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PRIVATE ACCOUNTS WOULD SUBSTANTIALLY INCREASE FEDERAL DEBT AND INTEREST PAYMENTS

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Summary

All of the major proposals to replace a portion of Social Security with private accounts would require large increases in federal borrowing for many decades. This increased borrowing is not necessary to restore Social Security solvency. Instead, the increased borrowing would be needed to finance the creation of the private accounts, which by themselves would not do anything to restore solvency, and under some circumstances would worsen solvency.

Some plans with private accounts, like the President's, would shrink the solvency gap by reducing Social Security benefits (over and above the benefit reductions that are designed to compensate for the loss of payroll taxes diverted to private accounts). These benefit reductions would partially offset the increased borrowing that would result from the private accounts. Even when these benefit reductions are taken into account, however, all of the proposed plans that include private accounts would substantially increase the federal debt and the interest payments on the debt. For instance:

- The President's plan would create $17.7 trillion in additional debt by 2050.[1] This additional debt would be equal to 19.3 percent of the Gross Domestic Product in 2050. By comparison, the *total* federal debt currently equals 38 percent of GDP. Thus, by 2050, the President's plan would require more than half as much borrowing as the federal

KEY FINDINGS

- **All of the private account plans that have been proposed would substantially increase federal debt and interest payments.**
- **Despite the increases in debt, none of the private account plans would achieve Social Security solvency without large transfers from the rest of the budget, but the rest of the budget is in deficit and has no surplus resources to transfer.**
- **The two Social Security plans that do not include private accounts would reduce, rather than increase, federal debt.**

[1] CBPP estimates of the President's plan are based on estimates made by the Social Security actuaries of the effects of the President's plan through 2015, and on the actuaries' estimates of the effects in subsequent years of private account and progressive-indexing proposals included in other Social Security plans that are similar to what the President has proposed. The actuaries' estimates of the effects of these other plans are adjusted for comparability to reflect the assumptions of the 2005 Social Security Trustees' report and the assumption that private accounts would take effect in 2009, as the President's plan proposes. See Appendix B for a discussion of the methodology used in developing these estimates.

government has undertaken for all purposes in its first 216 years. In 2050, the interest on the additional debt created by the President's plan would be equivalent to $133 billion in today's economy, or more than the federal government will spend this year on all education, veterans' health care, science, conservation, pollution control, and job training programs combined.

By 2050, the cost of the interest payments on the additional debt that the President's plan would create would be equivalent to $133 billion year today

- The plan proposed by Robert Pozen, an investment company official who served on the President's Social Security Commission, would create $3.5 trillion in additional debt (equal to 3.8 percent of GDP) by 2050. Interest on that additional debt in 2050 would be equivalent to $29 billion in today's economy.

- The plan proposed by Senator Lindsey Graham (R-SC) in 2003 would create $19.1 trillion in additional debt (equal to 20.8 percent of GDP) by 2050. Interest on that additional debt in 2050 would be equivalent to $145 billion in today's economy.

- The plan proposed by Senator Chuck Hagel (R-NE) would create $24.2 trillion in additional debt (equal to 26.5 percent of GDP) by 2050. Interest on that additional debt in 2050 would be equivalent to $182 billion in today's economy.

- The plan proposed by Senator John Sununu (R-NH) and Representative Paul Ryan (R-WI) would create $85.8 trillion in additional debt (equal to 93.7 percent of GDP) by 2050.[2] Interest on that additional debt in 2050 would be equivalent to $635 billion in today's economy.

These estimates and comparable estimates for other Social Security plans are shown in the table on page 5.

Why do these private accounts plans create additional debt? Currently, all payroll taxes paid into Social Security are used by the federal government. These taxes are used to the full extent needed to pay Social Security benefits to current beneficiaries. The Social Security trust funds loan any revenues not needed for this purpose to the Treasury and receive Treasury bonds in return. Since total federal revenues — including Social Security taxes — are now less than total federal expenditures, the government runs a deficit each year. Thus, the funds borrowed from Social Security are used to help cover these deficits. (If the rest of the budget were balanced, the Treasury would use the revenues borrowed from Social Security to pay down the federal debt.)

Creation of a system of private accounts would not change the amount of revenue coming into the federal government, but it would *increase government spending*, because the federal government would be making regular payments into the private accounts. These payments would represent new government spending. This increase in spending, unaccompanied by an increase in revenues, would widen annual deficits. The federal government would have to borrow more to cover these larger deficits, and that added borrowing would increase both the national debt and the cost of interest payments on

[2] These estimates do not take into account the potential effect of proposed caps on non-Social Security spending proposed by Senator Sununu and Representative Ryan. See Appendix A for a description of the Sununu-Ryan proposal and an explanation of why the potential effects of the proposed caps are not included in these estimates.

Temporary Private Account Plan Would Permanently Increase Debt

On June 23, 2005, Senator Jim DeMint (R-SC) introduced S. 1302, "The Stop the Raid on Social Security Act of 2005." (A similar bill, H.R. 3304 — the "Growing Real Ownership for Workers Act of 2005" — was introduced by Representative Jim McCrery (R-LA) on July 14, 2005. Senator DeMint also introduced a more comprehensive Social Security plan in 2003, when he was a Member of the House of Representatives; see the description of that plan in Appendix A.) Unlike the other proposals described and analyzed in this paper, the new plan offered by Senator DeMint would neither make permanent changes in Social Security nor establish a permanent system of private accounts. Instead, it provides for voluntary private accounts funded by diverted Social Security payroll taxes only for as long as Social Security has a cash-flow surplus (i.e., a surplus not counting the interest that the trust funds receive on their bonds). According to the most recent report of the Social Security Trustees, cash-flow surpluses will exist only through 2016.

Under the DeMint plan, the total amount of Social Security payroll taxes diverted to private accounts each year would be equal to the Social Security cash-flow surplus for that year. The contribution rate for each participant would be determined by dividing the total amount that could be placed in private accounts in a given year by the total taxable earnings in that year of the workers eligible to make contributions to these accounts. All workers born after 1949 could participate.

When a worker who has chosen to participate in the private account plan became eligible to receive retirement benefits under Social Security, the worker would have to repay Social Security for the payroll taxes diverted to his or her private account. The repayment would be made in the form of a reduction in the worker's monthly Social Security benefit that is actuarially equivalent to the total payroll taxes diverted, plus interest on the diverted taxes compounded at an annual rate equal to the yield from long-term U.S. Treasury bonds minus 0.3 percent.

Although the private accounts funded in this manner would continue to exist as long as participants remained alive, there would be no new contributions to those accounts — and no new accounts established — after cash-flow surpluses in the Social Security trust funds ceased to exist.

By themselves, the DeMint plan's private accounts would slightly increase (by 2 percent) the 75-year Social Security shortfall.[a] The DeMint plan also contains a provision requiring automatic transfers from the General Fund of the Treasury to the Social Security trust funds sufficient to ensure that full scheduled Social Security benefits could be paid until 2041 (the year that the Social Security Trustees estimate the trust funds will become insolvent under current law). These General Fund transfers would guarantee Social Security solvency through 2041, but would be paid entirely with borrowed money.

Although it provides only for temporary contributions to private accounts and would do nothing to improve Social Security solvency, the DeMint plan would permanently increase the federal debt. The increase in debt resulting from the DeMint plan would total $1.3 trillion (5.5 percent of GDP) by 2018, and $3.5 trillion (3.8 percent of GDP) in 2050. The McCrery proposal has somewhat different effects on Social Security because it proposes to fund individual accounts from General Fund revenues, but it has exactly the same effect on federal debt as the DeMint plan.

a. For an analysis of the 2005 DeMint plan and the McCrery plan, see Jason Furman and Robert Greenstein, "The DeMint and McCrery Social Security Plans," Center on Budget and Policy Priorities, revised July 19, 2005.

the debt. (If the budget outside of Social Security were balanced and the Treasury were using the payroll taxes borrowed from Social Security to pay down the debt, diverting those revenues to private accounts would still result in higher levels of debt than would occur if the taxes were not diverted).

Proponents of private accounts dismiss the increased borrowing and interest costs caused by private accounts as "transition costs," since the cost of establishing the accounts would eventually be

offset by reductions in Social Security benefits for workers who opened a private account.[3] However, the additional debt created by President's plan would continue growing as a share of GDP until 2044, when it would peak at 20.5 percent of GDP, and would remain as high as 10.6 percent of GDP in 2061. A problem that will not begin to recede for four decades is difficult to dismiss as simply a "transition cost."

Moreover, the eventual reduction in the debt incurred in order to fund private accounts would depend on future reductions in Social Security benefits being carried out as planned. It is by no means certain this would happen, especially if the securities held by private accounts earned less than proponents predict and pressure consequently grew for the offsetting benefit reductions to be scaled back.

Additional interest payments resulting from private account plans would make it harder to maintain important federal programs and avoid unsustainable deficits.

The added interest payments during the several-decades-long "transition" period would place more pressure on the federal budget, which already faces growing shortfalls in coming decades because of demographic pressures, rising health care costs, and tax cuts. These additional interest payments would make it harder to maintain important federal programs and avoid unsustainable deficits. In addition, the increase in federal debt that resulted from a private accounts plan could contribute to or exacerbate a fiscal crisis that some experts fear may be triggered at some point by continuing high federal deficits.

It is important to note that Social Security reform plans exist that restore solvency and do *not* increase debt and interest payments. A plan proposed by economists Peter Diamond of MIT and Peter Orszag of the Brookings Institution that does not include private accounts would restore solvency and *reduce* federal debt in every year; by 2050, this plan would reduce debt by $23.7 trillion (or 25.9 percent of GDP) and reduce interest payments by $1.3 trillion (or 1.4 percent of GDP).

Changes in Debt and Interest Resulting from Proposed Social Security Plans

The table on the next page shows the increases in federal debt, and the interest payments on that additional debt, that would result from the private account plans discussed above and from several additional plans. (See Appendix A for a description of the plans included in the table and Appendix B for the methodology used to determine the estimates, which include adjustments to make all estimates consistent with the assumptions of the 2005 report of the Social Security Trustees and with the assumption that private account plans would start in 2009, as the President has proposed).

The table also shows the reductions in federal debt and interest payments that would result from two plans that do not include private accounts. Finally, the table shows the percentage reduction in the 75-year Social Security shortfall that each plan would achieve, excluding the effects of transfers from the rest of the government.[4]

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[3] Actually, under the President's plan, these benefit reductions would not fully offset the diversion of payroll taxes into the accounts, even over the long term. See page 12.

[4] The effects of transfers from the General Fund to the Social Security trust funds that are not paid for by spending cuts or new revenues are excluded because the General Fund is already in deficit, is projected to suffer growing deficits in the decades ahead, and would have to borrow every penny it transfers to Social Security. According to Douglas Holtz-

ADDITIONAL FEDERAL DEBT AND INTEREST IN 2050 RESULTING FROM PROPOSED SOCIAL SECURITY PLANS
(Over and Above the Levels that Would Otherwise Exist)

Plan	Increase (+) / Reduction (-) in Debt by 2050	Increase (+) / Reduction (-) in Annual Interest Payments in 2050		Reduction (-) / Increase (+) in 75-Year Social Security Shortfall**
	Percent of GDP	Percent of GDP	Billions of Dollars based on 2005 GDP*	Percent Change
Bush	19.3%	1.1%	$133	-24%
Pozen	3.8%	0.2%	$29	-51%
Hagel	26.5%	1.5%	$182	-8%
Graham	20.8%	1.2%	$145	-49%
Johnson	65.3%	3.7%	$451	+30%
Kolbe-Boyd	1.2%	0.1%	$11	-66%
DeMint (2003)	79.7%	4.4%	$541	+120%
Shaw	40.1%	2.2%	$272	+7%
Sununu-Ryan	93.7%	5.2%	$635	+129%
Diamond-Orszag	-25.9%	-1.4%	-$173	-100%
Ball	-28.2%	-1.5%	-$188	-92%

* This is calculated by multiplying the estimated additional interest payments in 2050 as a percent of GDP by the GDP projected for 2005.

** Excluding the effect of proposed transfers to Social Security from the rest of the budget. These estimates of the effect of plans on solvency are based directly on estimates of each plan (other than the President's) by the Social Security actuaries, without any adjustment to reflect the assumptions of the Social Security Trustee's 2005 report or a delay in the start of private accounts until 2009. Such adjustments would have little or no effect on the estimated impact of the plans on Social Security solvency over 75 years. The estimate of the effect of the President's plan on solvency is by Jason Furman of the Center on Budget and Policy Priorities.

President's Plan Would Increase Debt and Interest Costs

The President has proposed that workers be allowed to choose to have up to four percentage points of their payroll tax contribution to Social Security diverted into a private account.[5] When an individual who has opted for a private account is eligible to retire under Social Security, the money diverted to his or her private account would have to be repaid to Social Security, along with an interest charge equal to 2.7 percent plus inflation on the amounts diverted. This repayment would be made in the form of a reduction in Social Security benefits.[6]

Eakin, the Director of the Congressional Budget Office, such transfers "would not address the broader budgetary and economic issues stemming from the fiscal imbalances in the Social Security system." Testimony before the Senate Committee on Finance, May 25, 2005, p. 7

[5] Under current law, the Social Security payroll tax totals 12.4 percent of an individual's wages (on wages up to $90,000 in 2005), with 6.2 percent taken out of the employee's pay and 6.2 percent paid by the employer. Under the President's plan, there would initially be a dollar limit of $1,000 on the amount that could be diverted to a private account, but that limit would increase gradually until everyone could divert 4 percent of taxable earnings into an account.

