instead be replaced by one derived from free markets and operated by a free citizenry making individual economic decisions in their own self-interest.

Reform is long overdue. If we fail to act soon, our children will either inherit a bankrupt system or be forced to pay an impossibly high level of taxes. Politicians have long understood the coming catastrophe, but they have been unwilling to confront the hard choices necessary to meet it. The question now is whether they will have the courage to act, or whether our children will be the next victims of a failed and unsustainable system.

Notes

1. "Generation X Believes UFOs but Laughs at Social Security," Washington Times, September 27, 1994.
3. 1995 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Trust Funds (Washington: Government Printing Office, April 11, 1994).
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5. Ibid., Table III.A.2.
7. David W. Wise, "Six Initiatives to Promote Private Saving," Challenge, November-December 1992, p. 23.
9. An argument could be made that the government also "invests" by building infrastructure, but that argument in turn assumes that government investments will in the aggregate outperform investments resulting from private market capital distribution. There is no evidence to support that assumption.
11. For a discussion of the problems with allowing the government to invest Social Security funds in the economy, see Jule R. Herbert Jr., "The Impossibility of Full Funding," Cato Policy Report 5, no. 8 (August 1983), pp. 7-8.

13. Malcolm S. Forbes Jr., "How to Make a Good Economy Even Better," *Forbes*, March 5, 1990, p. 27.
15. Private Letter no. B-257207 from the GAO to Rep. John E. Porter, August 12, 1994, p. 2.
17. Robert J. Myers, "Chile's Social Security Reform after 10 Years," *Benefits Quarterly* (Third Quarter 1992): 44.
19. See Eric R. Kingson and John B. Williamson, "Generational Equity or Privatization of Social Security?" *Society*, September-October, 1991, p. 38, for an example of the power of the generational equity argument. The authors proceed from the premise that income redistribution is desirable and that "fairness" is defined in terms of equality rather than property rights, but they clearly perceive the contradiction in their own principles caused by income redistribution plans that take from an increasingly hard-pressed, younger middle class and give to an increasingly wealthy older population. Clinging to their inconsistencies to the end, they fear the argument has appeal for those who would reduce "the social welfare function of government."
21. Marco Santamaria, "Privatizing Social Security: The Chilean Case," *Columbia Journal of World Business* (Spring 1992): 39.
23. Many people did not switch simply because they could not meet the minimum contribution level requirement of the new system before planned retirement. Myers, p. 54.
25. The 18 percent includes the costs of other system benefits such as disability and survivor benefits (3 percent) and health insurance (4 percent). Santamaria, p. 41.
27. There are 21 AFPs as of this writing. AFPs may be created by the private sector at any time with government approval and their numbers are proliferating.
29. Saul Hansell, "The New Wave in Old Age Pensions," *Institutional Investor*, November 1992, p. 81.
31. Rita Koselka, "A Better Way to Do It," *Forbes*, October 28, 1991, p. 158.
33. *Ibid.*, p. 160.
35. Myers, p. 49.
37. Santamaria, p. 41.
39. Not detailed are some other adjustments in social insurance payroll taxes that were differential depending on worker classification and resulted in a slightly higher than average decrease in the cost of blue-collar labor.

41. Robert Genetski, "Privatize Social Security," *Wall Street Journal*, May 21, 1993, p. 10.
43. Santamaria, p. 45.
45. *Ibid.*, p. 47.
47. Genetski, p. 10; and Myers, p. 51.
49. Hansell, p. 80.
51. Robert Myers draws a similar conclusion and projects long-term growth for the Chilean portfolio at 2 to 3 percent real. Myers, p. 52.
53. *Ibid.*, p. 47.
55. Santamaria, p. 46.
57. Hansell, p. 81.
59. Fund directors have expressed the opinion that returns would be better if more capital could be put into the stock market, and the Chilean government is expected to soon allow investing in a limited number of securities outside the Chilean economy.
61. Steve Hanke, "Is Chile on the Italian Menu?" *International Economy*, July-August, 1992, p. 79.
63. Alexander Estrin, "Peru's Privatization Option for Pension and Health Systems," *Social Security Bulletin* 55, no. 3 (Fall 1992): 79; G. Ricardo Campbell, "Argentina Approves a Privatization Model for Social Security," *Social Security Bulletin* 56, no. 4 (Winter 1993): 99-100; G. Ricardo Campbell, "Columbia Moves Closer to the Privatization of Social Security," *Social Security Bulletin* 56, no. 2 (Summer 1993): 52; and G. Ricardo Campbell, "Italy Creates Private Pension Funds," *Social Security Bulletin* 56, no. 2 (Summer 1993): 92.
65. Hansell, p. 83.
67. Quoted in Koselka, p. 160.
69. Peter Ferrara, ed., *Social Security: Prospects for Real Reform* (Washington: Cato Institute, 1985).
71. Genetski, p. A10; and Bipartisan Commission on Entitlement and Tax Reform, *Final Report: Bipartisan Commission on Entitlement and Tax Reform* (Washington: Government Printing Office, January 1995), p. 3.

