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Administrative Costs and Equilibrium Charges with Individual Accounts

Peter Diamond

Individual account proposals come with a vast variety of different structures and details. There are many different ways in which a discussion of individual accounts might be organized. For analytic discussion of administrative charges, a central distinction is between *government-organized accounts* and *privately organized accounts*. The term *government-organized accounts* will be used to denote individual account systems in which the government arranges for both the record keeping for the accounts and the investment management for the funds in the accounts—whether these functions are performed by government agencies or by private firms under contract to the government. An example of government-organized accounts is the federal Thrift Savings Plan (TSP), a pension plan that contracts with a government agency to perform record keeping and with a private firm to do fund management. The term *privately organized accounts* will be used to denote individual account systems in which individuals directly select private firms to do the record keeping and investment management. An example is IRAs, where individuals select their own private financial institution.

With government-organized accounts, two questions are how much it costs to run the system and how the government allocates those costs

among the different accounts (and possibly to outside sources of revenue). There are also costs that may fall on employers and workers. With privately organized accounts, we must ask about equilibrium prices and their relation to selling costs as well as the costs of record keeping and investment management. Again, there are also costs that may fall on employers, workers, and the government. Since the government may be purchasing services from private providers, another way to see this distinction is that government-organized accounts are organized on a group basis while privately organized accounts are organized on an individual basis. As with financial and insurance products generally, the group and individual markets function very differently and yield different pricing structures.[1]

A central element in thinking about costs is the quality of services offered with the accounts. With government-organized accounts, the central question for this element is what Congress might legislate and, underlying that, what services are likely to be requested by constituents. With privately organized accounts, Congress will legislate a minimum standard of quality of services, but the market is likely to offer an array of services, extending above the minimum. In turn, this equilibrium is likely to be influenced by the details of the regulations that are placed on these accounts for these accounts are likely to be subject to a new set of regulations, possibly administered by a new regulatory body or possibly handled by one or more existing bodies, such as the SEC. These regulations will affect the costs of providing services and may include regulation directly of charges, either in level or in form.

There are many steps in organizing and running individual accounts. The costs of different steps might be paid by different sources: workers, employers, charges against the accounts, the rest of social security, the non–social security portion of the federal budget. In comparing different cost estimates, it is important to be clear about which tasks, and their costs, are included in a given estimate and which are assumed to be borne elsewhere. To help with such comparisons, the National Academy of Social Insurance (NASI) Panel on Privatization of Social Security prepared a list of many of the tasks associated with having accounts. That list is reproduced here as appendix A.

The paper proceeds by first describing how a low-cost/low-services government-organized plan might look, how it differs from the TSP, and what it might cost. For this purpose, I rely heavily on NASI (1998). My estimate of the cost of such a system is in the range of roughly $40–$50 per worker per year. I suspect that there would be pressure for more services, which would raise costs. After this discussion, the paper turns to

1. The paper does not consider the use of employers to organize groups for some workers, as would follow with a mandate on employers rather than on workers. The Australian system is a mandate on employers (see, e.g., Edey and Simon 1998).

privately organized accounts and the nature of equilibrium. My conclusion is that, for the small accounts that are the current focus of political discussion (financed from 2–3 percent of payroll), the costs of private organization would be very high compared to the cost of government organization, given the perceived advantages of such a system.

4.1   Government-Organized Accounts

The creation of mandatory government-organized individual accounts would involve setting up nearly 150 million individual accounts, with a system to produce a flow of deposits into the accounts and a mechanism for investing, reporting, and changing portfolio choices.[2] To put the scope of a possible new system in perspective, the TSP maintains fewer than 3 million individual accounts, the largest number of existing individual accounts handled by a single firm has under 6 million accounts, and there are fewer than 10 million IRAs with multiple investment options. No existing system could handle the administrative complexities of a program with this scope of individual accounts; creating one would take time and resources.

In addition to needing a structure for accumulation in individual accounts, a structure is needed for the provision of retirement-income flows. This issue is considered below after the structure and cost of the accumulation phase are considered.

Since the present structure of social security would be preserved for the remaining defined-benefit retirement system as well as disability insurance and survivors insurance for young families, any introduction of individual accounts would add to the costs of social security. Currently, social security costs about $16 per person (workers and beneficiaries) per year. Excluding the costs of the disability program, OASI costs about $10 per person per year. A cost of $10 per participant is a cost of $14.50 per worker.[3]

4.1.1   Measuring Costs

Setting up and administering a system of individual accounts involves a variety of types of costs. Some would be one-time costs to set up the system, independent of the size of the system. Other setup costs would depend on the number of participants. In terms of ongoing costs, most are

2. One can have a defined-contribution system without any individual portfolio choice. While such a construct is useful for analytic purposes (see, e.g., Diamond 1998), this is not on the agenda of proposals being taken seriously currently.

Much of the presentation in this section is drawn verbatim from NASI (1998).

3. The estimates for costs are based on the 1997 administrative cost of $3.4 billion for the total program divided by 198.7 million participants (145 million workers and 43.7 million beneficiaries). The cost for only the retirement and survivors part of social security is based on an administrative cost of $2.1 billion and 182.6 million participants (145 million workers and 37.6 million beneficiaries) (Board of Trustees 1998, 97, 105; SSA 1997, 167, 183).

fixed costs per account, while some depend on the size of the account. Since the bulk of ongoing costs would likely be fixed costs per account, estimating costs is approached in those terms (e.g., x dollars per account per year). That is, the cost of managing the aggregate portfolio is small relative to the costs of record keeping, including communication with account owners. With the TSP, investment-management fees are roughly one-tenth of total costs borne by the TSP (with the costs borne by federal agencies also fixed costs per account). Dividing an annual dollar cost by annual deposits converts this to a percentage front load.

It is also useful to express these costs in other ways. One familiar method of stating costs is as an annual management fee in percentage terms (e.g., y percent of the accumulated balance in the account per year). Once the size of the accounts has been estimated, a dollar cost per year and a percentage of balances per year can be related by calculations that equate the present discounted value of costs over the career of a worker. If charges are imposed to cover the costs under these two methods, the charges will be equal on a lifetime basis but will likely differ in any given year or stage of life. With balances that grow relative to wages, a constant percentage of balances is a smaller charge in early years and a larger charge in later years. A third way in which to report on the costs is in terms of the percentage decrease in the accumulation in an account at retirement age as a consequence of the administrative charges, called the *charge ratio*. The relation among percentage front load, annual management fee, and charge ratio, based on continuous-time calculations, are presented in appendix B, which is reproduced from Diamond (1998). Some examples are shown in table 4.1.

The costs of organizing the accounts depend on the level of services provided with the accounts. Examples of variation in the level of services include variations in the frequency of deposits of withheld funds into the accounts, the number of alternative investment options available, the fre-

Table 4.1   Decline in Value of Accounts due to Fees after a 40-Year Work Career

Type and Level of Fees	% Decline in Account Value due to Fees	Type and Level of Fees	% Decline in Account Value due to Fees
Front-load fees (% of new contributions) of:		Annual management fees (% of account balance) of:	
1%	1	0.1%	2.2
10%	10	0.5%	10.5
20%	20	1.0%	19.6

Note: I assume real wage growth of 2.1 percent and a real annual return on investments of 4 percent. With a larger difference between the rate of return and the wage growth rate, the charge ratio with annual management fees is slightly larger, and conversely.

quency of interfund transfers that is allowed, the frequency of reporting on balances, the availability of information (e.g., an 800 number), the ease of communication (e.g., the presence of people who can speak different languages), and the amount of education made available to workers.

I begin by considering government-organized accounts that have relatively low costs and provide a relatively low level of services. The following description is taken from NASI (1998), with a few modifications. In particular, using round numbers and reflecting diverse opinions, the panel described a range of costs as being $25–$50. I use a range of $40–$50 because I consider this range more plausibly centered.

4.1.2   An Illustrative Low-Cost/Low-Services Plan

Transmission of Funds

At present, employers pay social security taxes to the Treasury shortly after each pay period, with a frequency depending on the size of the employer. However, these payments are not individually identified to the Treasury; that is, the Treasury knows the employer but not the individual employee associated with any tax payment. Once a year, employers file W-2 forms that show the annual taxable earnings of individual workers, which are needed for the eventual determination of benefits. Until 1978, firms reported on individual earnings quarterly, but that frequency was reduced to hold down costs, particularly for employers with few workers.[4] At present, of the 6.5 million employers that report to the Social Security Administration (SSA) each year, 5.4 million file their W-2 reports on paper; these include more than 4 million employers with ten or fewer employees.