[6] See Jason Furman, "How The Individual Accounts in the President's New Plan Would Work," Center on Budget and Policy Priorities, revised February 4, 2005. The President initially proposed that the offset to Social Security benefits be calculated assuming an interest charge of 3 percent plus inflation, but in July, he changed the proposed interest charge to

Under the President's plan, the diversion of payroll taxes into private accounts would begin in 2009. With the federal government facing deficits "as far as the eye can see" under current policies, every dollar diverted into private accounts would represent an additional dollar that the federal government would have to borrow.[7]

Since the holders of private accounts would not begin to repay Social Security for the amounts diverted into their private accounts until they retired, the debt required to fund the private accounts would grow for decades. For example, a worker who is 25 in 2009 and retires at age 65 would have part of his or her payroll taxes diverted every year from 2009 through 2048 before *beginning* to repay Social Security through reduced monthly benefits in 2049. Even for workers who retire only a few years after the private account plan takes effect, the total payroll taxes diverted to their private accounts would exceed their total repayments to Social Security for several decades.

The President's plan also includes another proposal (known as "sliding-scale benefit reductions," see the description of the President's plan in Appendix A) that would reduce Social Security benefits below the levels scheduled under current law for most beneficiaries not currently near retirement age, whether or not they have a private account. By itself, that proposal would reduce federal debt and interest payments. Even with these benefit reductions, however, the President's plan would have the following budgetary effects, as a result of the long delay in repaying the payroll taxes diverted to private accounts:

By 2050, the additional debt accumulated to finance the President's plan would total $17.7 trillion.

- By 2050, the additional debt accumulated to finance the President's plan would total $17.7 trillion, which is equal to 19.3 percent of the gross domestic product projected for that year. (At the end of 2005, the *total* federal debt held by the public — that is, the net borrowing since the founding of the nation — is expected to equal 38 percent of GDP. Thus, the additional borrowing necessitated by the President's plan would, by 2050, be equal to more than half of the net borrowing the federal government undertook in its first 216 years.)

- The additional debt would require additional interest payments totaling $988 billion in 2050, which would equal 1.1 percent of GDP. (This year, *total* interest payments on the debt accumulated since the nation's founding are expected to equal 1.5 percent of GDP.)

Higher Interest Costs Would Further Squeeze an Already Tight Budget

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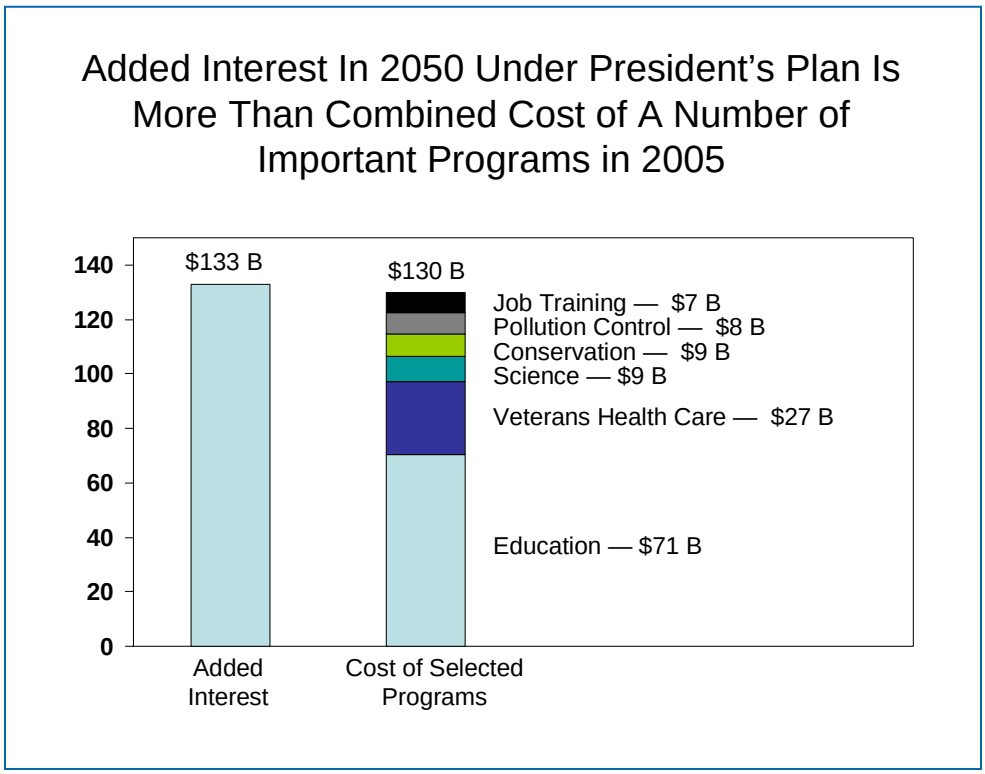
2.7 percent plus inflation. That reduced the benefit offset and increased the additional debt and interest that would result from the plan, further worsening Social Security solvency. See also, Jason Furman, "The Impact of the President's Proposal on Social Security Solvency and the Budget," Center on Budget and Policy Priorities, Revised July 22, 2005.

[7] As noted above, the payments to private accounts would represent new spending by the federal government, and there would be no corresponding reduction in current spending or increase in current revenues. Therefore, deficits and borrowing would increase. Even if one accepts the assertion that the new spending would be "paid for" by the payroll taxes that are diverted, it is clear that the government would have to borrow additional money to pay for the current spending that the diverted taxes would otherwise have financed.

To understand the budgetary impact of these additional interest payments, consider that in today's economy, 1.1 percent of GDP (the amount of the added interest payments in 2050) is equal to $133 billion. That is more than the $130 billion the federal government will spend this year on education ($71 billion), veterans' health care ($27 billion), science ($9 billion), conservation ($9 billion), pollution control ($8 billion), and job training ($7 billion) programs *combined*, according to the Office of Management and Budget. In other words, the added interest costs under the President's proposal would be more than the amount the federal government now spends on all of these priorities (see figure on this page).

Programs such as these are already under pressure without the additional pressure that would come from higher interest costs. The President's budget for fiscal year 2006 proposes cutting education entitlement programs (primarily student loan programs) by $7.2 billion over the next five years. It also proposes cutting annually appropriated (discretionary) funding for education by $28.5 billion over five years and by $9.2 billion — or 14 percent — in 2010 alone.[8] In addition, for 2010, the budget proposes a 16 percent cut in funding for veterans' medical care, a 13 percent cut in funding for science programs, a 25 percent cut in funding for conservation programs, and a 20 percent cut in funding for pollution control programs.



Efforts to cut important programs such as these are sure to intensify after 2010 as a growing number of baby boomers retire and the costs of Social Security, Medicare, and Medicaid rise more rapidly.[9] The addition of substantial new interest payment costs would make it still harder to maintain adequate funding in these areas.

Reduction of "Transition" Debt is Far Off and Uncertain

[8] These cuts are relative to the level of funding enacted for 2005, adjusted only for inflation.

[9] See, for instance, Congressional Budget Office, "The Long-Term Budget Outlook," December 2003.

Many proponents of private accounts dismiss the increased debt and interest payments caused by private accounts as "transition costs." This term implies that the increase in debt and interest payments would peak in just a few years and then rapidly decline. In fact, the additional debt needed to finance the President's plan would continue to increase as a percentage of GDP until reaching 20.5 percent of GDP in 2044 and would remain as high as 10.6 percent of GDP in 2061. It is hard to dismiss as short-term a problem that will only begin to recede 39 years from now and will remain substantial 56 years from now. (Under several other plans, the additional debt resulting from private accounts would continue to grow relative to the size of the economy for many years beyond 2044, the year in which debt would peak under the President's plan.)

It also is important to note that even the eventual reduction, many decades from now, of most of the debt accumulated to fund the private accounts would depend on future reductions in Social Security benefits actually being carried out as planned. That may not happen if private account investments do not perform as well as proponents claim (see box on the next page). If large numbers of people lose money through private accounts — in other words, if the reduction in Social Security benefits imposed on accountholders to offset the diversion of payroll taxes to their accounts exceeds the value of the accounts themselves — there likely will be tremendous political pressure to scale back those benefit reductions. If that occurred, the increases in debt and interest payments would be even larger and longer-lasting.

Interest on outstanding *explicit* debt must be paid, regardless of the status of the federal budget and the economy.

Additional Debt Could Harm the Economy

Proponents of private accounts also argue that the added borrowing required to fund the accounts merely represents an explicit recognition of the implicit debt reflected in the promise to pay future Social Security benefits.[10] The reality is quite different.

In the absence of an unprecedented default by the federal government (which could have catastrophic effects on the budget, the financial markets, and the economy), explicit debt must be paid back or rolled over when it comes due. Similarly, interest on outstanding explicit debt must be paid, regardless of the status of the federal budget and the economy. That is in stark contrast to the implicit debt represented by the projected future shortfall in Social Security, since Social Security benefits and taxes can be modified if circumstances warrant. Such modifications are exactly what happened in 1983, when Congress averted Social Security's impending insolvency by adopting a bipartisan plan that increased payroll taxes and gradually reduced benefits.

[10] They also argue that national saving will not be affected because federal government dissaving (bigger deficits and borrowing) will be entirely replaced by the new saving in the private accounts. This would be true if there were no change in private saving outside of the accounts. Individuals with private accounts, however, may think that they are wealthier because of the private accounts in their names and reduce their other saving below what it would have been without the private accounts. In that case, total national saving would be somewhat smaller because of the accounts.

Losses in Private Accounts Would Be Likely For Many People

Proponents of private accounts seem to promise that returns on the accounts will always exceed the 3.0 percent real (inflation-adjusted) interest rate that the President initially proposed to use to determine the repayment to Social Security, much less the 2.7 percent rate he is now proposing. Yet there is a substantial risk that for many people, this would not be the case.[a]

Professor Robert Shiller of Yale, an acknowledged authority on the stock market, has estimated that private accounts structured as the President has proposed and invested (as the President also has proposed) in a "life-cycle" portfolio (which reduces risk as a person nears retirement), would lose money — that is, have a real rate of return of less than 3.0 percent — between about one-third and two-thirds of the time.[b] Using the same estimating approach, private accounts would earn a real rate of return of less than 2.7 percent between one-fifth and three-fifths of the time.

The lower estimate, which is that private accounts would lose money about 20 percent of the time under the President's revised proposal, is based on historical average market rates of return in the United States. However, like many other market experts, Professor Shiller believes that average future returns are likely to be lower than average past returns. Under what he believes to be more realistic assumptions about future rates of return, it is estimated that private accounts structured and invested as the President has proposed would lose money 59 percent of the time.

If anything approaching 59 percent of the people with private accounts find that their Social Security benefits are being reduced by more than the value of their private accounts, it is hard to imagine that lawmakers will not seriously consider scaling back the Social Security benefit reductions.

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a. The White House has acknowledged that a private account owner would come out ahead under the President's initial proposal only if the account earns a real rate of return greater than three percent. At a February 2 briefing, a senior Administration official said "…in return for the opportunity to get the benefits from the personal account, the person forgoes a certain amount of benefits from the traditional system. Now, the way the election is structured, the person comes out ahead if their personal account exceeds a 3 percent real rate of return, which is the rate of return that the trust fund bonds receive. So, basically, the net effect on an individual's benefits would be zero if his personal account earned a 3 percent real rate of return." Under the President's revised proposal, the break-even rate of return would be 2.7 percent.

b. Robert Shiller, "The Life-Cycle Personal Accounts Proposal for Social Security: An Evaluation," March 2005.

The Administration itself recognizes that promises to pay Social Security benefits at currently scheduled levels do not represent the same sort of firm legal obligation as promises to pay interest on federal debt. This is clear from the Administration's argument that the benefit levels under its plan should be compared to the benefits that Social Security could afford to pay given the long-term shortfall in the Social Security trust funds, rather than to the benefits that are currently promised. Furthermore, the President — and many others who have put forth Social Security plans — have proposed cuts in Social Security benefits below currently promised levels.

Financial markets, both domestic and foreign, are likely to be more troubled by the explicit debt incurred to fund private accounts than by the implicit long-term obligations represented by Social Security. Federal Reserve Chairman Alan Greenspan has testified that *if* financial markets do not distinguish between implicit and explicit debt, borrowing to fund private accounts would have no impact on the market. "But," he added, "we don't know that. And if we were to go forward in a large way and we were wrong, it would be creating more difficulties than I would imagine."[11]

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[11] Alan Greenspan, testimony before the Senate Committee on Banking, Housing, and Urban Affairs, February 16, 2005.

Furthermore, the claim that the new explicit debt merely replaces existing implicit debt depends on the assumption that future reductions in Social Security benefits will occur as planned, which might not be the case (as noted above). To the extent that the planned benefit reductions do not occur, the government will be left with both the new explicit debt and the old implicit debt. Put another way, under a private account plan, the accumulation of large amounts of explicit debt is certain, while the reduction in implicit debt is tenuous.

Even if the additional debt incurred to finance private accounts does not lead immediately to higher interest rates or other signs of concern in financial markets, it might contribute to — and could make it much harder for the nation to deal with — a future financial and economic crisis. A number of experts, including former Treasury Secretary Robert Rubin, Brookings Institution economist Peter Orszag, and Wall Street economist Allen Sinai, have warned that the large, sustained budget deficits projected under current policies (not including the effect of private account plans) could have negative consequences that are more sudden and serious than conventional economic analyses have suggested.[12] Such a scenario also has been described by the Congressional Budget Office:

Additional debt could make it much harder for the nation to deal with a future financial and economic crisis.