73. George Church and Richard Lacayo, "The Case for Killing Social Security," Time, March 20, 1995.
75. John Porter, "Testimony before the Ways and Means Subcommittee on Social Security," October 4, 1994, pp. 2-3.
77. Ibid.
79. Ibid., p. 2.
81. Bipartisan Committee on Entitlement and Tax Reform, pp. 23-28.
83. Ibid., pp. 7-43.
85. Ibid, p. 23.
87. The order has been altered for this paper to reflect the author's analysis.
89. William Shipman, "Retiring with Dignity: Social Security vs. Private Markets," Cato Institute Social Security Paper No. 2, August 14, 1995. Emphasis added.
91. Bipartisan Commission on Entitlement and Tax Reform, p. 221.
93. Ibid., p. 38.
95. Social Security Eligibility Age Adjustment Act of 1995.
97. Strengthening Social Security Act of 1995.
99. Ibid.
101. Ibid.
103. Personal Investment Plan Act of 1995.
105. General Accounting Office, "Social Security: An Analysis of a Proposal to Privatize Trust Fund Reserves," GAO-HRD-91-22, December 12, 1990, p. 6.

107. In other words, individual ISSRA portfolios can be expected to perform beyond the efficient frontier when assets are allocated using modern portfolio management techniques, mixing risky equity securities with risk-free government securities. Even if Congress were to not respond to the increased political pressure of higher operating deficits being reported, the ability to reconstruct individual ISSRA portfolios and diffuse the total purchase of government securities throughout the economy should create stronger individual portfolios with higher systemwide rates of return.
109. General Accounting Office, p. 7.
111. The GAO's analysis of bond returns, for instance, presumes the full range of risks inherent in the bond market. Nonsystematic risk, however, can be diversified away, and systematic interest rate reinvestment risk and interest rate price risk can be offset with a properly constructed portfolio matching calculated duration with the participant's investment horizon, producing stable yields. Individuals should be free to choose portfolios with varying levels of risk and consequently different levels of expected returns.
113. For a detailed discussion of market versus Social Security rates of return, see Shipman.
115. Ibid.
117. William A. Niskanen, "A Flawed Plan to Privatize Social Security," Testimony to the Subcommittee on Social Security, House Ways and Means Committee, October 4, 1994, p. 3.
119. James C. Miller III, "Privatization: Challenge and Opportunity," Phi Kappa Psi Journal, Spring 1990.
121. David Ranson, "Criteria for Reforming Social Security," in *Social Security: Prospects for Real Reform*, pp. 139-55.
123. Ibid., p. 146.
125. Ibid., p. 143.
127. Although many such formulas to restrict such risk are possible, I propose the following: 100 percent of basic fund balances could be invested in a diversified portfolio of corporate and government bonds with a portfolio duration matched to a planned retirement age. No bond rating requirements would apply, but diversification would have to be adequate to eliminate 95 percent of nonsystematic risk from the portfolio. No more than 25 percent of the fund could be invested in government securities, "agency" issues, or government-guaranteed debt. Up to 50 percent of the portfolio could be invested in diversified funds of equity securities. Equity securities would be limited to those traded on the New York, American, or NASDAQ exchanges, and portfolios would have to be sufficiently diversified to eliminate 95 percent of nonsystematic risk. Although investment in broad-based index funds would be permitted, no trading in derivative securities would be allowed other than those necessary for hedging strategies associated with reducing cash demand risks and smoothing variances from index returns. Systematic risk for eligible portfolios would be limited to a portfolio maximum beta of 1.05.

129. The future annuity cash flow could be discounted using the current one-year T-Bill rate, providing an expected real rate of return without long-term inflationary expectations.
131. Ranson, p. 147.
133. Pamela M. Terrell, "Social Security: The Search for Fairness," Editorial Research Reports by the Congressional Quarterly, April 5, 1991, p. 193.