While shifting to more frequent reporting might not be costly for employers with electronic record keeping, doing so would represent a significant cost for small businesses. Therefore, in the low-cost/low-services version of individual accounts, it is assumed that these taxpaying and reporting practices of private firms would not change. With this structure, the Treasury could place the portion of aggregate payroll-tax revenues that was allocated for individual accounts in a separate trust fund, which would earn interest. Such a fund could hold Treasury debt, but it might be better to hold the estimated average portfolio, based on existing allocations and previous earnings. This would permit an allocation to individual accounts that reflected individual portfolio choices (which would have been made before the year began). Moreover, the allocation to individual accounts might go more smoothly in the capital market if assets were allocated to the accounts rather than funds to buy assets. Without a direct

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4. Olsen and Salisbury (1998, 15) cite a 1972 estimate of the cost savings to small employers from dropping quarterly reporting that, "adjusted to 1997 dollars, . . . would amount to about $900 million a year."

adjustment, there would be some difference between the total investment returns of the separate trust fund and the amounts to be credited to individual accounts. This difference could be averaged over time, or allocations could be adjusted each year, but something would need to be done. However, the allocation could not recognize the actual timing of payments by different workers; all workers would be treated as if the timing of their withheld tax payments were the same as the timing of aggregate withholdings.

Once a year, the Treasury would allocate the accumulated separate trust fund to individual accounts. To process almost all the accounts without greater cost than at present would probably require seven to nine months after the end of the year in which the taxes had been collected.[5] More time would be required for those cases in which there was a mismatch between the reported W-2 information and social security records as well as for the self-employed, who can file as late as 15 April (and later if they file for an extension). In a system this large, even a small percentage of errors adds up to a large number of errors. Currently, roughly 3 percent of W-2 forms (6 million cases) require direct contact with employer or employee to match the W-2 and social security records. With the additional element of portfolio allocation, more errors would have to be resolved.

Portfolio Choice

Under this structure, individuals would inform social security about the division of their deposits among the available portfolios. Workers might do this directly or through their employers, but, in either case, it would have to be done before the start of the calendar year, with the allocation unchanged from the previous year unless the worker requested otherwise. Presumably, a chosen allocation would be unchanged until a worker selected a different one. Thus, a worker changing employers would not need to report a portfolio choice to social security; only newly covered workers and workers wanting to change their allocations would need to report. Since many new and changed allocations would be reported on paper if done by a firm or on paper or by phone if done by workers, there are likely to be errors and a need for both an error-correction mechanism and a record-keeping function to provide evidence for sorting out errors.[6] Some individuals, particularly newly covered workers, would not have selected an allocation, and there would have to be a default portfolio for these workers. This could be legislated to be similar to the current portfolio of the Social Security Trust Fund, or the average portfolio in individual

5. Mitchell (1998, 417) reports, "Only 70 percent of earnings were posted within six months of the tax-year end in 1991."
6. As an example of the difficulties present in error correction, Olsen and Salisbury (1998, 25) cite unpublished SSA data (1998) that "approximately 10 percent of employers reporting wages to SSA go out of business each year."

accounts, or a prudently selected portfolio. In addition to directing the flow of new deposits among different index funds, workers would be allowed to shift existing account balances on a limited basis, such as once a year. Again, if this were allowed, a record-keeping mechanism would be needed to deal with possible mistakes or claims of mistakes. Similarly, information on the level of their accounts would be provided directly to workers only once a year. Workers could infer the value of their accounts by knowing the number of units held in each account and checking the values of those units, which would likely be presented regularly in the media.

To keep costs low, worker education about portfolio choices would be limited to providing pamphlets on investment strategy. It should be noted, however, that experience with worker education in 401(k) plans shows that considerably more substantial (and expensive) worker education is needed to have a noticeable effect on workers' investment choices (Bayer, Bernheim, and Scholz 1996). Moreover, the covered population includes many people who have not considered investment choices, making this low level of education an important issue. As reported by Arthur Levitt (1998), SEC research indicates that half the public do not know the difference between a stock and a bond. In addition to this minimal outreach providing education, the SSA would need to respond to questions asked by covered workers. Presumably, this would be a major source of cost, particularly reflecting the education and language difficulties of part of the population.

Handling and managing the aggregate funds would probably require only a small management fee. Currently, the TSP is charged roughly one basis point by the fund managers handling the bond and stock funds.

Benefits

The cost of paying retirement benefits from individual accounts must also be considered. Assuming that annuitization is mandated, the least-cost approach would be automatic annuitization of these funds according to rules set by legislation, with the payments added to the payment of whatever defined benefits were maintained. Information would be provided to beneficiaries on the source of each payment.

4.1.3 Cost

A starting place for estimating the additional costs to social security for adding such a low-cost/low-services individual account plan is the portion of the costs of the TSP that fall on the TSP (i.e., excluding the costs that fall on federal agencies that educate workers, answer questions, and report earnings records to the TSP and excluding the administrative costs coming from the payment of annuities [which are paid by retirees and reflected in the price of privately supplied annuities]). The TSP cost is currently

roughly $20 per worker per year, although the costs were lower when fewer services were provided.[7] With 140 million accounts, a cost of $20 per worker would be an aggregate cost of $2.8 billion per year. The start-up costs of the TSP in 1987 were $5.25 million; if the start-up costs were the same per participant, the 1998 cost would be $1.08 billion (Olsen and Salisbury 1998).

There are a number of issues involved in comparing TSP costs with the incremental costs of the low-cost/low-services system just described. On the one hand, the TSP provides better services (in terms of frequency of reporting, frequency of portfolio change, and frequency of deposit), must deal with loans against workers' accounts, and has fewer economies of scale. In addition, social security would have some economies of scope. For example, a single annual statement can contain information on both parts of the system. These factors tend to lower the costs of social security individual accounts relative to TSP costs. On the other hand, there are factors that tend to raise the cost of social security individual accounts relative to TSP costs. First, many costs of the TSP system are borne by federal agencies as employers. They handle the education of participants (providing more education than described in the low-cost plan), respond to their questions, enroll them in the plan, transmit their portfolio choices electronically, and make employees whole when reporting errors cause them to lose investment returns on their contributions. If employers do not fill the roles that they fill with the TSP, these costs will likely fall on social security. Many of the 140 million workers have more limited education and less proficiency in English than is typical of federal employees, and direct contact would be needed to handle the tasks outlined above. For example, the cost of providing account information over the Internet is 1 percent of the cost of providing the information by an operator responding to an 800 number and 4 percent of the cost of providing it by an automated 800 number (Joel Dickson, personal communication, 1998). The social security population would make less use of the Internet, on average, than the 401(k) population. Second, social security covers many small employers that report social security records on paper rather than electronically, which would add to the cost and risk of errors in record keeping. While error correction for earnings needs to be done for the continuing defined-benefit system, adjusting individual accounts for the same errors would be an additional cost. Also, correction of errors in reported portfolio choice would have additional costs. Third, social security covers part-time, intermittent, and highly mobile workers, many of whom have multiple employers, whereas federal employees have low labor mobility.

7. The estimate for the TSP is based on its 1997 balance sheet and includes administrative costs of $44.1 million, investment-management fees of $2.3 million, and fiduciary insurance of $0.2 million, divided by 2.3 million participants (Arthur Anderson 1998).

Table 4.2   **Percentage of Workers with Social Security Earnings below Specified Levels (wage and salary workers, 1996)**

Annual Taxable Earnings of Less Than:	No. of Workers	% of Workers
$5,000	29,554	22
$10,000	46,438	35
$15,000	61,816	46
$20,000	76,178	58
$25,000	88,900	67
$30,000	99,458	73
$40,000	114,629	85
$50,000	123,641	91
$60,000	128,591	95
$63,000	129,578	96
$63,001	136,689	100

Source: Office of the Actuary, SSA.

Fourth, there are likely to be mandatory adjustments on divorce and account sharing between spouses. Finally, there will be costs of providing benefits, whether annuitized or paid out regularly, that are not part of TSP costs. A range of $40–$50 per worker per year seems to me a reasonable rough order of magnitude for a low-cost/low-services plan. A bit lower or somewhat higher cannot be ruled out. I note that this is a considerably higher cost than the 10.5 basis points for accounts financed by 1.6 percent of payroll assumed by the Advisory Council on Social Security (1997).