> "Taken to the extreme, such a path [i.e., a path of large persistent budget deficits] could result in an economic crisis. Foreign investors could stop investing in U.S. securities, the exchange value of the dollar could plunge, interest rates could climb, consumer prices could shoot up, or the economy could contract sharply. Amid the anticipation of declining profits and rising inflation and interest rates, stock markets could collapse and consumers might suddenly reduce their consumption. Moreover, economic problems in the United States could spill over to the rest of the world and seriously weaken the economics of the U.S. trading partners."[13]

It is hard to imagine that financial markets would ignore the additional debt caused by private accounts if a situation develops in which, as Rubin, Orszag, and Sinai warn, "ongoing deficits may severely and adversely affect expectations and confidence, which in turn can generate a self-reinforcing negative cycle among the underlying fiscal deficit, financial markets, and the real economy."[14]

The additional debt from establishing private accounts would likely contribute to such a negative cycle and make it more difficult for the government to restore confidence in its fiscal situation.

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[12] See Robert E. Rubin, Peter R. Orszag, and Allen Sinai, "Sustained Budget Deficits: Longer-Run U.S. Economic Performance and the Risk of Financial and Fiscal Disarray," paper presented at the AEA-NAEFA Joint Session, January 4, 2004.

[13] The Congressional Budget Office, "The Long-term Budget Outlook," December, 2003, p.15.

[14] Rubin, Orszag, and Sinai, "Sustained Budget Deficits: Longer-Run U.S. Economic Performance and the Risk of Financial and Fiscal Disarray," p. 1.

Regarding the problems that could be triggered by large, persistent budget deficits, Gregory Mankiw, the former chairman of President Bush's Council of Economic Advisers, wrote a number of years ago, in a paper authored with another economist:

> "We can only guess what level of debt will trigger a shift in investor confidence, and about the nature and severity of the effects. Despite the vagueness of fears about hard landings, these fears may be the most important reason for seeking to reduce budget deficits. … [A]s countries increase their debt, they wander into unfamiliar territory in which hard landings may lurk. If policymakers are prudent, they will not take the chance of learning what hard landings in G-7 countries are really like."[15]

Surely, this admonition should apply to the prospect of amassing large amounts of additional debt to finance private accounts.

All Private Accounts Proposals to Date Would Increase Debt and Interest Costs

Not just the President's Social Security plan but all plans proposed to date that include private accounts would increase federal debt and interest payments significantly for a number of decades, even when other elements of those plans that reduce Social Security benefits are taken into account.[16] The plan proposed by Robert Pozen would increase debt by $3.5 trillion (3.8 percent of GDP) by 2050. A plan proposed by Senator Chuck Hagel (R-Nebraska) would increase debt by $24.2 trillion (26.5 percent of GDP) by 2050.

All private account plans proposed to date would increase federal debt and interest payments significantly for a number of decades.

Fiscally dubious as these proposals may be, other proposals are even more so. Senator John Sununu (R-New Hampshire) and Representative Paul Ryan (R-Wisconsin) have introduced a plan that would increase federal debt by $85.8 trillion, or 93.7 percent of GDP, by 2050.[17] The added interest payments in 2050 would equal 5.2 percent of GDP, which is equivalent to $635 billion in today's economy — more than the entire cost of Social Security this year.

Under the Sununu-Ryan plan, debt and interest payments would grow even larger after 2050. By 2079, the additional debt would total 132 percent of GDP, and interest on that additional debt would equal 7.4 percent of GDP, equivalent to $899 billion in today's economy. These additional interest payments would equal almost two-fifths of what the federal government spends today on everything other than interest. There is

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[15] Laurence Ball and N. Gregory Mankiw, "What Do Budget Deficits Do?" In *Budget Deficits and Debt: Issues and Options*." Federal Reserve Bank of Kansas City, 1995, p.117.

[16] In fact, the only way to avoid having private accounts lead to such increases would be implement immediate increases in taxes or reductions in spending (in Social Security or other programs) sufficient to offset the immediate cost of the private accounts.

[17] As noted above, these estimates do not take into account the potential effect of caps on non-Social Security spending proposed by Senator Sununu and Representative Ryan. See Appendix A for a description of the proposal and an explanation of why those possible effects are not included in these estimates.

no way the federal government could make these additional interest payments without substantial tax increases or massive cuts in most areas of the budget.

Additional Debt and Interest Costs Are Not Necessary to Restore Solvency

The significant increases in debt associated with private account plans are not a necessary result of restoring Social Security solvency. Despite the trillions of dollars in borrowing needed to fund them, the President's private accounts would do nothing to help restore solvency.

Plans that avoid getting sidetracked into private accounts can restore Social Security solvency and *reduce* federal debt.

By themselves, in fact, the private accounts in the President's plan would make the Social Security shortfall somewhat larger than it would be under current law, even over an "infinite horizon."[18] This is because the diversion of payroll taxes to private accounts would never be entirely offset by the benefit reductions imposed on holders of private accounts, since the 2.7 percent interest rate used to determine the offset is less than the estimated interest rate that would be earned on the payroll taxes if they were not diverted to private accounts. In addition, in some cases the benefit reduction would not occur or would be less than the amount diverted to the account because of other aspects of the President's proposal. For example, if an unmarried worker died before retirement, his or her private account would go to his or her estate but there would be no offsetting reduction in Social Security benefits.[19]

By contrast, plans that restore solvency without getting sidetracked into private accounts can *reduce* federal debt substantially. For instance, a plan proposed by economists Peter Diamond of MIT and Peter Orszag of the Brookings Institution would, based on the estimates of the Social Security actuaries, reduce federal debt by $23.7 trillion (25.9 percent of GDP) by 2050 and by even larger amounts after that.

[18] See Jason Furman, "The Impact of the President's Proposal on Social Security Solvency and the Budget," Center on Budget and Policy Priorities, Revised July 22, 2005.

[19] Ibid.

APPENDIX A
Brief Description and Estimated Debt and Interest Effects of Plans

Plans with Private Accounts

President Bush's Plan

(No legislation has been introduced. This description and the analysis of the plan in this paper are based on a July 15, 2005 memo from Stephen C. Goss, the Chief Actuary of the Social Security Administration,[20] to Charles P. Blahous, Special Assistant to the President for Economic Policy, Presidential statements, and background briefings and documents provided by the Administration.)

The President has advanced a plan that has two main components: private accounts funded with Social Security payroll taxes and sliding-scale reductions that would reduce Social Security benefits below the levels scheduled under current law. The private accounts (including eventual reductions in Social Security benefits designed to largely offset over the long run the effects on the Social Security trust funds of the diversion of payroll tax revenues) do not contribute to Social Security solvency.[21] And, even with the proposed sliding-scale benefit reductions, the President's plan does not achieve Social Security solvency over 75 years. It reduces the 75-year shortfall by only 24 percent.

The additional funds needed to pay for private accounts greatly exceed the savings from the proposed benefit cuts in coming decades. As a result, the President's plan would increase federal debt by substantial amounts, as shown in the table below.

Effect of Bush Plan on Federal Debt and Interest

	2018	2028	2038	2050
Increase in debt				
Current dollars	$1.4 trillion	$4.9 trillion	$10.6 trillion	$17.7 trillion
Percent of GDP	6.0%	13.9%	19.5%	19.3%
Interest on increased debt				
Current dollars	$72 billion	$269 billion	$589 billion	$988 billion
Percent of GDP	0.3%	0.8%	1.1%	1.1%
In 2005 economy	$38 billion	$93 billion	$132 billion	$133 billion

[20] All of the actuarial memos discussed in this paper except this one are available at: http://www.ssa.gov/OACT/solvency/index.html.

[21] The President's private accounts — as well as other private account plans discussed in this paper — substantially worsen Social Security's projected shortfall over 75 years. This is in large part due to the fact that private accounts are funded up front while most of the offsetting reductions in Social Security benefits occur decades after the contributions to the private accounts have been made. Many private account proposals, including the President's, would worsen solvency over the infinite horizon, although not by as much as they would worsen solvency over 75 years. See Jason Furman, "The Impact of the President's Proposal on Social Security Solvency and the Budget," Center on Budget and Policy Priorities, Revised July 22, 2005.

Private Accounts

The President proposes to give workers the option to divert a portion of their Social Security payroll taxes to private accounts. The amount diverted would equal up to 4 percent of a worker's taxable wages (out of the Social Security payroll tax of 12.4 percent of taxable wages). When the plan would first take effect in 2009, only workers born from 1950 through 1965 could participate, and the diverted payroll tax could not exceed $1,000 a year for any worker. Eventually, all workers born after 1949 would be eligible and would be allowed to divert up to 4 percent of taxable wages.

When a worker who had chosen to participate in the private account plan became eligible to receive retirement benefits under Social Security, the worker would have to repay Social Security for the payroll taxes diverted to his or her private account. The repayment would be made in the form of a permanent reduction in the worker's monthly Social Security benefit that was actuarially equivalent to the total payroll taxes diverted, plus interest on the diverted taxes compounded at an annual rate of 2.7 percent plus inflation.[22]

Benefit Reductions

The President has proposed sliding-scale benefit cuts (also known as "progressive price indexing") similar to those proposed by Robert Pozen, an investment company official who served on the President's Social Security Commission. Under the President's plan, these cuts would not apply to Social Security disability benefits, but they would apply to retirement and survivor benefits, even for those who do not choose private accounts.

Under current law, initial Social Security benefits for each generation grow in tandem with average wages in the economy — this is known as "wage indexing." This ensures that Social Security benefits for each generation reflect the current standard of living. So-called "price indexing" would change the Social Security benefit formula so that initial benefits for each generation would keep pace only with prices, rather than wages. Because prices generally increase more slowly than wages, this would result in increasingly large benefit reductions over time, with benefits replacing a shrinking portion of workers' average lifetime wages as each new generation reaches retirement age.

Progressive price indexing would use price indexing to determine initial benefits for "maximum earners," those who currently make $90,000 or more a year (in 2005 dollars). Lower-income workers — under Pozen's and the President's plan, the bottom 30 percent of earners, or those who make less than $20,000 a year currently — would continue to have their benefits determined under the current, wage-adjusted formula. Workers with average lifetime wages between $20,000 and $90,000 would get benefits somewhere between the currently promised benefits and the lower benefits they would get under full price indexing. For example, a worker making $36,600 annually would be subject at retirement in 2075 to a 28 percent benefit reduction, while a worker making

[22]The President initially proposed that the benefit offset be calculated with a 3 percent plus inflation interest rate. In July, however, he modified his proposal to assume a rate of 2.7 percent plus inflation. This makes the benefit offset smaller than in his initial proposal and the increases in federal deficits and debt and the negative effect on Social Security solvency resulting from the plan larger. Thus, it would take even larger as-yet-unspecified cuts in Social Security benefits, increases in payroll revenues, or transfers from the rest of government to achieve solvency than it would have under the President's original plan.

$58,560 annually would be subject to a 42 percent reduction.[23] By 2100, if sliding-scale benefit reductions continued, *all* workers earning more than $20,000 would have their benefits reduced to the level of the benefits received by workers who make $20,000, despite their higher payroll tax contributions.[24]

In addition to shielding Social Security disability benefits from these sliding-scale reductions, the President has also proposed establishing a new minimum Social Security retirement benefit that would raise benefits for some poor seniors above the levels they would receive under current law.

Pozen Plan

(No legislation has been introduced. This description and the analysis of the plan in this paper are based on a February 10, 2005, memo to Mr. Pozen from Stephen C. Goss, Chief Actuary of the Social Security Administration.)

Robert Pozen, an investment company executive who served on President Bush's Social Security Commission, has proposed a plan that includes private accounts funded with Social Security payroll taxes and sliding-scale benefit cuts that would reduce Social Security benefits below the levels scheduled under current law. As in the President's plan, the private accounts (including eventual reductions in Social Security benefits designed to offset over the long run the effects on the Social Security trust funds of the payroll tax diversion) would not contribute to Social Security solvency even over an infinite horizon and would worsen the Social Security shortfall over the next 75 years. The sliding-scale benefit cuts would contribute to solvency, but not enough to achieve solvency over 75 years. Taking into account the private account plan and the sliding-scale benefit cuts, the Pozen plan would close a little more than half (51 percent) of the 75-year Social Security solvency gap. (Pozen's plan would close more of the gap than would the President's plan — which similarly includes private accounts and sliding-scale benefit reductions — because Pozen would divert a smaller portion of Social Security payroll taxes to private accounts than the President has proposed and would have a smaller subsidy for the accounts (Pozen has an inflation-adjusted offset of 3.0 percent while the President is proposing 2.7 percent), and because the sliding-scale benefit cuts would apply to all benefits under the Pozen plan, including Social Security disability benefits. Under the Presidents' plan, the sliding-scale benefit reductions would not apply to disability benefits.)

The Pozen plan also contains a provision that requires automatic transfers from the General Fund to the Social Security trust funds if the trust funds would not have sufficient funds to cover expected benefits in the coming 12 months. This automatic General Fund transfer guarantees Social Security solvency. It should be noted, however, that the General Fund is already in deficit, is projected to suffer growing deficits in the decades ahead, and would have to borrow every penny it transfers to Social Security. According to the Director of the Congressional Budget Office, such transfers

[23] See Jason Furman, "How Would the President's New Social Security Proposals Affect Middle-class Workers and Social Security Solvency," Center on Budget and Policy Priorities, revised May 10, 2005.

[24] It is not clear whether Pozen or the President intend the sliding-scale benefit reductions to continue after 2078.

"would not address the broader budgetary and economic issues stemming from the fiscal imbalances in the Social Security system." [25]

The additional funds needed to pay for private accounts would greatly exceed the savings from the proposed benefit cuts in coming decades. As a result, the Pozen plan would increase federal debt by substantial amounts, as shown in the table below.