While the bulk of the costs would be fixed per account, their effect on the accumulation in individual accounts would depend on how charges for these costs were allocated across accounts of different sizes. The charges could be proportional to deposits or to account sizes, implying that all workers with the same portfolio choice would receive the same rate of return. Alternatively, the charges could include a fixed component reflecting the underlying structure of the costs, implying that workers with higher accumulations would have better rates of return net of charges. The importance of this choice depends on the dispersion in earnings for the covered population. In 1996, 22 percent of workers covered by social security earned less than $5,000, while 58 percent earned below $20,000 (table 4.2). Presumably, government-organized accounts would follow the approach of uniform percentage charges.

How would these added costs affect the retirement income of covered workers? The relative significance of a cost range of $40–$50 per worker per year would depend on the proportion of workers' earnings being deposited in the accounts and the size of their earnings. In 1997, mean social security taxable earnings were approximately $23,000. If 2 percent of workers' earnings went to individual accounts, the mean deposit would be

$460. A $40–$50 cost charged to the account would be equal to 9–11 percent of the new contribution (equivalent to a "front-load" charge) for the mean earner. Presumably, the cost would rise roughly in step with average wages, keeping the front load roughly constant in percentage terms. These calculations would be the same for workers at any earnings level if charges were the same percentage for all workers. If charges reflected some of the fixed costs of accounts, the load would be larger for low earners and smaller for high earners. The calculation for accounts financed from larger or smaller percentages of payroll would be proportional.

Another way to describe these charges is to ask what charge as a fraction of assets under management would cover these costs on a lifetime basis, assuming that the cost grew with average wages. Using table 4.1 above, with 2 percent accounts an annual $40–$50 change would be roughly equivalent to a forty- to fifty-basis-point charge on assets under management over a forty-year career.

Note that the distribution of earnings of workers covered by social security is very different from that of earnings of current 401(k) participants. In contrast to table 4.2, of workers participating in 401(k) plans in 1993, only about 20 percent earned less than $20,000 (EBRI 1994).

4.1.4   Level of Services

Costs would be raised by the provision of additional services, such as more frequent reporting on accounts, more frequent deposits into accounts, more frequently allowed reallocations of existing portfolios, more readily available information on account balance, more resources devoted to answering questions, or more worker education. Thus, a critical question is what level of services would be a political equilibrium. A low-cost/low-services plan would provide far fewer services than a typical 401(k) account, with which much of the public is familiar. That might be one source of pressure for more services. In addition, unless voters make a good connection between services and costs, there might be pressure for more services that Congress might be inclined to satisfy since it does not have to legislate a tax increase to finance the higher services, the higher cost just coming out of the individual accounts without explicit pricing by Congress. Thus, a steady rise in services and costs might well be the political equilibrium, as it has been with the TSP.

4.1.5   Payment of Benefits

The cost of paying retirement benefits from individual accounts also depends on legislative decisions. Assuming that annuitization is mandated, the least-cost approach would be automatic annuitization of these funds according to rules set by legislation, with the payments added to the payment of whatever defined benefits were maintained. Information would be provided to beneficiaries on the source of each payment. Such a system

would add little to the total costs of social security. However, this method for providing services might not be the political equilibrium. An important issue with mandated annuitization of accounts that are individually owned and managed is the political stability of such a proposal as the public's view of social security shifts. For example, would an individual with limited life expectancy or extraordinary immediate needs be forced to annuitize? Indeed, proposals for individual accounts sometimes propose alternatives, including some degree of choice as to how benefits are received. Another reason why this might not be the political equilibrium is that it would involve social security's directly holding the assets that back the annuity promise. Some of the reasons that some people favor individual accounts have them favoring private market provision of annuities, unless the backing is fully in indexed Treasury debt. First, I consider private market–provided annuities for government-organized accounts with mandated annuitization. Then I consider possible alternatives for benefit provision.

Annuity Provision

Annuitization of individual accounts might be accomplished in three different ways. First, the federal government could decide what benefits to pay for given accumulations, with social security bearing the risk inherent in projecting mortality and selecting a portfolio. Second, the federal government could contract with private providers to receive accounts from the government in return for paying the annuities. These annuities would be priced on a group basis. These payments could go directly to beneficiaries or to the government for transmittal to beneficiaries; in the latter case, the government would provide the payments directly to beneficiaries along with defined benefits. The private providers would bear the mortality and return risks, although there would be residual risk that a private insurance company would be unable to meet its obligations for annuity payments. It would be undesirable and probably politically untenable to put that residual risk on individuals, particularly those late in life. Therefore, the government should absorb that residual risk. Currently, insurance companies receive oversight from state governments, not the federal government; with such a residual risk for the federal government, there would be a call for federal oversight instead of or in addition to state oversight. Third, individuals could be left free to contract with insurance companies on their own, purchasing annuities from their accounts. This approach would employ individual rather than group purchase of annuities. In insurance markets generally, group products are considerably less expensive than individual products. This outcome reflects both lower costs for insurance companies in dealing with groups and greater competition for large group accounts than for smaller individual accounts. Costs with the third approach would be considerably higher than with either of the other two.

The costs of private market annuitization are discussed elsewhere (see Poterba and Warshawsky, chap. 5 in this volume; and also Mitchell et al. 1999).

Like many insurance products, annuities are offered far more cheaply on a group basis than on an individual basis. In order to have private provision on a group basis with a large national program, some mechanism would be needed. One issue is the sheer size of the program, calling for the use of multiple groups and multiple providers rather than a single provider of annuities for all retirees. If multiple groups are used, then, to preserve as much of the advantage of group purchase as possible, the government needs to allocate people to different groups rather than allowing the market to form the groups (Diamond 1992). Since there is little reason for a geographic concentration of benefit recipients, people could be allocated to different groups randomly, giving everyone roughly the same opportunities, which could be adjusted by cross-subsidization between groups receiving slightly different bids. While such group provision is likely to be somewhat more expensive than government provision provided the same portfolio were held for backing for the annuity promises, there is probably not a great deal of difference in cost. What is likely to be more of an issue is the determination of benefits. With private provision, the political outcome is more likely to be to accept the prices offered by the market. With government provision, there may be pressures for intervention when the pricing implied by mortality projection and current interest rates involves a drop in benefits.

Benefit Alternatives

Proposals take three different forms with regard to allowing choice about retirement income. Some proposals allow lump-sum withdrawals, leaving the worker free to choose the extent of annuitization of that portion, whatever rules apply to the remaining balances. While providing a lump sum is not expensive to social security, retirees who do want to annuitize are then left with the private annuities market in which to annuitize. Private market annuitization on an individual basis is considerably more expensive than is provision of retirement benefits by social security, making this option costly for those who might annuitize. Those who did not annuitize would be bearing the risk of outliving their retirement wealth. An intermediate position is to give workers a choice between annuitization and periodic withdrawal (e.g., monthly), with a limit on the size of the allowed withdrawal to limit the risk of outliving the retirement wealth. Other proposals mandate annuitization of the entire accumulation. An important issue with mandated annuitization of accounts that are individually owned and managed is the political stability of such a proposal as the public's view of social security shifts. For example, would an individual with limited life expectancy or extraordinary immediate needs be forced

to annuitize? Moreover, with mandated annuitization, the issue remains of the extent to which any mandate is for inflation-adjusted annuities and/ or for joint-and-survivor annuities for married couples.

4.1.6   Conclusion

While individual accounts and annuitized benefits could be provided at a cost of around $40–$50 per year, a critical question is what the political equilibria would be for the level of services during accumulation and for the structure of benefit provision after retirement. Cost estimates need to recognize the uncertainty in what will be legislated for the accounts.

4.2   Privately Organized Accounts

To consider the charges for government-organized accounts, I followed three steps. First, I described the level of services likely to be provided if there are government-organized accounts. Second, I estimated costs for that plan, noting that additional services increase costs. And, third, I suggested that the costs would be allocated to different workers in proportion to either deposits or account balances, or some combination of both. To consider privately organized accounts, I discuss the level of services that might be provided and how the costs differ from those of government-organized accounts. In addition, we must consider the issues raised by competition among private firms. In doing this, I keep in mind a realistic picture of competitive markets, not an idealized one. Charges differ from the costs identified because of marketing costs and markups (which interact in equilibrium).