Effect of Pozen Plan on Federal Debt and Interest				
	2018	2028	2038	2050
Increase in debt				
Current dollars	$1.1 trillion	$3.3 trillion	$5.4 trillion	$3.5 trillion
Percent of GDP	4.9%	9.2%	9.9%	3.8%
Interest on increased debt				
Current dollars	$60 billion	$179 billion	$306 billion	$214 billion
Percent of GDP	0.3%	0.5%	0.6%	0.2%
In 2005 economy	$32 billion	$62 billion	$69 billion	$29 billion

Private Accounts

Mr. Pozen proposes to give workers the option to divert a portion of their Social Security payroll taxes from Social Security to private accounts. The amount diverted would be up to 2 percent of a worker's taxable wages (out of the Social Security payroll tax of 12.4 percent of taxable wages). Workers born after 1949 could participate. The diverted payroll tax could not exceed $3,000 a year — indexed for inflation after 2007 — for any worker. (According to the Social Security actuaries, this limitation would not begin to affect contributions for even the highest earners until 2048.)

When a worker who had chosen to participate in the private account plan became eligible to receive retirement benefits under Social Security, the worker would have to repay Social Security for the payroll taxes diverted to the private account on his or her behalf. The repayment would be made in the form of a permanent reduction in the worker's monthly Social Security benefit that is actuarially equivalent to the total payroll taxes diverted, plus interest on the diverted taxes compounded at an annual rate of three percent plus inflation.

Sliding-Scale Benefit Reductions

Mr. Pozen has proposed sliding-scale benefit cuts, which the President adopted in his plan. The only difference between the sliding-scale proposals is that Pozen would apply the reductions to all Social Security benefits (retirement, survivor, and disability benefits), while the President would not apply them to disability benefits.

[25] Douglas Holtz-Eakin, Director, Congressional Budget Office, "Options for Social Security: Budgetary and Distributional Impacts,." Testimony before the Committee on Finance, U.S. Senate, May 25, 2005, p. 7.

Hagel Plan

(Senator Chuck Hagel — R-NE — introduced S 540, "The Saving Social Security Act of 2005," on March 7, 2005. This description and the analysis of the plan in this paper are based on a March 10, 2005, memo to Senator Hagel from Stephen C. Goss, the Chief Actuary of the Social Security Administration, and Alice H. Wade, the Deputy Chief Actuary.)

Senator Hagel has proposed a plan that includes private accounts carved out of Social Security and several changes in the Social Security benefit formula that would reduce benefits below the levels scheduled under current law. As in other plans, the private accounts (including eventual reductions in Social Security benefits designed to offset over the long run the effects of the payroll tax diversion on the Social Security trust funds) would not contribute to Social Security solvency, even over an infinite horizon, and would worsen the Social Security shortfall over the next 75 years. The proposed reductions in the Social Security benefit formula would contribute to solvency, but not enough to achieve solvency over 75 years. Taking into account the private account plan and these other proposals, the Hagel plan would close about one-twelfth (8 percent) of the 75-year Social Security solvency gap

The Hagel plan also contains a provision that requires automatic transfers from the General Fund to the Social Security trust funds in any year for which the trust funds are projected to have insufficient funds to cover expected benefits. These automatic General Fund transfers would guarantee Social Security solvency, but as noted above in the description of the Pozen plan, they would do nothing to address the underlying budget and economic problems posed by Social Security's imbalances and would be paid entirely with borrowed money.

The additional funds needed to pay for private accounts would greatly exceed the savings from the proposed benefit cuts in coming decades. As a result, the Hagel plan would increase federal debt by substantial amounts, as shown in the table below.

Effect of Hagel Plan on Federal Debt and Interest

	2018	2028	2038	2050
Increase in debt				
Current dollars	$1.7 trillion	$6.1 trillion	$13.2 trillion	$24.2 trillion
Percent of GDP	7.4%	17.2%	24.2%	26.5%
Interest on increased debt				
Current dollars	$88 billion	$332 billion	$733 billion	$1,360 billion
Percent of GDP	0.4%	0.9%	1.3%	1.5%
In 2005 economy	$47 billion	$115 billion	$164 billion	$182 billion

Private Accounts

Senator Hagel proposes to give workers the option to divert a portion of their Social Security payroll taxes from Social Security to private accounts established in their names. The amount diverted would be up to 4 percent of a worker's taxable wages (out of the Social Security payroll tax

of 12.4 percent of taxable wages). Workers born after 1960 could participate in the private account plan.

When a worker who had chosen to participate in the private account plan became eligible to receive retirement benefits under Social Security, the worker would have to repay Social Security for the payroll taxes diverted to the private account on his or her behalf. The repayment will be made in the form of a permanent reduction in the worker's monthly Social Security benefit that is actuarially equivalent to the total payroll taxes diverted, plus interest on the diverted taxes compounded at an annual rate of three percent plus inflation.

Benefit Reductions

Senator Hagel has proposed several changes in the Social Security benefit formula that would reduce benefits below the levels scheduled under current law. These changes would apply to benefits for workers born after 1960. The proposed changes are: (1) to increase the normal retirement age to 68 for workers born after 1960; (2) to reduce Social Security benefits to account for increases in the life expectancy of beneficiaries; and (3) to increase the reduction in benefits currently imposed on those who retire before the normal retirement age and increase the boost in benefits given to those who delay retirement beyond the normal retirement age.

Graham Plan

(Senator Lindsey Graham — R-SC — introduced S 1878, "The Social Security Solvency and Modernization Act of 2003," on November 18, 2003. This description and the analysis of the plan in this paper are based on a November 18, 2003, memo to Senator Graham from Chris Chaplain, Actuary, Social Security Administration, and Alice H. Wade, Deputy Chief Actuary.)

Senator Graham has proposed a plan that includes private accounts carved out of Social Security and several changes in the Social Security benefit formula that together would reduce benefits below the levels scheduled under current law. Senator Graham also proposes that workers be given the option to forgo private accounts and receive benefits as scheduled under current law, but to pay higher payroll taxes (initially 14.4 percent of wages, instead of the current 12.4 percent). The Social Security actuaries assume that no one would choose this option.

As in other plans, the private accounts would not contribute to Social Security solvency, even over an infinite horizon, and would worsen the Social Security shortfall over the next 75 years. The proposed changes in Social Security benefits would contribute to solvency, but not enough to offset the effect of the private accounts and achieve solvency over 75 years. Taking into account the private account plan and these other proposals, the Graham plan would close about half (49 percent) of the 75-year Social Security solvency gap.

Senator Graham also proposes that the portion of income taxes collected on Social Security benefits that currently goes to the Medicare Hospital Insurance Trust Fund should go instead to the Social Security trust funds. In addition, the Graham plan contains a provision that requires transfers each year from the General Fund to the Social Security trust funds. The amount transferred would equal to 1.25 percent of payroll. The plan calls for a commission to recommend cuts in "corporate

welfare" programs to offset the cost of these transfers, but the transfers would be made whether or not these cuts occur. The redirection of income taxes from the Medicare HI Trust Fund and these automatic General Fund transfers would guarantee Social Security solvency, but as noted above in the description of the Pozen plan, they would do nothing to address the underlying budget and economic problems posed by Social Security and would be paid entirely from borrowed money, unless the "corporate welfare" cuts materialized.

Senator Graham also proposes that workers may voluntarily contribute up to $5,000 a year of their wages to their personal accounts. Workers earning less than $32,500 in 2006 who contribute their own money to the accounts would receive matching contributions from the government of up to $500 (the amount would depend on the income level of the worker and the amount of the voluntary contribution). The tax treatment of the voluntary contributions would be the same as for Roth IRAs — the contributions would come out of after-tax dollars but accumulations and distributions would be tax free. Government matching contributions and the distributions from those contributions would be entirely tax free. This aspect of the proposal has no effect on Social Security solvency but would add substantially to federal deficits and debt.[26]

The additional funds needed to pay for private accounts greatly exceed the savings from the proposed benefit cuts in coming decades. The Graham plan would increase federal debt by substantial amounts, as shown in the table below.

Effect of Graham Plan on Federal Debt and Interest				
	2018	2028	2038	2050
Increase in debt				
Current dollars	$2.5 trillion	$7.3 trillion	$13.7 trillion	$19.1 trillion
Percent of GDP	11.0%	20.7%	25.1%	20.8%
Interest on increased debt				
Current dollars	$134 billion	$403 billion	$766 billion	$1,088 billion
Percent of GDP	0.6%	1.1%	1.4%	1.2%
In 2005 economy	$71 billion	$139 billion	$172 billion	$145 billion

Private Accounts

Senator Graham proposes to give workers the option to divert a portion of their Social Security payroll taxes from Social Security to private accounts. The amount diverted would be up to 4 percent of a worker's taxable wages (out of the Social Security payroll tax of 12.4 percent of taxable wages). The diverted payroll tax could not exceed $1,300 a year in 2006 — that limit would increase at the rate of the growth in wages after 2006 — for any worker. Workers born after 1948 would be eligible to participate in the private account plan.

[26] The matching contributions to the private accounts are included in the estimates of the Graham plan made by the Social Security actuaries, but it appears that the loss of tax revenues resulting from this proposal is not accounted for in the estimate. Since our estimate of the increase in federal debt resulting from the proposal is based on the actuaries' estimate, it would not include those effects if they are not reflected in the actuaries' estimate.

When a worker who has chosen to participate in the private account plan became eligible to receive retirement benefits under Social Security, the worker would have to repay Social Security for the payroll taxes diverted to the private account on his or her behalf. The repayment would be made in the form of a permanent reduction in the worker's monthly Social Security benefit that is actuarially equivalent to the total payroll taxes diverted, plus interest on the diverted taxes compounded at an annual rate equal to the yield from long-term U.S. bonds minus 0.3 percent.

Benefit Reductions

Senator Graham has proposed several changes in Social Security benefits. One is to use price indexing rather than wage indexing to set initial benefits for retirement, survivor, and disability benefits. Under current law, initial Social Security benefits for each generation grow in tandem with average wages in the economy. This is known as "wage indexing." It ensures that Social Security benefits for each generation reflect the current standard of living. So-called "price indexing" would change the Social Security benefit formula so that initial benefits for each generation would keep pace only with prices, rather than average wages. Because prices generally increase more slowly than wages, this would result in increasingly large benefit reductions over time as compared to the current benefit structure, with benefits replacing a shrinking portion of workers' average lifetime wages as each new generation reached retirement age. This proposal would, by itself, more than close Social Security's 75-year shortfall.

Senator Graham also proposes other changes that would increase Social Security benefits for some beneficiaries. He proposes to establish a minimum benefit for workers with a specified number of years of work and to increase the widow(er) benefit to 75 percent of the benefit that would be received by the couple if both spouses were still alive.

Johnson Plan

(Representative Sam Johnson — R-TX — introduced HR 530, "Individual Social Security Investment Act of 2005," on February 2, 2005, which reflects a proposal put forward by the Cato Institute. This description and the analysis of the plan in this paper are based on a February 15, 2005, memo to Representative Johnson from Stephen C. Goss, Chief Actuary, Social Security Administration, and Alice H. Wade, Deputy Chief Actuary.)

Representative Johnson has proposed a plan featuring private accounts that would be funded by Social Security payroll taxes and would entirely replace Social Security retirement benefits in the long run (all workers born after 1982 would have private accounts and no Social Security retirement benefits). Accumulations in and distributions from the private accounts would not be subject to the federal income tax. Under the Johnson plan, there would be no changes in benefits for workers born before 1950. Workers born after 1949 and before 1983 could choose not to establish private accounts, but their initial Social Security benefits would be price indexed, which would reduce the benefits below the levels scheduled under current law. Workers born after 1949 and before 1983 who did choose the private account option would, at the time they make this choice, receive for deposit into their private accounts "recognition bonds" representing any Social Security benefits they had earned up to that time. Workers with private accounts would have access to the assets in their private accounts when they retired, but would receive no Social Security benefits. If the

benefits from a private account are less than a specified minimum benefit (100 percent of the poverty line for workers with 35 years or more of work), the difference would be made up by a Social Security payment financed by the General Fund.

The diversion of payroll taxes to fund private accounts (and the proposal to exempt all distributions from the accounts from the federal income tax, rather than to treat the distributions the way that Social Security benefits are treated under the income tax) would worsen Social Security solvency. Over time, reducing the number of people receiving Social Security benefits (as the share of retirees with private accounts increased) and price-indexing the benefits of those who would still be receiving Social Security benefits would contribute to solvency, but not by enough to achieve solvency over 75 years. Altogether, these proposals would increase the 75-year Social Security solvency gap by almost one-third (30 percent).

The Johnson plan also contains a provision requiring automatic transfers from the General Fund to the Social Security trust funds as needed to maintain trust fund solvency. These automatic General Fund transfers would guarantee Social Security solvency, but as noted above, they would do nothing to address the underlying budget and economic problems posed by Social Security and would be paid entirely from borrowed money.

The additional funds needed to pay for private accounts would greatly exceed the savings from the proposed benefit cuts in coming decades. As a result, the Johnson plan would increase federal debt by substantial amounts, as shown in the table on the next page.[27]

[27] In their analysis of the Johnson plan, the Social Security actuaries record the cost of the "recognition" bonds issued to private accounts in the years when those bonds would be redeemed. We believe the cost should be recorded, and the increase in debt recognized, in the years that the bonds would be issued, because issuing the bonds, which are marketable, is equivalent to giving the recipient cash, and the bonds are proof of the government debt. As the Office of Management and Budget's instructions to agencies preparing the federal budget state: "When the Government receives or makes payments in the form of debt instruments (such as bonds, debentures, monetary credits, or notes) in lieu of cash, we record collections or outlays in the budget on a cash equivalent basis. The Government can borrow from the public to raise cash and then outlay the cash proceeds to liquidate an obligation, or, if authorized in law, it may liquidate the obligation by issuing securities in lieu of the cash. The latter method combines two transactions into one — borrowing and an outlay. Combining these transactions into one does not change the nature of the transactions. Since the two methods of payment are equivalent, we require you to record the same amount of outlays for both cases." (From OMB Circular A-11, June 2005, page 31 of Section 20.)