4.2.1   Deposit of Funds

There are three methods of deposit of funds to consider. In parallel to the low-cost/low-services government-organized plan described above, I consider a system under which the government continues to collect all taxes and transmits them once a year to private financial firms, with workers directly informing the government as to which private firm to use. Second, I consider having employers directly transmit the funds to financial firms. Third, I consider direct deposit by workers, keying off a tax credit. We need to keep in mind costs that fall on all three players in this scenario—workers, employers, and the government.

If the government transmits the funds once a year to firms, then there are some additional costs for the government beyond having it transmit the funds to itself. The actual transmission is not likely to have significant costs, but there are additional steps. Workers must inform the government as to the destination of the funds. There is a major design issue at this stage. Is a worker restricted to keeping his or her account at a single financial institution, or are workers allowed to have accounts at several

institutions? If it is the former (as in Chile), then the government must enforce such consistency. When a worker, particularly a worker with a new employer, selects a financial institution, the government must check for consistency with the location of the existing account. With a centralized deposit plan, this is readily accomplished. Without a centralized system, restricting workers to a single account is probably not feasible, and we would have, as Australia does, a problem of many very small accounts, particularly as some low earners might start many accounts. This will be a problem for the workers who start multiple accounts in the absence of regulatory restrictions and/or subsidies since the earnings on small accounts would not cover the costs of maintaining them. If firms are required to charge all accounts the same percentage amounts (and to accept all workers), this cross-subsidization of multiple accounts is part of the cost for everyone. In Australia, this is a significant problem and is one reason for preferring the centralized transmission of funds. I assume that workers are restricted to a single account each. Otherwise, costs per account must be multiplied by accounts per worker to estimate costs per worker.

With government transmission of funds, the costs include verifying and correcting mistakes in the choice of firm, verifying and correcting mistakes in the deposits with financial firms (e.g., do the social security number and the name in the firm's records match those given in the incoming deposit information?), and overseeing transfers between firms. It seems plausible that many workers would shift financial firms from time to time. In Chile, turnover is roughly 20 percent per year. Transmission would not cost much since all communication between the government and firms would be electronic and would be likely to be accurate. The problems would come from errors at either end.

Direct deposits from employers would be significantly more expensive for both employers and financial firms. Financial firms would have to process many paper transactions (duplicating the same paper transactions being handled by the SSA) and would have to deal with many employers separately. Similarly, employers would have higher costs, whatever the frequency of transactions, from dealing with many financial firms as well as with the government. In Chile, there are a small number of AFPs (*administradoras de fondos de pensiones*), so the process is not so bad. In the United States, there would be a vast array. While there would arise private clearinghouse arrangements (which have not arisen in Chile) to help particularly small firms, this is another layer of costs and markups. Moreover, there would be the usual tensions in a naturally increasing-returns activity between costs and competitive pressures depending on how many firms survived as clearinghouses. Financial firms would still have the problem of communicating with both workers and the fund transmitter (employers rather than the government), which adds to costs. Since this seems to add

significantly to costs and has little in the way of benefits that are apparent to me in the U.S. context, I will not consider such transmissions further. While there would be some economies of scope from combining these accounts with 401(k)s, it is important to recognize that only a fraction of workers have 401(k)s, that regulations covering 401(k)s are likely to be different from those covering mandated accounts (requiring separate record keeping), and that it is unlikely that workers would be required to use only the options provided by the employer that provides their 401(k)s. So, while there is an advantage here, it is unlikely to offset the sizable cost disadvantage of this approach.

Direct deposit by individual workers has the advantage for financial firms that the firms are dealing with only a single entity, although they would still need to keep the government informed, as with mutual funds currently. The agent with whom they must communicate anyway is the one who makes the deposit and whose job it is to check that the deposit is properly handled. With many workers without financial sophistication, the government is likely to play a larger role in policing accuracy than it does when dealing with voluntary accounts with financial firms currently. This would follow both from the difference in populations from those currently dealing with financial firms handling retirement savings and from the presence of a mandate. In addition, deposits would be overwhelmingly on paper, making for considerably higher costs and error rates than with a single electronic transmission from the government. This seems to me likely to be noticeably more expensive than government deposit. Moreover, it involves issues of some workers filing for refundable tax credits who would not otherwise file taxes. So I conduct the analysis on the basis of government collection of taxes and transmission to private firms.

4.2.2   Alternative Investments

One of the major arguments in favor of privately organized accounts is the presence of a wider choice of investment options. In particular, one would expect that all three of the banking, insurance, and mutual fund industries would be active participants in this market. Banks would offer CDs and a vast array of locations. Insurance companies would offer accounts with insurance features attached to them. Mutual funds would offer managed as well as indexed funds and possibly individually designed portfolios.

Several issues arise from this array. One is the currently diverse regulation of these different institutions. In particular, mutual funds and banks have different federal regulatory agencies, while insurance companies are regulated at the state level. Presumably, this would change in a significant way under a system of privately organized accounts.

A second major issue is how to think about the value of this diversity as well as the increased diversity just within mutual funds. As economists,

we normally consider increased options to be advantageous, provided that the increased options do not come with adverse price changes as part of the adjustment to a new equilibrium. This need not be the case here for two reasons, both related to the purpose of and motivation for social security. First, the purpose is to have retirement income. Insofar as workers (implicitly) trade off current services (including possibly kickbacks) for a lower rate of return (and so lower retirement incomes), the increase in options in privately organized accounts is cutting against the primary purpose of the mandate. Second, insofar as the mandate comes from a concern that individuals do not do a good job of looking out for themselves when it comes to retirement planning, it seems right to recognize that many people will not do a good job of choosing a financial intermediary for retirement savings as well. The current financial market is marked, as are almost all retail markets, by a diversity of prices for similar, sometimes seemingly identical products. Some people end up with high-cost options. Since individual accounts would involve an ongoing relationship, with little at stake in any particular month, workers, particularly low earners, would not have much incentive to stay on top of the changing array of alternative investments and alternative charges. In the absence of detailed regulations limiting pricing alternatives, we might see a dizzying array of prices and arrangements in this market.

In this setting, it is important to move beyond an "average" worker and to recognize the allocation of workers across different options and the relations between different worker characteristics, particularly earnings level and options selected. Thus, it would not be an adequate analytic approach to consider the availability of some low-cost option as the basis for evaluation, with an assumption that everyone choosing some higher-cost option is gaining from making that choice. Both positive political economy and normative considerations suggest that this would be a tightly regulated market, with both the benefits and the costs of tight regulation.

Comparing Costs

In some settings, private firms have lower cost functions than the government because they have access to better technologies, are able to generate better incentives for workers, or can pay lower wages, perhaps by avoiding unionization. The potential for these opportunities depends on the nature of the task being fulfilled. As Wilson (1989) has argued, some bureaucratic tasks have outputs that are easy to measure, so it is easier for a government bureaucracy to do a good job. Current social security is in this category. The tasks are well defined (collect money, keep records, distribute money, provide information). Indeed, the costs of social security are very low compared to private firms involved in similar activities. Moreover, this is not a special U.S. outcome but a common feature of many national pension systems in advanced countries. (On costs in other ad-

vanced countries, see Mitchell [1998].) It seems to me that organizing a TSP-type system has similar characteristics from the perspective of ease of bureaucratic management. I would not expect private firms to have lower cost functions than the federal government. In addition to considering the cost functions, there are issues of returns to scale since the government system would be vastly larger than the average private system. While some firms may have economies of scope from combining their share of social security individual accounts with other fund-management activities, social security has economies of scope as well. I conclude by suggesting that record-keeping and investment-management costs are likely to be higher with privately organized than with government-organized accounts.

Charges

If the world were like an idealized competitive market, then all we would need to know is costs since, in the absence of regulation, charges would equal costs. But observation of other countries that have national (mandated or voluntary) privately organized individual accounts (Chile, Argentina, the United Kingdom) makes it clear that this model does not apply. Similarly, consideration of the voluntary individual capital market in the United States shows considerable advertising expenses and charges that do not have the structure of costs.

There are two aspects to thinking about equilibrium in such a market. What will be the structure of charges, and what will be the levels of pricing parameters in the structure? Currently, the most common bases for charges in mutual funds are proportional to the amount in an account or a combination of the amount in an account and the amounts being deposited— in 1997, load funds accounted for more than half of all new sales of equity funds (Rea and Reid 1998). The market has higher charges for people with lower accounts, minimum account balances, and some flat charges. It is plausible that, without regulations on the structure of charges, mandatory accounts would see a similar structure. I am not aware of analyses as to why this structure has evolved. I suspect that a charge in basis points is less psychologically aversive than one in dollars—it is harder to think about how much it is actually costing. Since the advantage of having "better" management of funds increases with the size of the funds, charges that vary in this way may take advantage of the way in which charges will be viewed and the extent to which investors will shop and switch. Presumably, this is a market with considerable inertia as to switching, even though switching costs are very low (except from firms that have back loads or to firms that have front loads on transfers).