The actuaries assume that all of the bonds would be redeemed by 2050, so the debt and interest estimates for that year would not be affected by the actuaries' not treating the "recognition bonds" as debt. But estimates of the increases in debt and interest payments resulting from the Johnson plan would be higher than shown in the actuaries' memorandum and the table above in earlier years if the cost of the bonds were counted at the time that the bonds were issued.

Effect of Johnson Plan on Federal Debt and Interest				
	2018	2028	2038	2050
Increase in debt				
Current dollars	$4.3 trillion	$15.1 trillion	$35.1 trillion	$59.8 trillion
Percent of GDP	18.6%	42.5%	64.2%	65.3%
Interest on increased debt				
Current dollars	$225 billion	$821 billion	$1,940 billion	$3,372 billion
Percent of GDP	1.0%	2.3%	3.6%	3.7%
In 2005 economy	$119 billion	$283 billion	$435 billion	$451 billion

Private Accounts

Representative Johnson proposes to divert a portion of Social Security payroll taxes from Social Security to private accounts. The amount diverted would be 6.2 percent of a worker's taxable wages (out of the Social Security payroll tax of 12.4 percent of taxable wages). The private account plan would be mandatory for workers born after 1982. Those workers would not be eligible for any Social Security retirement benefits. They would be guaranteed a minimum benefit from their private account, with any difference between that benefit and the amount that their private account would provide being funded from the General Fund.

Workers born after 1949 and before 1983 could choose whether to participate in the private account plan. Those who chose to participate would (on the date the plan went into effect) be issued a "recognition" bond with a present value equal to the estimated Social Security worker retirement benefits they have earned as of that date. (Spouse, widow(er), and child benefits would not be taken into account in calculating the value of the bond.) The bond would be deposited in the worker's private account, would be marketable, and would be redeemable on the date that the worker reached normal retirement age. These bonds would be given to workers in lieu of the Social Security retirement benefits these workers have earned; these workers would not receive any Social Security retirement benefits when they retired.

Accumulations and distributions from the private accounts would be exempt from the federal income tax.

Benefit Reductions

Workers participating in the Johnson private account plan would receive no Social Security retirement benefits beyond the recognition bond equal to the estimated value of the retirement benefits they had earned before the private account plan started (although disability and young survivor benefits would remain unchanged for those in the private account plan).

For workers born after 1949 and before 1983 who chose not to participate in the private account plan, Social Security benefits (including disability and young survivor benefits) would be reduced by using price-indexing to determine their initial benefits.

Workers born before 1950 would remain in the current Social Security program and receive full benefits scheduled under current law.

Kolbe-Boyd Plan

(Representatives Jim Kolbe — R-AZ — and Alan Boyd — D-FL — introduced HR 440, the "Bipartisan Retirement Security Act of 2005," on February 1, 2005. It is essentially the same as a bill introduced in the previous Congress by Representative Kolbe and then-Representative Charles Stenholm — D-TX. This description and the analysis of the plan in this paper are based on a February 11, 2004, memo to Representatives Kolbe and Stenholm from Stephen C. Goss, Chief Actuary, Social Security Administration, Alice H. Wade, Deputy Chief Actuary, and Chris Chaplain, Actuary.)

Representatives Kolbe and Boyd have proposed a plan that includes private accounts carved out of Social Security and a number of changes in the Social Security benefit formula that overall would reduce benefits significantly below the levels scheduled under current law (as well as some changes that would increase benefits for some beneficiaries). In addition, Kolbe and Boyd propose to boost Social Security revenues (and increase total benefit payments by a lesser amount) by increasing the maximum taxable payroll amount for a worker so that 87 percent of all covered earnings would be taxable (currently, about 83 percent of earnings are below the maximum taxable amount).

As in other plans, the private accounts themselves would not contribute to Social Security solvency, even over an infinite horizon, and would worsen the Social Security shortfall over the next 75 years. The proposed changes in Social Security benefits and income taxes directed to Social Security would contribute to solvency, but not enough to offset the effects of the private accounts and achieve solvency over 75 years. Taking into account the private account plan and these other proposals, the Kolbe-Boyd plan would close almost two-thirds (66 percent) of the 75-year Social Security solvency gap.

Kolbe and Boyd also propose that the portion of income taxes on Social Security benefits that is currently dedicated to the Medicare HI Trust Fund be redirected to the Social Security trust funds. In addition, their plan contains a provision that provides for transfers each year from the General Fund to the Social Security trust funds. The amount transferred would equal a percentage of total payroll specified for each year, starting at 0.02 percent of payroll and increasing to 0.57 percent of payroll in years after 2062. The redirection of income tax revenues from the Medicare HI Trust Fund to Social Security and these automatic General Fund transfers would assure Social Security solvency, but as noted above in the description of the Pozen plan, they would not address the underlying budget and economic problems posed by Social Security.

Unless they were accompanied by reductions in spending by or increases in revenues to the General Fund, these transfers would be paid entirely from borrowed money. The legislation introduced by Representatives Kolbe and Boyd does include two specific proposals that would alter General Fund spending and revenues, but the fiscal effects of those two provisions are likely largely to cancel out each other. As a result, taken together, the two proposals are likely to have little net effect on projected General Fund deficits and thus would not "pay for" the plan's General Fund transfers to Social Security.

The first of those proposals is to use the Bureau of Labor Statistics' "superlative" measure of inflation to calculate annual cost-of-living adjustments for most indexed programs (including Social Security) and various annual adjustments in the income tax code. This would slightly reduce the size of annual COLAs and annual increases in various tax-code parameters, such as the personal exemption and the income levels at which the various tax brackets begin. The Congressional Budget Office estimates that these provisions would increase non-Social Security revenues by about 0.1 percent of GDP in 2025 and 0.2 percent of GDP in 2085 and would decrease non-Social Security spending by less than 0.1 percent of GDP in 2025 and slightly more than 0.1 percent of GDP in 2085.[28] The net present value of the resulting reduction in the non-Social Security deficit over the next 75 years is equal to slightly more than 0.1 percent of GDP.

The Kolbe-Boyd plan also contains a provision allowing workers voluntarily to contribute up to $5,000 a year of their wages to their personal accounts. Workers earning less than a specified amount who contribute their own money to the accounts would receive matching contributions from the government. (The amount of the matching contribution would depend on the income level of the worker and the amount of the voluntary contribution.) The tax treatment of the voluntary contributions would be the same as for Roth IRAs — the contributions would be made with after-tax dollars, but accumulations and distributions would be tax free. Government matching contributions and the distributions from those contributions also would be tax free. This aspect of the proposal has no effect on Social Security solvency but would reduce revenues by about 0.1 percent of GDP on a net present value basis over the next 75 years. The revenue losses — and deficit increases — resulting from this proposal thus would largely offset the deficit reduction that would result from the CPI proposal. The two provisions consequently would produce little or no net savings to "pay for" the plan's General Fund transfers.

Neither the non-Social Security effects of the CPI proposal nor the effects of the voluntary contribution proposal appear to be included in the actuaries' estimates of the Kolbe-Boyd plan.[29] Since our analysis is based on the actuaries' estimates, none of the non-Social Security effects of these two proposals are included in our estimates either. But, because the non-Social Security effects of the two proposals, taken together, would have little net effect on the budget, this exclusion does not have a significant effect on our analysis.

The additional funds needed to pay for private accounts would substantially exceed the savings from the proposed benefit cuts in coming decades. As a result, the Kolbe-Boyd plan would increase federal debt by sizeable amounts, as shown in the table on the next page.

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[28] Congressional Budget Office, "Long-Term Analysis of H.R. 3821, the Bipartisan Retirement Security Act of 2004," July 21, 2004.

[29] The effects of making the tax treatment of voluntary contributions to private accounts the same as the treatment accorded Roth IRAs is definitely not included in the actuaries' estimate because that provision was not in the version of the plan (H.R. 3821, introduced by Representatives Kolbe and Stenholm in 2004) that was estimated by the actuaries. Since the Kolbe-Stenholm plan did not include that provision, the combined effects of the CPI and voluntary contribution provisions of that plan would have reduced General Fund deficits enough to partially "pay for" the plan's proposed General Fund transfers to Social Security.

Effect of Kolbe-Boyd Plan on Federal Debt and Interest				
	2018	2028	2038	2050
Increase in debt				
Current dollars	$1.4 trillion	$3.3 trillion	$4.8 trillion	$1.1 trillion
Percent of GDP	5.9%	9.4%	8.7%	1.2%
Interest on increased debt				
Current dollars	$72 billion	$185 billion	$272 billion	$83 billion
Percent of GDP	0.3%	0.5%	0.5%	0.1%
In 2005 economy	$38 billion	$64 billion	$61 billion	$11 billion

Private Accounts

Representatives Kolbe and Boyd propose that 3 percent of a worker's first $10,000 of taxable earnings and 2 percent of earnings in excess of $10,000 be diverted from Social Security to a private account. (The $10,000 threshold is stated in 2006 dollars and would be increased after 2006 at the rate of growth in wages.) Workers born after 1950 would be eligible to participate in the private account plan. The distributions from the private accounts would be taxed as if they were Social Security benefits.

Benefit Reductions

Representatives Kolbe and Boyd have proposed a number of changes in the Social Security benefit formula that would significantly reduce benefits below the levels scheduled under current law. By themselves, these changes would reduce benefits by more than enough to achieve Social Security solvency. The changes that would reduce benefits are: a gradual reduction in the factors in the benefit formula (this provision would not apply to disability benefits); use of the Bureau of Labor Statistics' "superlative" measure of inflation to calculate annual cost-of-living adjustments, which would slightly reduce the adjustment in the typical year; an acceleration of the scheduled increase in the normal retirement age to 67 (by eliminating the currently scheduled hiatus in the move to the higher age); a modification of the early retirement reduction factors and the delayed retirement credits, to encourage workers to continue working longer; a reduction in benefits to reflect increases in life expectancy; and a limitation on the spousal benefit for couples with high earnings.

Representatives Kolbe and Boyd also propose other changes that would increase Social Security benefits for some beneficiaries. They propose to establish a minimum benefit for workers with a specified number of years of work and to increase the widow(er) benefit to 75 percent of the benefit that would be received by the couple if both spouses were still alive.

2003 DeMint Plan

(When he was in the House of Representatives in 2003, now-Senator Jim DeMint — R-SC — introduced H.R. 3177, "The Social Security Savings Act of 2003." This description and the analysis of the plan in this paper are based on a September 26, 2003, memo to then-Representative DeMint from Stephen C. Goss, Chief Actuary of the Social Security Administration..)

Representative DeMint proposed a plan that provides for private accounts carved out of Social Security. Social Security benefits would be reduced by amounts tied to the value of the private accounts at the time that a worker retires. Other than these benefit reductions, which would be designed to offset over the long run the effects on the Social Security trust funds of the diversion of payroll taxes to the private accounts, the plan proposes no changes in Social Security benefits. As under other private account plans, the private accounts (including the offsetting reductions in Social Security benefits) would not contribute to Social Security solvency, even on an infinite horizon. The actuaries' analysis shows that the DeMint plan would more than double (increase by 120 percent) the Social Security shortfall over the next 75 years.

The DeMint plan contains a provision that requires the Social Security trust funds to borrow by issuing Social Security Transition Bonds that would be held in the private accounts. In addition, DeMint would authorize automatic transfers from the General Fund to the Social Security trust funds in any year that the trust funds would not have sufficient funds to cover expected benefits. This borrowing and the automatic General Fund transfers would guarantee Social Security solvency, but as noted above, they would do nothing to address the underlying budget and economic problems posed by Social Security and would be paid entirely from borrowed money.

The additional cost of private accounts would greatly exceed the savings from the proposed benefit cuts in coming decades. As a result, the DeMint plan would increase federal debt by very large amounts, as shown in the table below.

Effect of 2003 DeMint Plan on Federal Debt and Interest

	2018	2028	2038	2050
Increase in debt				
Current dollars	$4.4 trillion	$14.4 trillion	$33.0 trillion	$73.0 trillion
Percent of GDP	19.2%	40.6%	60.5%	79.7%
Interest on increased debt				
Current dollars	$231 billion	$785 billion	$1,820 billion	$4,051 billion
Percent of GDP	1.0%	2.2%	3.3%	4.4%
In 2005 economy	123 billion	$271 billion	$408 billion	$541 billion

Private Accounts

Representative DeMint proposed to give workers the option of diverting a portion of their Social Security payroll taxes from Social Security to private accounts. The amount diverted would be from 3 percent to 8 percent of a worker's taxable wages (out of the Social Security payroll tax of 12.4

percent of taxable wages), depending on the amount of a worker's wages — workers with lower levels of wages would be able to contribute a higher percentage. (The Social Security actuaries estimate that the amount diverted would be, on average, 5.1 percent of wages.) Workers born after 1950 could participate.

When a worker who has chosen to participate in the private account plan became eligible to receive retirement benefits under Social Security, the worker would have to repay Social Security for the payroll taxes diverted to the private account on his or her behalf. The repayment would be made in the form of a permanent reduction in the worker's monthly Social Security benefit. The reduction would be related to the monthly payment amount that would be made from a full-life annuity that had a value equal to the value of the assets that would have accumulated in the private account if the account had always been invested 65 percent in broad-based equity funds and 35 percent in long-term federal bonds. The reduction in benefits would be equal to 90 percent of the hypothetical annuity for workers born in 1951. For workers born after 1980, the reduction would be equal to 100 percent of the annuity amount. For workers born between those years, the reduction would be reduced by amounts rising from 90 percent to 100 percent.