Looking across different portfolios, it does seem to be the case that those funds with higher costs have higher charges, but there is considerable spread in charges within portfolio categories, indeed, even within index

fund categories that are tracking the same index. Spreads in prices for the same services are widespread phenomena in retail markets and suggestive of imperfections in perceiving and acting on alternatives that exist in the market. This suggests that, without regulation to the contrary, charges on average will be higher (in percentage terms) for accounts that are financed with a smaller fraction of taxable payroll. It also suggests that charges on average will be higher (in percentage terms) for lower earners than for higher earners.

This view of markets as having markups and variation primarily because of consumer lethargy is clearly different from a perspective that consumers are choosing the best option in an array of competitive firms that offer different qualities of services at different prices. It is the case that firms offer different services in terms of the nonreturn aspects of services. But I find it hard to accept the competitive market model. This would be particularly an issue with mandatory accounts where people may not know how services vary across firms or how to value such services. In particular, it is very difficult to assess whether some portfolio managers are better than others even if one understands the concept of a risk-return trade-off. Given the difficulty in doing this with sophisticated analysis, most workers would have considerably greater difficulty, even though *Consumer Reports* would be giving ratings to the small fraction of the public that would follow such information. I conclude that equilibrium is likely to have substantial markups, together with the selling costs that are encouraged by such markups.

This possibility has led some analysts to call for a cap on allowable charges for handling privately organized accounts. Our experience with price regulation leaves it unclear how well such regulation would work. In addition, caps would be somewhat difficult to enforce. Some types of accounts (e.g., CDs) do not have separate charges. Currently, charges from brokerage fees are treated separately from other charges. And costs are different for different types of accounts (bond vs. stock, domestic vs. international, index vs. managed).

Current Examples

One approach is to consider existing market alternatives and their costs. While this might give some idea of average charges, it is more difficult to consider the degree of matching of different workers with different institutions. It also needs to be recognized that the average size of accounts may well be different from any particular example and that the population whose demand reactions affect pricing would be different.

A key point is that individuals will be seeking out firms on an individual basis. Thus while quotations of charges made by financial firms on an institutional basis are relevant when considering costs with government-organized accounts, they seem to me irrelevant when considering privately

organized accounts. We therefore need to consider the market for individual choice or the market that deals with small firms. It is natural to look at four pieces of evidence. What has happened in other national systems with individual accounts organized individually? What are charges for mutual funds and other investment vehicles? What are charges with IRAs and 401(k)s? It is also important to look at the entire market, not just the offerings of one or a few firms. Since other papers in this volume also consider the available information, I will be brief.

Costs in Chile (which are front-load costs of roughly 15–20 percent) are roughly equivalent to seventy-five to one hundred basis points on accounts that are 10 percent of taxable wages (which seems to me relevant since the labor costs of the financial firms will resemble the average labor costs in an economy). Argentina, with smaller accounts, has larger charges. Mexico, which has amounts put in the accounts by the government as well as amounts withheld from workers, has higher charges relative to the deposits of workers' withholding but lower charges relative to total deposits. The United Kingdom has considerably higher charges than Chile.[8]

Some people have argued that costs are high in Chile because of the nature of regulation there. Regulations require uniform pricing for all workers, preventing the formation of groups that might bargain for lower prices, with an unclear implication for charges to the remaining population. Regulation on the structure of charges (only front loads and only a combination of flat and proportional charges) would not prevent competitive pressures, if they are as in the idealized market, from keeping charges, on average, close to costs and so holding down the incentive for sales efforts. The high markups over production costs and the high fraction of costs devoted to sales suggest that it is inherent in individually organized markets for this type of product to have high markups. The similarity of costs in Chile to those in markets without such price-structure regulations also suggests that the details of the regulation are not the prime reason for the level of costs.[9]

A recent Investment Company Institute study of equity mutual funds (Rea and Reid 1998) argues that the average dollar invested in individual funds in 1997 was charged around 149 basis points, not including any brokerage charges that go with many of these products. The calculation includes balanced and other hybrid funds. This calculation includes both annual maintenance charges and an annualization of front-load charges.[10]

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8. For more details, see Diamond (1998).

9. Australia has a mandate on firms, not workers. Thus, evidence from the large-firm section of that economy does not seem relevant for the typical proposal in the United States.

10. The study argues for the importance of including front loads since roughly two-thirds of retail investors buy mutual funds through sources offering load funds and load funds accounted for more than half of all new sales of equity funds in 1997 and represented 60

The study also reports that this average charge has fallen from 225 basis points in 1980. The study does not report the average account size, which would help for comparison with individual social security accounts.[11]

I do not know what the implicit charges would be with bank CDs. Similarly, I have not looked into insurance company charges.

I do not examine IRA and 401(k) charges—for discussions of the literature, see Mitchell (1998) and Olsen and Salisbury (1998). As these authors note, some data sources (e.g., form 5500) report only part of the charges made by financial firms. We need to recognize that both IRA and voluntary accounts may well have lower costs than mandatory accounts because financial firms deal only with the depositor in these cases but would deal with both the government and the individual with mandatory accounts. On the other hand, 401(k)s have considerable regulation for tax qualification and have financial firms deal with both employers and employees. Thus, the costs for providing services to small firms may well be higher than with mandatory accounts organized with direct government deposits. Larger firms have economies of scale and bargaining power in negotiating individual deals rather than accepting a take-it-or-leave-it offer in the market—so their charges and costs are probably not relevant for thinking about privately organized accounts.

I see no reason to think that the nature of equilibrium with privately organized individual accounts would be dramatically different from these examples. The accounts would be smaller and the population dealing with the financial community more diverse and less sophisticated on average. I suspect that the costs for the typical worker choosing a mutual fund would be at least one hundred basis points with accounts from a large percentage of payroll and larger, possibly considerably larger, if we are considering accounts financed with only 2 percent of payroll. I note that this is roughly consistent with the 1 percent cost for accounts financed by 5 percent of payroll assumed by the Advisory Council on Social Security (1997).

Implications of Charges

For example, with one hundred basis points of accumulations per year charged over a full career, and assuming that wage growth exceeds the interest rate by 2 percent, the final accumulation in privately organized accounts would be reduced by 19.6 percent. Other examples were reported

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percent of equity fund assets at the end of 1997. The study does not seem to deal with the complication in annualizing front loads owing to the fact that the interest rate relevant for the individual depends on the charging structure. I suspect that this would not be a significant change in the calculation, but it should be examined.

11. Mitchell (1998) reports on expense ratios without front loads separately for different types of mutual funds and does report on average account sizes. For fiscal years ending in 1994–95, calculations show expense ratios varying from 0.324 for equity index funds to 1.043 for growth funds and 1.250 for global funds. From average account sizes, these translate into $67.9 for index funds and $137.5–$302.5 for the other funds.

in table 4.1 above. Thus, privately organized accounts are likely to deliver accumulations at retirement that are at least 10–15 percent lower than could be delivered by government-organized accounts and quite possibly even lower. In addition, the provision of annuitization would be more difficult and would likely be more expensive.

4.2.3   Conclusion

My conclusion is that privately organized individual accounts are very expensive for satisfying the basic purpose of social security. Since I think that government-organized accounts can be reasonably insulated from political interference, that the increased choice that would be present with privately organized accounts may be as likely to be harmful to the worker as helpful, and that greatly increased regulation is likely with the uncertainties created by the introduction of a new regulatory structure, I consider privately organized accounts to be dominated by government-organized accounts.

Appendix A

Tasks in Implementing Individual Accounts

This list first considers tasks in implementing government-organized accounts, and then notes tasks that would be different with privately-organized accounts.

Government-Organized Accounts

This list assumes that contributions are received throughout the year, and are linked to individual taxpayers after the end of the year, when W-2s are filed. It also assumes that the government receives the money, arranges for investment, recordkeeping and benefit payments. An asterisk (*) indicates tasks now done by the Social Security Administration or Treasury, or similar tasks. In some cases, the tasks become more complex because of differences in timing or other concerns.