Shaw Plan

(Representative E. Clay Shaw — R-FL — introduced H.R. 750, "The Social Security Guarantee Plus Act of 2005," on February 10, 2005. This description and the analysis of the plan in this paper are based on a May 12, 2005, memo to Representative Shaw from Stephen C. Goss, Chief Actuary of the Social Security Administration, Alice H. Wade, Deputy Chief Actuary, and Chris Chaplain, Actuary.)

Representative Shaw has proposed a plan that provides for private accounts funded out of general revenues. When workers became eligible for retirement, they would receive 5 percent of the value of the accumulated assets in their accounts as a lump sum distribution. The worker would also receive a benefit paid by the Social Security trust funds that would be equal to the larger of the Social Security benefit scheduled under current law or the annuity payment that could be funded by the 95 percent of accumulated assets remaining in the private account. The amount remaining in the account would be transferred to the Social Security trust funds to cover the benefit the worker would receive from Social Security.

Representative Shaw also proposes several minor changes in the Social Security benefit formula that would slightly increase Social Security benefits above the levels scheduled under current law for some beneficiaries.

Solvency of the Social Security trust funds under the Shaw plan depends on large General Fund transfers, as general funds would be used to fund the private accounts. It also depends on the rate of return on private account assets. The Social Security actuaries estimate that the amount transferred from the General Fund to private accounts under the Shaw plan would, in present value terms, exceed the 75-year Social Security shortfall. However, if a risk-adjusted rate of return (the rate of return on Treasury bonds) is assumed on assets in the private accounts, the actuaries estimate that the Shaw plan would reduce the Social Security 75-year shortfall by only 56 percent. Without

the transfers from the General Fund that end up in the Social Security trust funds, the 75-year shortfall would be increased by 7 percent.

The funds needed to pay for the private accounts would greatly exceed the amounts transferred from the private accounts to the Social Security trust funds. As a result, the Shaw plan would increase federal debt by substantial amounts, as shown in the table below.

Effect of Shaw Plan on Federal Debt and Interest				
	2018	2028	2038	2050
Increase in debt				
Current dollars	$2.3 trillion	$7.3 trillion	$16.6 trillion	$36.8 trillion
Percent of GDP	10.0%	20.5%	30.4%	40.1%
Interest on increased debt				
Current dollars	$121 billion	$397 billion	$914 billion	$2,039 billion
Percent of GDP	0.5%	1.1%	1.7%	2.2%
In 2005 economy	$64 billion	$137 billion	$205 billion	$272 billion

Private Accounts

Representative Shaw proposes to establish voluntary private accounts for workers. The accounts would be funded by contributions from the General Fund of the Treasury (in the form of refundable tax credits). The amount contributed would equal 4 percent of each worker's taxable wages under Social Security, up to a limit of $1,000 a year (in 2006 dollars, adjusted for increases in wage growth after 2006).

When a worker who has chosen to participate in the private account plan (the Social Security actuaries assume that all workers will participate) became eligible to receive retirement benefits under Social Security, the worker would receive 5 percent of the value of the private account as a lump-sum payment. The worker also would receive a monthly benefit from Social Security equal to the monthly annuity value of the remaining assets in the private account or equal to the Social Security benefit scheduled under current law, whichever is larger. An amount equal to the estimated monthly annuity benefit would be transferred from the account to the Social Security trust funds each month. (If a retired beneficiary died with assets remaining in the private account, the remaining assets would be transferred to the Social Security trust funds. If transfers to the Social Security trust funds exhausted a private account before a beneficiary died, the beneficiary would continue to receive the full promised benefit from Social Security.)

Benefit Changes

Representative Shaw proposes several changes in the Social Security benefit formula that would increase benefits for some beneficiaries above the levels scheduled under current law. These changes include: increasing the aged or disabled widow(er) benefit for some beneficiaries; extending benefits to disabled surviving spouses under age 50; eliminating the rule that a surviving spouse can become eligible for disability benefits only if the disability occurs no later than seven years after the death of the worker (or seven years after the surviving spouse was no longer eligible for benefits that

he or she had been receiving as a result of caring for a surviving child who was under 16); providing credits toward Social Security benefits for time (up to five years) that a worker spends caring for a child under age 7 instead of working full-time outside of the home; halving the current reduction (known as the Government Pension Offset) in the Social Security spouse or widow(er) benefits that would otherwise be applied to a person who is receiving a pension from a federal, state or local government based on work that was not subject to Social Security payroll taxes (the offset would be reduced from two-thirds of the pension amount to one-third); and, phasing out the Social Security earnings test that applies to beneficiaries age 62 and over who have not yet reached the normal retirement age, under which Social Security retirement benefits are reduced by $1 for every $2 of earned income over a specified amount ($12,000 in 2005) that a beneficiary receives.[30]

Sununu-Ryan Plan

(Senator John Sununu — R-NH — and Representative Paul Ryan — R-WI — introduced "The Social Security Guarantee Plus Act of 2005," — S. 857 in the Senate and HR 1776 in the House — in April, 2005. This description and the analysis of the plan in this paper are based on an April 20, 2005, memo to Senator Sununu and Representative Ryan from Stephen C. Goss, Chief Actuary of the Social Security Administration.[31])

Senator Sununu and Representative Ryan have proposed a plan that provides for private accounts carved out of Social Security. When workers became eligible for retirement, they would be able to access funds in their private accounts (part of the distributions from the accounts would have to be in the form of a life annuity). Their Social Security retirement benefits would be reduced based on the amount contributed to their private account relative to how much would have been contributed if the private account plan had been available throughout their working lifetime and they had fully participated in it. (For workers who started their careers after the plan became available and fully participated in the plan, Social Security benefits would generally be reduced to zero.) Workers would be guaranteed a total benefit (from the private account and Social Security combined) that would be no less than the Social Security benefit scheduled under current law. Distributions from the private accounts would be tax free.

Because the contributions to private accounts would exceed the attendant reductions in benefits paid by Social Security, the Sununu-Ryan private accounts would more than double the Social Security shortfall over 75 years; they would increase the shortfall by 129 percent.

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[30] Workers whose benefits are reduced because of earnings will receive higher benefits later when they no longer have earnings or when they reach the normal retirement age. Thus, the earnings-test reduction in current benefits actually represents a shift in the timing of benefits rather than a permanent reduction.

[31] According to the memo from the Social Security Chief Actuary Goss, the actuaries based their analysis on descriptions of the plan (and the intent of its authors) expressed to the actuaries by Senator Sununu, Representative Ryan, and their staff. There apparently are differences in a number of instances between the descriptions and intent of the plan expressed to the actuaries and the legislative language of the bills introduced. For instance, the legislation provides for a minimum benefit from a private account that is no less than 150 percent of poverty level income, but the actuaries do not mention such a provision in their memo. The description and analysis provided in this paper only take into account the estimates and information provided in the memo from the actuaries.

To ensure solvency over that period, Senator Sununu and Representative Ryan propose massive transfers from the General Fund to Social Security. They provide three mechanisms to provide for these transfers. First, they provide for the transfer of amounts equal to their estimates of the extra corporate income tax revenues they assume would be generated by the additional economic growth they assume would be generated by their private account plan. Second, they provide for the transfer from the General Fund each year (as long as transfers are needed to ensure solvency) of additional amounts, calculated according to a formula that is supposed to represent savings that would be achieved by restraining the growth of total federal spending. These two transfers would occur whether or not any increases in corporate income tax revenues or any reductions in federal spending actually are realized. In addition, Sununu and Ryan provide that the Treasury may transfer funds to Social Security at any time if these transfers are needed to ensure solvency. These automatic General Fund transfers would guarantee Social Security solvency, but as noted in the description of other plans, would do nothing to address the underlying budget and economic problems posed by Social Security,

Unless they are accompanied by reductions in other spending by or increases in revenues to the General Fund, these transfers would be paid entirely from borrowed money. The legislation introduced by Senator Sununu and Representative Ryan includes proposed caps on entitlement and discretionary (annually appropriated) spending that are intended to achieve savings that would offset the General Fund transfers to Social Security. The Social Security actuaries have not estimated the potential effects of these caps and did not take account of them in their analysis of the Sununu-Ryan plan. We have produced estimates of the reductions in federal spending that would result if the proposed caps were to have the effects that Senator Sununu and Representative Ryan intend (see below), but have not included those reductions in our estimate of the debt and interest under the Sununu-Ryan plan because: our analyses in this paper are based on estimates made by the Social Security actuaries; the Congressional Budget Office traditionally does not score savings that might be achieved by caps on broad categories of spending, as distinguished from the savings that would be achieved by specific reductions in specific programs; similar cap mechanisms tried in the past often have failed to achieve promised results; and the enormous size of the cuts in federal spending assumed make it highly unlikely the Sununu-Ryan caps would be allowed to work as proposed.

The additional funds needed to pay for private accounts would greatly exceed the savings from the proposed reductions in, and elimination of, Social Security benefits in coming decades. As a result, the Sununu-Ryan plan would (not counting theoretical savings from the proposed caps on entitlement and discretionary spending) increase federal debt by massive amounts, as shown in the table below.

Effect of Sununu-Ryan Plan on Federal Debt and Interest

	2018	2028	2038	2050
Increase in debt				
Current dollars	$2.7 trillion	$13.8 trillion	$35.9 trillion	$85.8 trillion
Percent of GDP	11.9%	38.9%	65.7%	93.7%
Interest on increased debt				
Current dollars	$143 billion	$745 billion	$1,969 billion	$4,748 billion
Percent of GDP	0.6%	2.1%	3.6%	5.2%
In 2005 economy	$76 billion	$257 billion	$441 billion	$635 billion

Private Accounts

Senator Sununu and Representative Ryan propose to establish voluntary private accounts for workers born after 1950. The accounts would be funded by diverting a large portion of payroll taxes from the Social Security trust funds to the private accounts. Initially, the amount diverted would equal 5 percent of the first $10,000 (in 2006 dollars) of earnings covered by Social Security, plus 2.5 percent of covered earnings in excess of $10,000. The $10,000 threshold would be indexed by the rate of growth in wages. Starting in 2016, the amount of payroll taxes diverted would double, to 10 percent of earnings under the threshold and 5 percent of earnings above it.

When they became eligible to retire, workers who participated in the private account plan would be required to purchase a CPI-indexed life annuity that would provide monthly payments which, together with any Social Security benefit due to the worker, would at least equal the Social Security benefits scheduled for that worker under current law. The amount remaining in the private account after purchase of the annuity could be disposed of in any manner chosen by the owner of the account. All accumulations in and distributions from the private accounts (including annuity payments) would be exempt from the federal income tax.

Social Security retirement benefits for these workers would be reduced, based on the extent of their participation in the plan. The benefit reduction would be equal to the benefit scheduled under current law multiplied by the ratio of: (a) the present value of all payroll taxes actually diverted to a worker's private account, to (b) the present value of all potential payroll taxes that could have been diverted to that worker's private account if the private account plan had been in effect for a worker's entire career and the worker had fully participated in the private account plan. Thus, a person who began working after the Sununu-Ryan plan had taken effect and fully participated for an entire career would generally have his or her Social Security retirement benefit reduced by 100 percent. (Since the Sununu-Ryan plan guarantees that a worker would receive benefits from his or her private account and Social Security combined that are at least equal to the Social Security benefit scheduled under current law, the full reduction in Social Security benefits would not occur if the earnings in the private account were inadequate to fund this level of benefit.)

Benefits for workers who did not choose to participate in the private account plan would remain unchanged from the levels scheduled under current law.

Entitlement and Discretionary Caps

Senator Sununu and Representative Ryan propose two new dollar limits, or caps, designed to force Congress to make extremely large cuts in government programs other than Social Security. First, an entitlement cap would apply for 13 years to all entitlement or "mandatory" programs other than Social Security. The largest and fastest growing of these programs are Medicare, Medicaid, and interest on the debt. A formula would limit the total dollar cost of all such programs taken together, and Congress would have to decide which programs to cut and by how much in order to remain within each year's cap. Second, a "discretionary" cap would apply for nine years to all annually appropriated programs, such as national defense, education, transportation, and veterans' medical care. As with the discretionary caps, Congress would have to decide which programs to cut to fit within each year's cap.

Although the Sununu-Ryan proposal provides for automatic across-the-board cuts (called "sequestrations") that are intended to enforce the caps on entitlement and discretionary spending if Congress does not enact the required spending cuts, it is highly debatable whether these caps would be adhered to, given the severity of the program cuts that would be required. To illustrate: under this year's budget resolution, Congress plans to reduce the cost of entitlements such as Medicaid and student loans by a total of $35 billion over five years. The agreement to do so was difficult to reach. In contrast, during the first five years that the Sununu-Ryan entitlement caps would be in effect, Congress would be required to cut entitlement programs a total of $718 billion, or more than *20 times as much.*

The Social Security actuaries did not provide any estimate of the possible savings from these proposed caps on programs, perhaps because the caps are unrelated to Social Security. Likewise, the Congressional Budget Office traditionally does not score savings from proposed budget process changes such as discretionary or entitlement caps. Given the reasonable doubt that these caps could be adhered to, it is plausible to look only at the Social Security aspects of the Sununu-Ryan plan. However, for the sake of completeness, we have made our own estimates of the offsetting budget cuts that would be achieved if the entitlement and discretionary caps were fully adhered to and the resulting budget cuts were permanent. The method of calculating the cuts required by the proposed caps will be explained in a forthcoming analysis by the Center on Budget and Policy Priorities of cap legislation proposed by Representative Jeb Hensarling (R-TX).[32]

If the proposed cuts were achieved and made permanent (the percentage reduction in program expenditures, relative to current policy, would remain the same after the caps expired), they would more than offset the otherwise steep cost of the Social Security aspects of the Sununu-Ryan plan. Through 2018, the entitlement cap alone would cut expenditures by $2.7 trillion, and the discretionary caps would cut expenditures by an additional $623 billion. In effect, the Sununu-Ryan plan proposes to pay for its private accounts by making extremely deep cuts in other, unspecified programs. By 2021, the Sununu-Ryan entitlement cap would require an average reduction in entitlement programs of 30 percent. If some entitlement programs were partially or completely protected from such deep cuts, other entitlement programs would have to be cut even more deeply to make up for that. Given the depth of the required cuts, it is likely that most government benefit programs other than Social Security — including Medicare — would undergo severe cuts if the plan were carried out.