1. Collect Contributions from Employers

   a. Receive and record money from employers shortly after each payday.*
   b. Reconcile amounts received with quarterly 941 and annual W-2 reports to detect missing or discrepant payments.*
   c. Segregate account contributions from other taxes paid by employers.

2. Invest Funds

   a. Select a private fund manager(s).

   b. Invest new contributions during the year according to government policy.

   c. Designate a default investment portfolio for individuals not selecting one.

   d. Report investment returns to the recordkeeper—annual average for new contributions, monthly/quarterly for account balance valuations.

3. Credit Workers' Accounts with New Contributions

   a. Find missing or inconsistent reports from employers by reconciling annual and quarterly reports and correspond with employers to fix it.*

   b. Record new contributions to individual accounts. Identify discrepancies between W-2s and SSN files and correspond with employers or employees to fix mistakes.

   c. Set up new information system of records needed to administer accounts: workers' ID, portfolio choice, effective date of choice, interfund transfers and date of interfund transfer, death beneficiary designation, marital status, spouse ID, and spousal consent code (depending on policy), current address.

4. Enroll Workers and Get Portfolio Choice
(and Other New Information)

   Depends on employer involvement (either mandatory or voluntary). Options include: (i) ongoing requirement that employers enroll new employees and report portfolio choices annually (on W-2s or W-4s); (ii) one-time employer responsibility to enroll workers in the plan and send data to the record keeper; (iii) do not involve employers—deal directly with workers through 1040s, correspondence, phone, website or in person.

5. Educate and Communicate with Workers

   a. "Wholesale" tasks (such as in the TSP) include developing educational brochures, videos, training courses for employers to use to enroll workers.

   b. "Retail" tasks (performed by employers in the TSP) include one-on-one communication with workers—via Social Security (or IRS?) field offices, an 800 number, website.

6. Pay Death Benefits

   a. Determine policy for death benefits including registry of state laws on inheritance rights and rules for determining jurisdictions, if relevant.

b. Set rules of evidence for determining correct death beneficiary and maintain record system to support it.*

c. Resolve competing claims when they occur.*

7. Implement Policy on Treatment of Accounts at Divorce

Possible policies include: (i) let courts decide; (ii) automatically divide 50/50 changes in account balances that occurred during the marriage; and (iii) automatically divide contributions each year between spouses. Depending on policy, tasks include:

a. Set policy for treatment of QDRO (qualified domestic relations order from court).

b. Maintain historical records that can be used to retroactively combine and split two individuals' change in account balances for a period of years or each year, link accounts of husbands and wives and transact a split.

c. Set up systems for verifying marital status and spouse ID, and policies for resolving disputes, discrepancies, and informing each party of transactions made on their accounts.

8. Pay Retirement Benefits

a. Determine policies about nature of withdrawal options.

b. With annuities, determine whether government or insurance companies will: (i) assume mortality and investment risk; and/or (ii) administer the annuities.

c. If insurance companies, determine policy for their involvement— e.g., standards for participation, competitive bidding for group contract, some sort of reinsurance.

d. Policy on joint-and-survivor annuities and beneficiary designation for non-annuitized funds (or period certain annuities).

9. Retirement Benefit Counseling (assuming a number of withdrawal options are available)

a. Explain to retirees what the choices are and what terms mean and run scenarios of how different choices would affect the particular retiree and spouse.

b. Set policies (if any) on who will provide the information and who will pay for it.

10. Early Access (if loans or withdrawals end up being allowed for "hardship.")

a. Determine hardship rules and how they will be applied.

b. *If loans,* set up systems for how they will be repaid.

Privately-Organized Accounts: Additional Tasks

This list assumes that funds are withheld and paid by employers to the government (as they are now) and that employers report annually on W-2s the amounts belonging to each worker. The government's tasks in collecting contributions would be the same as in government organized accounts.

When W-2s are in, the government would send each worker's funds to a financial institution chosen by the worker. The financial institution would be responsible for all further dealing with the account holder. It would be responsible for: investing funds, crediting workers accounts with new contributions, getting information about the worker's portfolio choice and other data needed to pay benefit to the worker or his/her beneficiaries, educate and communicate with workers about investment choices, pay death benefits, implement policy on treatment of divorce, pay retirement benefits under applicable rules, and provide retirement benefit counseling. It would also be responsible for enforcing whatever policy applies with regard to early access.

New issues and tasks that arise under this model:

a. Government would maintain a default plan or default institution for workers who fail to designate a financial institution.

b. Government would set rules on financial institutions eligible to hold Social Security accounts.*

c. If workers would be required to hold their funds in only one institution at a time, government and financial institutions would put systems in place to ensure that happened.

d. Once money is sent to the financial institution, it would be responsible for receiving portfolio choices from workers, sorting out mistakes and making employees whole under whatever rules apply.

e. Government policies might regulate fee arrangements of financial institutions, terms on which accounts are accepted by institutions, and possibly, marketing practices.

f. Government policies might regulate allowable portfolios.

g. Government would monitor institutions' compliance with whatever rules apply to the accumulation and distribution of account funds.*

h. Auditing, trustee, legal and related functions, to the extent not included above.

Appendix B

I do the calculation in continuous time. Consider a worker who earns w_s at time s, assumed to grow exponentially at rate g:

$$(1) \qquad\qquad\qquad w_s = w_0 e^{gs}.$$

The tax rate on these earnings is t. There is a proportional front-load charge of f so that $t(1 - f)w_0 e^{gs}$ is deposited at time s. This accumulates until retirement age, T. The accumulation occurs at the rate $r - c$, where r is the rate of return, and c is the management charge per dollar under management. Thus, deposits made at time s have accumulated to $t(1 - f)w_0 e^{gs} e^{(r-c)(T-s)}$ at time T. The total accumulation at time T is the integral of this expression from time 0 until time T. Integrating, the accumulation depends on f and c and (for $g + c \neq r$) is equal to the following:

$$(2) \qquad A[f, c] = t(1 - f)w_0 e^{(r-c)T}\{e^{(g+c-r)T} - 1\}/(g + c - r).$$

For $g + c = r$, the accumulation satisfies

$$(3) \qquad\qquad A[f, c] = t(1 - f)w_0 e^{(r-c)T}T.$$

For r unequal to both $g + c$ and g, the ratio of the accumulation to what it would be without any charges satisfies

$$(4) \qquad AR[f, c] = A[f, c]/A[0, 0]$$
$$= (1 - f)e^{-cT}\{(e^{(g+c-r)T} - 1)/(e^{(g-r)T} - 1)\}$$
$$\times \{(g - r)/(g + c - r)\}.$$

The charge ratio is one minus the accumulation ratio:

$$(5) \qquad\qquad CR[f, c] = 1 - AR[f, c].$$

Sample calculations are shown in table 4.1 above.

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Comment   Martin Feldstein

Peter Diamond has made an important contribution to the general analysis and design of social security reform by calling attention to administrative costs. His earlier writing (Diamond 1997) and our personal discussions in the past have also caused me to reconsider the appropriate way to finance individual investment-based supplementary social security accounts and to change my own proposal (Feldstein 1997) to an alternative structure with significantly lower administrative costs. I return to this below.

In the present paper, Diamond emphasizes the distinction between two types of individual investment-based accounts: *government-organized accounts,* in which the government does the record keeping and investment management (as it does for the federal employees' Thrift Savings Plan [TSP]), and *privately organized accounts,* in which private firms do the record keeping and investment management. Diamond's conclusion is that government-organized accounts would cost about $40–$50 per account

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per year while privately organized accounts would cost about twice as much. For an average-size account, Diamond translates the $40–$50 charge into a reduced yield of forty to fifty basis points, implying that the individual's accumulation at retirement would be 10 percent less than it would be if there were no administrative cost. The privately organized accounts would therefore, according to Diamond, reduce final accumulation by about 20 percent. From these calculations, Diamond concludes that government-organized accounts would be desirable (or at least acceptable) while privately organized accounts would be "prohibitively expensive."

I do not agree. In this comment, I make four basic points: First, centrally administered accounts raise fundamental problems that make them politically unacceptable as an alternative to part of the pay-as-you-go social security system. Second, even if we accept Diamond's estimate that government-organized accounts involve a forty- to fifty-basis-point administrative cost per year, the benefit of such accounts would outweigh the cost. Third, the same is true of individually organized accounts; their benefits would outweigh their costs even if those costs were the one hundred basis points assumed by Diamond. Fourth, privately organized accounts would not cost as much as one hundred basis points and could well become less expensive than government-organized accounts.