[32] Although the cap mechanisms in the Sununu-Ryan plan and the Hensarling legislation are the same, the total amount of estimated spending cuts that would occur if the proposals were carried out differ because of different assumptions about the starting dates and different lengths of time that the cap mechanisms would operate. Representative Hensarling proposes to cap entitlement spending in 2007 through 2015 Senator Sununu and Representative Ryan propose that the cap apply in 2007 through 2019. To make the timeframe for estimates of the Sununu-Ryan plan consistent with the timeframe for the President's plan (which does not take effect until 2009), we estimated the intended savings from the Sununu-Ryan entitlement cap assuming that the cap would limit spending in 2009 through 2021.

Plans without Private Accounts

Diamond-Orszag Plan

(No legislation has been introduced. Peter Diamond and Peter Orszag detailed a Social Security plan in their book, *Saving Social Security*, published in 2004 by the Brookings Institution Press. This description and the analysis of their plan in this paper are based on that book and on an October 8, 2003, memo to Dr. Diamond and Dr. Orszag from Stephen C. Goss, Chief Actuary of the Social Security Administration.)

Economists Peter Diamond, Institute Professor at the Massachusetts Institute of Technology, and Peter Orszag, Joseph Pechman Senior Fellow in Economic Studies at the Brookings Institution, have proposed a plan that does not include private accounts, would make Social Security solvent over the next 75 years without any General Fund transfers, and would reduce federal debt and interest payments.

The Diamond-Orszag plan proposes a number of changes in the Social Security benefit formula, which taken together would reduce Social Security benefit payments below the levels scheduled under current law. It also proposes increases in payroll taxes going to Social Security.

The Diamond-Orszag plan would *reduce* federal debt by substantial amounts, as shown in the following table (minus signs show a reduction in debt).

Effect of Diamond-Orszag Plan on Federal Debt and Interest				
	2018	2028	2038	2050
Reduction in debt				
Current dollars	-$0.6 trillion	-$2.4 trillion	-$7.1 trillion	-$23.7 trillion
Percent of GDP	-2.7%	-6.7%	-13.0%	-25.9%
Reduced interest on debt				
Current dollars	-$33 billion	-$128 billion	-$384 billion	-$1,293 billion
Percent of GDP	-0.1%	-0.4%	-0.7%	-1.4%
In 2005 economy	-$17 billion	-$44 billion	-$86 billion	-$173 billion

Proposed Changes

Diamond and Orszag propose a number of changes in the Social Security benefit formula that would reduce benefits below the levels scheduled under current law. These include reductions in benefits to take into account increases in the life expectancy of beneficiaries; reductions in benefits for high-earner beneficiaries; and, after 2022, some further reductions in benefits. (They propose to protect disabled workers in the aggregate from these reductions.)

They also propose several changes that would increase payroll tax revenues going to Social Security: increasing the ceiling on the maximum amount of earnings subject to the payroll tax (now $90,000) so that 87 percent of all covered earnings would be taxable[33] (currently, about 83 percent of earnings are below the maximum taxable amount); applying a 3 percent tax rate (1.5 percent each for

[33] This would also increase total benefit payments by a smaller amount.

employers and employees) to wages in excess of the maximum taxable amount (calculations of benefits would not take this additional tax into account); and, after 2022, modestly increasing both that 3 percent rate and the basic payroll tax rate.

Diamond and Orszag also have proposed a change that would affect both total revenues and total benefits — requiring that all newly hired state and local workers be covered by Social Security. This would increase both revenues and benefit payments, but would contribute in net to solvency over 75 years.

Diamond and Orszag also proposed several changes that would increase Social Security benefits above the level scheduled under current law for some beneficiaries, including increases in benefits for low-earners and increases in benefits for some widows/widowers.

Ball Plan

(No legislation has been introduced, although Representative David Obey — D-WI — introduced a bill — H.R. 5179 — in the 108th Congress that incorporated most of the proposals in the Ball plan. This description and the analysis of the Ball plan in this paper are based on an April 14, 2005, memo to Robert M. Ball from Stephen C. Goss, the Chief Actuary of the Social Security Administration.)

Robert M. Ball, former Commissioner of Social Security under Presidents Kennedy, Johnson, and Nixon, has proposed a plan that does not include private accounts and would reduce federal debt and interest payments.

Mr. Ball proposes to use the Bureau of Labor Statistics' "superlative" Consumer Price Index in calculating the annual Social Security cost-of-living adjustment, which would slightly reduce the COLA in the typical year below the COLA that would occur under current law, and thus reduce benefits below the levels scheduled under current law. His plan also includes several changes that would increase Social Security revenues and one proposal that would affect both total benefits and revenues. In addition, he proposes to gradually invest 20 percent of the Social Security trust funds' assets in private equities, with the trust funds rather than individual accounts benefiting from gains or suffering from losses.

According to the Social Security actuaries, the Ball plan would achieve Social Security solvency over 75 years. That result, however, depends in part on a proposal to dedicate revenues from a reformed estate tax to the Social Security trust funds. As described below, in years after 2010, the estate tax proposal would not increase revenues relative to current law and would, therefore, represent a transfer from the rest of the budget that is not paid for. Excluding the effects of crediting the trust funds with estate tax revenues after 2010, the Ball plan would reduce the 75-year Social Security shortfall by 92 percent.

The Ball plan would reduce federal debt by substantial amounts, as shown in the table on the next page (minus signs show a reduction in debt).[34]

[34] In this analysis, we follow the Social Security actuaries in treating the investment of Social Security funds in private equities as federal expenditures. We believe this is conceptually wrong — such investments represent an exchange of financial assets like the sale or purchase of gold or the making of a direct loan (with no subsidy) and, as such, should not

Effect of Ball Plan on Federal Debt and Interest				
	2018	2028	2038	2050
Reduction in debt				
Current dollars	$0.2 trillion	-$0.3 trillion	-$6.4 trillion	-$25.8 trillion
Percent of GDP	0.9%	-0.9%	-11.7%	-28.2%
Reduced interest on debt				
Current dollars	$11 billion	-$12 billion	-$339 billion	-$1,408 billion
Percent of GDP	*	-*	-0.6%	-1.5%
In 2005 economy	$6 billion	-$4 billion	-$76 billion	-$188 billion

* Less than 0.05 percent.

Proposed Changes

Mr. Ball proposes to reduce the cost-of-living adjustments for benefits by adopting BLS' "superlative" measure of inflation, which would reduce Social Security benefit payments below the levels scheduled under current law.

Ball also proposes to boost Social Security revenues by increasing the ceiling on earnings subject to the payroll tax so that 90 percent of all covered earnings would be taxable (currently, about 83 percent of earnings are below the maximum taxable amount). He also proposes to dedicate revenues raised by a permanent, reformed estate tax to the Social Security trust funds in 2010 and later years.[35]

In addition, he proposes to gradually invest 20 percent of the assets of the Social Security trust funds in a broad-based index fund of private equities, such as the Wilshire 5000. In no case would the trust funds be allowed to hold more than 15 percent of the total value of all equities represented in the broad index.

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be treated as an expenditure. However, longstanding Office of Management and Budget scorekeeping rules require such purchases to be treated as expenditures in the budget, and we follow that practice here. Because of such "expenditures" for the purchase of equities, the plan is shown as temporarily increasing debt and interest in 2018.

[35] Under current law, the estate tax will be repealed in 2010 but restored in 2011, with the parameters in 2011 and the years thereafter set at the levels that were specified in law prior to enactment of the 2001 tax-cut legislation. (The parameters starting in 2011 would be a $1 million exemption from the tax and a top tax rate of 50 percent). The President has proposed to make repeal of the estate tax permanent. Ball proposes instead to freeze the exemption from the tax and the maximum tax rate at the levels that will be in place in 2009 (a $3.5 million exemption for individuals — $7 million for couples — and a 45 percent top estate tax rate). Relative to the President's proposal, the Ball proposal would provide a new revenue source that would be dedicated entirely to the Social Security trust funds. Relative to current law (under which a lower exemption amount and higher maximum rate are slated to take effect in 2011), there would be a reduction in total federal revenues, so the transfer of estate tax revenues would not be paid for. In the Social Security actuaries' estimate of the effects of the Ball plan on the unified budget (on which we base our estimates of changes in debt and interest under the various plans), the actuaries include the estimated savings from the estate tax proposal in 2010 (relative to the repeal scheduled under current law) but do not include any costs or savings from the proposal in subsequent years. Thus, our estimate does not include any effect of this proposal on debt and deficits other than the effect of the savings in 2010.

Finally, he also proposes a "balancing tax rate" increase in the Social Security payroll tax rate sufficient to ensure that the ratio of trust fund assets to annual program costs would increase throughout the 75-year period ending in 2078. The Social Security actuaries estimate that this would result in a 1 percentage point increase in the payroll tax rate (0.5 percent each for employees and employers) starting in 2023.

APPENDIX B
Sources and Methodology

Sources

The figures in this analysis are derived from estimates published by the Office of the Chief Actuary (OACT) of the Social Security Administration, and are consistent with the estimating assumptions used by OACT. That office has, with one exception, published estimates for each of the plans we analyze. Its estimates include accompanying tables showing the year-by-year effect of these plans on the budget, by calendar year for at least 75 years.[36]

The one plan for which OACT has not published a 75-year estimate is the partial plan proposed by the President.[37] In this analysis, our estimates of the cost of the President's plan come from estimates by Jason Furman, which in turn are based on other estimates issued by OACT. (See the box on the President's plan on page 38.) In addition, the Sununu-Ryan Social Security plan includes provisions that impose statutory caps or limits on entitlement programs *other than* Social Security and on annually appropriated programs. OACT did not estimate the amount of budget cuts that these caps would impose on the rest of government; accordingly, we have made our own estimate. (See discussion of entitlement and appropriations caps on pages 31 and 32.)

Methodology

Social Security plans with private accounts would increase annual deficits by diverting payroll taxes away from the government and into private accounts. The increased deficits would automatically result in greater government borrowing (deficits are financed by borrowing, by definition) and therefore in higher government debt and increased interest payments on that debt. Our methodology is designed to make apples-to-apples comparisons of the amounts by which various Social Security plans would increase or decrease projected federal government debt and interest costs, relative to the level of debt and interest that would occur if no changes were made to Social Security.[38]

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[36] The OACT analyses are available at http://www.ssa.gov/OACT/solvency/index.html.

[37] OACT did publish an estimate of the part of the President's plan that establishes private accounts, but that estimate covers only ten years. We refer to the President's plan as "partial" because it closes less than one-third of the 75-year shortfall in the Social Security trust fund. The other plans we analyze close 100 percent of the gap. Note, however, that with the exception of the Diamond-Orszag plan, all of the plans rely on direct or indirect transfers from the rest of the budget to the Social Security trust fund to close the Social Security shortfall.

The rest of the government is currently in substantial deficit and is expected to suffer from permanent, unsustainably large, and growing deficits as far as the eye can see, so reliance on the rest of the government to resolve the shortfall in Social Security in part or in whole constitutes a "free lunch" approach. Looking at the budget as a whole, transfers from the rest of the government to Social Security by themselves do nothing to improve the future condition of the budget or to prepare the nation for the retirement of the baby boomers.

[38] Government debt and interest costs are expected to rise substantially over coming decades, regardless of whether changes are made to Social Security. Our analysis shows the amount by which the growing path of debt and interest

The Cost of the President's Social Security plan

The President has proposed allowing workers to divert a portion of their Social Security payroll taxes into private accounts, with offsetting reductions in future Social Security benefits for those who elect private accounts. OACT has issued an analysis of these private accounts, through 2015.[a] Jason Furman has projected the cost of the President's proposed private accounts beyond 2015 based on OACT's long-range estimates of other plans containing private accounts.

In addition, the President has proposed reducing scheduled retirement benefits for people now younger than age 55 and their survivors, by phasing in "sliding scale" benefit reductions over time for all Social Security beneficiaries except those with the lowest 30 percent of lifetime earnings and those receiving Social Security disability benefits. OACT has issued 75-year estimates of the effects of the "sliding scale reductions" in an analysis of Social Security plan by Robert Pozen. (Pozen's version of these benefit cuts, often called "progressive price indexing," applies to all Social Security recipients, including those receiving disability benefits. The President's proposal would exempt disability benefits.) Furman has estimated the dollar savings achieved by the President's version of the "sliding scale" benefit cuts by reducing OACT's estimate of the savings achieved by Pozen's sliding scale benefit cuts to reflect the President's decision to protect disability benefits.