Centrally Administered Accounts

Diamond's estimate that a government-organized account costs forty to fifty basis points is relative to a system of investment-based social security with no administrative cost at all. The notion of an investment-based component of social security with no administrative cost can only be approximated by putting private securities into the Social Security Trust Fund or some other centrally administered single account as proposed in the Ball plan (Advisory Council on Social Security 1997) and the Aaron-Reischauer (1998) plan.

As a practical matter, I believe that such a central account is not a politically relevant option. Recall that, even with a mixed system that combines the current pay-as-you-go taxes with investment-based saving equal to 2 percent of payroll, the net accumulation after thirty years would then be equal to about 40 percent of the GDP in that year. In today's economy, that would be more than $3 trillion of private securities owned by the government. The political process, for good reason, would reject giving the government control over such a large pool of assets. Advocates like Aaron and Reischauer (1998) go to great lengths to emphasize that the funds would be administered by an independent administrative authority. Opponents reject claims of such independence since any authority, as a creature of legislation, is ultimately responsive to the Congress and/or the administration.

There are two broad concerns about the power that such an administrative authority would exercise. First, a government administrative authority would introduce political considerations into portfolio-investment decisions. The most obvious of these would be political prohibitions on investing in companies that make certain products (e.g., cigarette companies), companies that have been found to violate certain laws (antitrust rules, environmental rules, etc.), foreign-owned companies, U.S. companies whose foreign investments "take jobs away from American workers," etc. A second distortion would be geographic distribution requirements of the type that cause the defense budget and other public works to be distributed among states and congressional districts in response to political considerations rather than economic efficiency. A third problem would be distortion to risk decisions because of the politically asymmetrical reactions to gains and losses that would make investment managers likely to be excessively cautious to avoid the criticism that they gambled and lost retirees' money.

These concerns about the role of the government as an owner of equities also apply to corporate bonds. How would the government deal with companies that are in bankruptcy? Would its decision be the same as that of a private investment manager, or would it be concerned about employment effects, etc.?

The second broad concern is that government ownership of corporate stocks and bonds, even if in a nominally independent administrative authority, would bring with it control over corporations. Ownership conveys the right to vote shares. Even if this power were initially disavowed, it might eventually be assumed by the federal fund manager, just as state pension funds do now. How would the administrative authority vote on issues like takeovers, foreign takeovers, or poorly performing managers? A promise to be a passive investor that does not interfere in the management of the companies that it owns might change, rationalized by the argument that active management could lead to better investment performance, a decision that many state pension plans have made.

My impression from conversations with congressional leaders of both parties is that such a central account system is politically unacceptable. This view has been expressed publicly by Senator Daniel Patrick Moynihan, the ranking Democrat on the Senate Finance Committee, by Democratic senator Bob Kerry, and by a variety of Republicans in both the Senate and the House.

I conclude from all of this that, if there is to be an investment-based component of social security, it must take the form of individual accounts. If so, a forty- to fifty-basis-point administrative cost, relative to a centralized investment with no administrative cost (to use Peter Diamond's estimate of the effect of the "low-cost" government-organized accounts), is inevitable if there is to be an investment-based component to social security.

Government-Organized Accounts

That raises the question of whether such an investment-based strategy to replace part of the pure pay-as-you-go system is desirable if it does involve an administrative cost of fifty basis points. The simplest way to think about that question is to rephrase it as, If an investment-based social security system causes the nation to increase saving and investment above what it would otherwise be, is this desirable if the return on that investment must be reduced by fifty basis points? The real pretax return to increments to the capital stock is about 8.5 percent (Poterba 1997), implying that the real return to the increments caused by an investment-based social security program would be 8.0 percent if done through government-organized accounts. That is a substantially higher rate of return than the return that savers now receive after corporate-profits taxes, property taxes, and individual taxes on interest, dividends, and capital gains. This difference suggests a prima facie case for the desirability of increased saving through social security accounts.

Another way of judging whether an investment-based system of individual accounts with an administrative cost of fifty basis points would be desirable is to consider the way in which such a system would affect social security taxes and benefits over time. Andrew Samwick and I (Feldstein and Samwick 1998) present estimates of the effect of saving 2 percent of payroll in such accounts and receiving a return equal to 5.5 percent (the postwar average real return on a portfolio of 60 percent stocks and 40 percent bonds net of a forty-basis-point administrative cost). We show that, with new saving equal to 2 percent of payroll until 2030, and using the corporate tax receipts on the incremental capital stock that results from these individual accounts after that, it is possible to maintain the benefits provided in current law without raising the future payroll tax, thus avoiding an increase from the current 12 percent tax rate to a rate that is permanently more than 18 percent. My judgment is that that is a very attractive trade-off between current saving and permanently lower taxes.

My conclusion, in short, is that, if using an investment-based system requires a fifty-basis-point administrative cost, the investment-based system is very much worth doing.

Privately Organized Accounts

Government-organized accounts may not be politically acceptable for the same reason that a centrally administered account is not acceptable. Although government-organized accounts would provide a defined-contribution system in which individuals might have some influence on the extent of the risk that they take, a government-organized system in which the government is responsible for investment management would still leave many decisions in the hands of the government fund managers. As with any mutual fund, the government fund managers would be respon-

sible for voting proxies, deciding whether to tender stocks in a takeover situation, etc.

With privately organized accounts, the government would be responsible for regulating what investments are eligible and for the prudential supervising of investment managers. But individuals would retain the choice among eligible private managers, and those managers would be responsible for exercising the rights of shareholders.

If the choice is between a pure pay-as-you-go system and a system of privately organized accounts for which, to use Peter Diamond's estimate for now, the cost is one hundred basis points, should the privately organized accounts be regarded as "prohibitively expensive"? I think not. The question again can be restated by asking whether an increased national investment is desirable if it earns a real return of 7.5 percent. That is again much more than the real after-tax return that individuals can earn in their private capacity, suggesting that such a return is a desirable investment. Indeed, unless the general consensus that the United States should save and invest more is true for a real return of 8.5 percent but would not be for a return of 7.5 percent, this is a desirable investment decision for the nation. That this return would accrue to the social security system in a way the avoids a permanent increase in the payroll-tax rate of more than 6 percentage points—from the current 12.4 percent to more than 18 percent—is an extra advantage.

To be more specific about the nature of individually organized accounts, I will now describe what I believe would be a cost-effective way to administer such accounts. A key aspect of the cost is how the money is collected and transferred to individual accounts. In my November 1997 *Wall Street Journal* article, I suggested that each individual would establish an account similar to an IRA, send 2 percent of his or her wage up to the maximum social security taxable earnings to that account, and receive a refundable income-tax credit for that amount. The net result would be that the individual added 2 percent of income to the account at no personal cost. These tax credits could be financed out of the projected budget surpluses, assuring that those surpluses would not be spent on public or private consumption.

After publishing that article, I was persuaded by Peter Diamond and others that this method of depositing funds in individual accounts would be too expensive because of the large number of individuals with multiple jobs, small incomes, etc. I now believe that a better way is to use the Social Security Administration (SSA) to transfer 2 percent of wage income from the Treasury (i.e., from the budget surplus) to individual fund managers selected by the individual employees. The SSA has the information on the total earnings of each individual up to the social security taxable maximum. Although that information is available only with a lag, individuals can hardly complain since the money being deposited is the government's.

Costs could also be limited if each individual could have only one fund manager (although multiple investments with that manager) and could change fund managers no more than once a year. Individuals would indicate the identification number of their chosen fund manager on their tax return when they establish the account and whenever they want to change fund manager. The SSA would then wire the money and the names and social security numbers to the fund managers.

There is no cost of collecting the individual savings in this system since all the money is provided by the government. The biggest potential cost of individually organized accounts is thereby eliminated.

A potentially useful option is to have a government-managed fund as a "default option," for anyone who does not choose a private company or prefers a government fund manager. I say *potentially* useful option because, while such a manager could act as a low-cost standard that disciplines private providers, there is a danger that the government would subsidize this fund manager so that it comes to be so attractive that it has most of the money, the very problem that individually organized accounts are designed to avoid.

How Expensive Would Privately Organized Accounts Be?

I return now to Peter Diamond's assertion that privately organized accounts would cost about one hundred basis points, equivalent to $100 per account per year at the present time. As I look at the evidence, I think that that estimate is much too high for the following reasons.

The TSP Benchmark. The TSP run by the federal government now costs $20 per worker per year. That includes (1) collecting funds from each individual in a system that allows individuals to select different percentages of their salary to be contributed and (2) managing a loan program that uses TSP as collateral. Many of the extra costs that Diamond associates with going from TSP to general government-organized accounts (thereby increasing the cost from $20 to $40–$50) would be avoided or offset by centralized collection and crediting of deposits as part of the ordinary social security payroll operations in the way that I described above. The government-organized accounts would be no more costly than the TSP, that is, about $20 per account per year or about twenty basis points for the average-size account.

Private Mutual Fund Benchmark. Major mutual fund managers offer equity index funds at about thirty basis points and fixed income funds at an even lower cost. These mutual funds have to collect funds and make payments, a major expense that would be avoided by the centralized finance using government funds.

Foreign Experience. Diamond and others cite the high costs in Chile, Mexico, and the United Kingdom. I believe that that experience is irrelevant given the very efficient and low-cost system demonstrated by U.S. mutual fund providers.

Selling Costs, Markups, and Managed Funds. Mutual funds now provide indexed investments at thirty basis points despite their advertising expenses. Some individuals would prefer managed funds to index funds despite their higher charges. Perhaps such managed funds would cost one hundred basis points, adding about $50 a year or $1 per week to the cost of the account. Diamond does not like that idea, considering it wasteful and frivolous, despite the fact that a large fraction of current mutual fund investors have shown a preference for such funds. More generally, Diamond does not like the prospect of individuals having a large number of choices, noting that the current phone-service market with its "dizzying array of options" is a good parallel to the problem that would face individuals with privately organized accounts. Does that mean that the government should not allow competition among phone companies with multiple options? And what about automobiles or household detergents? It would be ironic if the government prevents people from spending $1 a week extra to get managed funds rather than indexed funds while encouraging those same individuals to buy state lottery tickets.

Technical Progress and Innovation. The next decade will see enormous changes in communications technology, making the ability to access information over phone lines virtually free. The technology that will soon be widely available will make it possible to use phones (as well as personal computers) to review investments and make changes among the options offered by fund managers.

All this will reduce the cost of individual accounts. It is wrong to assume, as Diamond does, that administrative costs will rise in the future in proportion to wages (and therefore to account deposits). It is far more likely that this technological service will see the kinds of cost-reducing gains that will cause its relative cost to decline significantly.

I am convinced, moreover, that competition among private fund managers is much more likely to achieve faster technical progress and more innovative and user-friendly service for individuals than would occur with a government monopoly.

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Discussion Summary

Peter Diamond began with two additional points on costs and a rebuttal to Martin Feldstein's comments on his paper. Diamond first noted that the possibility for individuals to open and hold multiple social security individual accounts could be a significant driver of costs and that a mechanism should exist to limit individuals to one account. Second, he noted that many individuals currently incur the (out-of-pocket) cost of employing personal investment advisers and that there is no inherent reason to believe that this would not continue under a system of individual accounts. In response to Feldstein's comments, Diamond first took issue with Feldstein's comparison of the rate of return to the current social security system to the rate of return to a system of individual accounts, arguing that it is not legitimate to compare the "return" on funds in a pay-as-you-go system to a portfolio rate of return. Second, Diamond questioned the legitimacy of Feldstein's claim that political considerations make government management and investment of funds infeasible. Diamond argued that it is just as likely that large corporations would be able to exert enough influence on Congress to stave off the type of government meddling that Feldstein suggested may occur. Third, he clarified his characterization of the costs of private management of individual accounts as "prohibitive" as meaning that private management would be higher cost without any significant offsetting benefit. And, finally, he noted that his comparison of a privately managed system of individual accounts to the current, fragmented phone-service provider market was intended to suggest simply that the market will be complex and that we should focus not just on the low-cost provider but also on the mean and distribution of the level of costs across the system as it is likely to be quite heterogeneous.

Sylvester Schieber began the discussion by questioning Diamond's contention that no current reform plan is proposing a 10 percent benefit cut (which is the amount by which individual account accumulations would be decreased by having them privately managed as opposed to government managed, according to Diamond's paper). Schieber noted that the Kerrey-Moynihan plan required benefit cuts of at least 10 percent and that Kerrey

had been clear in stating this. Diamond acknowledged that this was a fair point.

Estelle James suggested that Diamond's estimate of an annual communications cost of $40–$50 per person seemed too high. She noted that the comparable figure for the Thrift Savings Plan is roughly $20 per person and that much of that comes from supporting its loan activity, which would not be an issue for social security individual accounts. She also noted that mutual fund transfer agents charge only roughly $25 per head and that they offer a relatively high level of service. Diamond countered that neither of these systems deals with as large and heterogeneous a population as the one with which the managers of social security individual accounts would be dealing. James agreed that the different population would imply different costs, especially with respect to accommodating multiple languages, but she emphasized the point that Diamond's conclusions are sensitive to the $40–$50 figure and that, if true communications costs are actually $20–$25, the effective reduction in account accumulations would be much lower.

Leonard Glynn inquired into the incremental benefit to the social security system of investing a portion of the social security funds in the capital markets. Specifically, he asked whether the tax increases and/or benefit cuts needed to save the current system would be lower if social security funds were invested in capital markets. *Peter Diamond* noted that there are two separate elements to this question. First, it is true that, if, in fact, the Social Security Trust Fund can accrue more money over time through investment in the capital markets, the tax hikes and/or benefit cuts needed to meet future obligations would be lower. The second issue is the risk associated with the change in portfolio and on whom this risk would fall.

Alan Gustman suggested that it may be possible to get some empirical evidence on demand for an individual account option and likely administrative costs by "red-circling" a certain group of current workers to be eligible to opt out of social security and invest in individual accounts. *Diamond* disagreed, noting that a large part of the cost dynamics and cost-saving potential of management of individual accounts comes from uniformity. If an institution had to perform special functions to service the experimental group, it would not shed much light on the likely cost issues in a completely new institutional framework.

Responding to Gustman's point, *Olivia Mitchell* noted that many private pensions do effectively red-line certain groups of people—for example, individuals below a certain age and/or job tenure do not have to participate—and there may be some useful evidence there on demand for pension instruments. Mitchell also voiced disagreement with Martin Feldstein's contention that foreign countries' experience with moving to individual accounts is irrelevant to the American experience. She argued that the foreign experience shows us that it is possible to implement a

system of individual accounts. *Feldstein* responded that he meant that the foreign experience was irrelevant to our ascertaining the cost of implementing such a system in the United States. *John Shoven* suggested that foreign costs ought to be an upper bound on the costs. But *Peter Diamond* disagreed, asserting that, while it may be an upper bound on costs, it would not necessarily provide an upper bound on equilibrium pricing, which would depend on demand elasticities and other factors. Finally, *Mitchell* left as an open issue the comment that, if we believe that administrative costs of individual accounts are too high, perhaps we ought to be considering individual accounts that are based on larger contributions than just 2 percent of payroll.

Responding to Peter Diamond's earlier comment on social security's unfounded liability, *Sylvester Schieber* suggested that perhaps we should view this as a sunk cost and pursue the goal of reforming the system to be efficient in the steady state separately from the issue of how this sunk cost will be paid off. He suggested that combining the issues could result in our rejecting a reform that would be optimal in the steady state because it entailed a transition cost that fell disproportionately on one group. *Peter Diamond* agreed that the sunk cost is a separate issue and commented that his quarrel was with the attempt *directly to compare* the returns in a status quo system to the returns to a system of individual accounts. *Martin Feldstein* countered that, even if one drops the direct comparison, it is still the case that, if the market earns 7.5 percent (8.5 percent with a 1 percent reduction for administrative costs), that is inherently attractive. And, if the only way to access that return is to replace some of the pay-as-you-go element with an individual account element, then there is an *effective* comparison in favor of the individual accounts, if not a direct one.

Michael Graetz argued that the central issue in private as opposed to government management of individual accounts is the overriding political risk inherent in government-managed accounts. He asserted that, although in theory the government-management option would unquestionably imply lower administrative costs, it could produce prohibitively high costs from politically motivated investment strategies. He also suggested that any analysis of the attractiveness of individual accounts should take into account the possibility of early withdrawal of funds, which would decrease accruals. Finally, Graetz emphasized the importance of including a low-cost default option in any individual account system. The alternative to offering such an option, he argued, will be considerable price and product regulation of the funds that are offered.

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