Because OACT has not published an analysis of the President's plan as it currently stands, we use Furman's estimates in this analysis.[b]

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a See Social Security Administration, "Preliminary Estimated Financial Effects of a Proposal to Phase In Personal Accounts — INFORMATION," Memorandum to Charles P. Blahous, Special Assistant to the President for Economic Policy, National Economic Council from Stephen C. Goss, Chief Actuary, July 15, 2005.

b See Jason Furman, *The Impact of the President's New Proposal on Social Security Solvency and the Budget*, Center on Budget and Policy Priorities, Revised July 22, 2005

Specifically, all of our estimates are based on the 2005 estimating assumptions issued by OACT, even though some of the published analyses of Social Security plans are based on 2004 assumptions, some on 2003 assumptions, and one on 2002 assumptions. In addition, we assume that all diversions of payroll tax revenue into private accounts will start in 2009, the year that the President proposes to establish private accounts. Likewise, we assume that all major reductions in Social Security benefits *not* connected with private accounts will start no earlier than 2009.

The steps we take to produce estimates on this basis are described below, using the Pozen plan as an example. As described earlier in this analysis, the Pozen plan contains two elements.

First, under the Pozen plan a worker may choose to establish a private account. If the worker does, a portion of his or her payroll taxes are diverted from Social Security into his or her account, starting in 2007. But under the Pozen plan (and other plans as well), choosing a private account also puts the worker in debt to the government — he or she must repay the government for the payroll taxes diverted to his or her private account. The worker pays this debt by a reduction in his or her eventual Social Security retirement benefit; the worker's monthly Social Security check will

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would be *further increased* (or, in the case of the Ball and Diamond-Orszag plan, the amount by which the growing path of debt and interest would be *reduced*) as a result of each of the Social Security plans.

What are "Discounted" Dollars?

The OACT memoranda generally present estimates of the effect of Social Security plans in *discounted* dollars rather than current dollars. Discounting shows the value of the costs or the income that will occur in some future year (say, 2020) in present-day terms. Discounting is based on the idea that one can invest a dollar in Treasury securities and receive a guaranteed, positive return. Thus, a dollar in January 2005 is worth an estimated $2.31 in 2020, after accounting for interest earnings at Treasury rates. Stated differently, an investor should be equally happy with $1.00 on January 1, 2005, or a guarantee of $2.31 in 2020. By the same token, the guaranteed promise of $1.00 in 2020 is worth only an estimated 43 cents on January 1, 2005. That is, 43 cents is the *discounted* value of $1.00 in 2020 — 43 cents is the amount invested in January 2005 that would be worth $1.00 in 2020 at Treasury rates. A discounted future cost is often referred to as the "present value" of that future cost.

OACT displays its year-by-year estimates of costs in discounted dollars to make costs that occur many decades in the future comparable to present-day costs. If it did not, the apparent dollar costs of a plan 75 years in the future would be so huge as to be meaningless.

Discounting has a second very useful feature — it allows easy calculations of debt. To illustrate, imagine a simple plan that diverts 2 percentage points of payroll taxes into private accounts each year and never recoups or offsets this cost. OACT can easily estimate the lost revenue in each future year, and can display the year-by-year cost in discounted dollars. The cost to the government, however, is more than just the lost revenue. The lost revenue would cause higher deficits, and thus more borrowing from the public and higher debt. The higher debt would necessitate higher interest payments to be made, which themselves would add further to deficits and debt. To calculate how much such a plan would increase government debt by, say, 2020, one merely sums the discounted-dollar revenue loss in each year through 2020, and then multiplies the resulting total by the cumulative discount rate. (The cumulative discount rate is the Treasury interest rate compounded through 2020; in the example above, the cumulative discount rate starts at 1.000 on January 1, 2005, and reaches 2.310 midway through 2020 and 2.377 by December 31, 2020. Thus, to find the total increase in debt through the end of 2020 from a plan such as the one just discussed, one multiplies the revenue losses from the plan, in discounted dollars summed through 2020, by 2.377.)

In OACT memoranda based on 2003 or 2002 estimating assumptions, OACT generally displayed figures in *constant* dollars rather than *discounted* dollars. (That is, OACT reduced the current-dollar estimates of future costs to reflect compounding inflation but not to reflect compounding interest.) When analyzing those plans, we first converted the OACT estimates from constant dollars to discounted dollars using OACT inflation and interest rates, and then proceeded as described above.

be reduced by an amount that is actuarially equivalent to the amount of payroll taxes diverted into the worker's private account, plus annual interest at a rate of inflation plus 3 percent.[39]

The diversion of payroll taxes into a private account constitutes a new government expenditure, financed by increased borrowing. The resulting reduction in Social Security benefits many decades in the future eventually offsets most but not all of these expenditures. The annual cost to the

[39] If a person lives a normal lifespan after starting to receive Social Security retirement benefits, the value of the permanent reduction in his monthly retirement benefits would equal his debt to the government. If a person choosing a private account dies before retirement, the individual's spouse "inherits" not only the individual's private account but also the debt that the individual owes to the government, which the spouse must pay by a reduction in his or her retirement benefit.

government (excluding interest) of the payroll taxes diverted to private accounts is shown in the OACT estimate of the Pozen plan, issued February 10, 2005, in Table 1b, column 1. The subsequent, offsetting reduction in Social Security retirement benefits is shown in Table 1b, column 2, of the OACT memo. Together, these two columns represent the net budgetary cost of Pozen's private accounts. The OACT memo shows these amounts in dollars discounted to January 1, 2004. (See the box on previous page for an explanation of discounted dollars.) Note that OACT produced its estimates of the financial effects of the Pozen plan using estimating assumptions consistent with its 2004 Social Security trustees' report.

Second, in addition to private accounts, the Pozen plan includes reductions in *all* Social Security benefits – for retirement, for surviving spouses and children, and for workers who become disabled. These benefit cuts are accomplished through a formula that Mr. Pozen has termed "progressive price indexing." These benefit cuts would occur regardless of whether a worker has elected private accounts.[40] These benefit reductions do not apply to people currently 55 or older, and thus first start reducing government costs in 2012, when people who are now under 55 turn 62 and first become eligible for Social Security retirement benefits. Starting in 2012, and by larger amounts each year, these benefit cuts would reduce government benefit costs and therefore reduce the projected debt. The OACT memo shows the savings from these benefit reductions, without interest, in discounted dollars, in Table 2b, column 3. (In the OACT memoranda, the tables that start with "2" display estimates made on a risk-adjusted basis. See the box on risk adjustment on page 41.)

To derive the figures for increased debt and interest under the Pozen plan that we show in this paper, we take the following steps:

1. We convert the net cost of private accounts (OACT Table 1b, column 1 minus column 2) from discounted values to current dollars by multiplying the discounted value in each year by the compound discount rate for that year used by the OACT in its 2004 economic assumptions.

2. We then divide each year's current-dollar net costs by taxable payroll for that year (using 2004 OACT assumptions), thus producing year-by-year net costs of private accounts as a percent of taxable payroll. (Taxable payroll is the total amount of the wages and salaries of all workers covered by Social Security that are subject to the Social Security payroll tax, and currently includes all wages and salaries up to $90,000 per person.)

3. We then take the stream of "costs-as-a-percent-of-payroll," which starts in 2007, and delay each year's figure by two years. As a result, the stream of net costs starts in 2009 rather than in 2007. We do this because the President proposes that private accounts first be established in 2009, and we want our comparisons among plans to be based solely on differences in the *size* of private accounts, offsets, and other benefit cuts, not on differences in effective dates. This adjustment is necessary to provide accurate apples-to-apples comparisons.

[40] If a person does elect private accounts, the cut in Social Security benefits from progressive price indexing is *in addition to* the cut in retirement benefits that occurs to repay his private-account debt to the government.

Why We Use "Risk-adjusted" Estimates

Throughout our analysis, we use the "risk-adjusted" estimates of the cost of Social Security plans. The OACT memoranda generally give two or more estimates for any plan that involves stock market investment directly by the government (as in the Ball plan), indirectly on behalf of the government (as in the Shaw plan), or on behalf of individuals (as in the Pozen plan and a number of other plans). For each plan, one of these OACT estimates is on a risk-adjusted basis. In the case of the Pozen plan, risk-adjusted estimates appear in Table 2b of the OACT memorandum.

"Risk adjusted" estimates use the Treasury bond rate as the rate of return on equities. This is the same rate of return for government-held equities as is used in official government scoring by both the Office of Management and Budget (OMB) and the Congressional Budget Office (CBO). This does not mean that those making the estimates assume that the rate of return on equities will actually be equal to the bond rate. In fact, it is assumed that the rate of return on equities will be higher than the bond rate in some cases and lower in others, with the expected value of the return on a broad index of equities generally assumed to be somewhat higher than the bond rate. However, the returns that can be earned on Treasury bonds are assumed to be the best measure of the value to the average investor of the expected returns on equities. That is because most investors are risk averse — that is, they would choose a certain payment of $100 over a 50-50 chance of getting either $0 or $200, even though the expected value of the chance is $100. Put another way, the risk-adjustment methodology is based on the premise that $1 of stocks is worth the same as $1 of bonds when one takes into account the increased risk associated with the investment in stocks as well as the higher expected average return that comes with stocks. In this way, the risk-adjustment process keeps government finances from artificially appearing better, in present value terms, just by making shifts in the asset composition. We use the "risk-adjusted" figures produced by OACT rather than the "average expected" figures for several reasons.

First, risk adjustment is the most appropriate way to measure the value of investments for individuals, for the reason given above. A recent Congressional Research Service report states: "Standard risk adjustment techniques would set the rate of return on equities equal to U.S. Treasuries. This is the only way that a risky return can be directly compared to the risk-free Social Security benefit offsets that accompany the individual accounts."[a] The Congressional Budget Office has also reached this conclusion and *exclusively* uses risk-adjusted estimates when it summarizes the return on equities held in private accounts in its published analyses of individual benefits under various Social Security plans. (CBO also publishes charts that show the estimated distribution of returns on equities — that is, the probability that the rate of return will be higher or lower than the average expected rate of return.)

Second, both CBO and OMB use risk-adjusted returns when estimating yields on government equity investments, such as investments made by the Railroad Retirement Board. Our analyses of government costs are consistent with the approach that CBO and OMB take for these other forms of government investment in equities.

Third, in one case — the Sununu-Ryan plan — the government guarantees to make up for an investor's losses if his private account does badly, but lets him keep all of the gains if the account does well. The OACT analysis of the Sununu-Ryan plan reflects this guarantee and so estimates an extra cost to the government. But of the two OACT estimates of the Sununu-Ryan plan, the one assuming an "average expected return" shows a remarkably small cost to the government from this guarantee, because it assumes investors will not invest in a more risky manner to take advantage of this guarantee. The "risk-adjusted" OACT estimate, in contrast, shows a noticeably larger and more realistic cost to the Sununu-Ryan guarantee.

Note that in many plans, such as the President's and Pozen's, almost all risk is born by the individual and very little by the government, so the use of risk-adjusted OACT figures makes almost no difference in the resulting estimate of the increase in federal debt and interest costs that a plan would cause.

a. Brian W. Cashell and Marc Labonte, "Individual Accounts: What Rate of Return Would They Earn," Congressional Research Service, July 25, 2005.

4. We then multiply each value in this stream of "costs-as-a-percent-of-payroll" by the projected taxable payroll for the year in question, using OACT's *2005* projection of taxable payroll. This approach makes the resulting current-dollar figures consistent with the 2005 trustees' report.[41]

5. Next, we convert the current-dollar amount for each year back to a discounted value for that year by dividing by the compound discount rate for the year used by OACT in the 2005 trustees' report.

A Note on Discount Rates

In steps one and five, we use the OACT cumulative discount rate appropriate for costs occurring *over the course of a year*. In step one, for example, the cumulative discount rate will discount a stream of costs occurring in, say, 2038, to a discounted value as of January 1, *2004*. In step five, the cumulative discount rate will produce discounted values as of January 1, *2005*.

In step six, in contrast, we are summing discounted values to find *end-of-year* debt, so we use a cumulative discount rate appropriate for the end of a calendar year. As a result, the cumulative discount rates in step six have another half year's of interest beyond the cumulative rates in step five.

6. Our next step is to calculate, for 2018, 2028, 2038, and 2050, the amount of debt caused by the private accounts in the Pozen plan. This is directly accomplished by summing the discounted net costs (from step 5) through the date in question, say 2038. The sum of discounted values through 2038 equals the "present value" of the cost of the private accounts through that year. Multiplying that sum by the compound discount rate for 2038 gives the current-dollar amount of increased debt, including interest, in that year. We also show this increase in debt as a share of GDP in 2038.

7. In steps one through six, we describe how we calculate the net cost of *private accounts* under the Pozen plan. We then repeat steps one through six for the *savings* (the reductions in costs and in projected debt) resulting from the benefit cuts in the Pozen plan, known as "progressive price indexing." The data on the year-by-year discounted values of these benefit reductions appear in the OACT memo on Pozen, Table 1b, column 3. In this particular case, however, we do not delay the start of these benefit cuts three years (as we had done in step three above), because these benefit reductions do not occur until 2012 in any case; they do not start before 2009.

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[41] Steps two, three, and four use taxable payroll as the common denominator to delay the effective date of the Pozen plan and also to convert the OACT's analysis from 2004 estimating assumptions to 2005 estimating assumptions. An alternative would have been to use GDP as the common denominator. We believe taxable payroll to be a better common denominator because all plans have some elements that use taxable payroll as a denominator. For example, the plans with private accounts divert a specified portion of taxable payroll into private accounts. The Diamond-Orszag and Ball plans include increases in the payroll tax rate.

The OACT memoranda provide a test of this approach. In January 2003, OACT issued an estimate of the Shaw plan using 2002 estimating assumptions. In May 2005, OACT issued another estimate of a nearly identical Shaw plan, assuming different effective dates for the private accounts and benefit changes, and using 2004 estimating assumptions. We converted each of the two OACT memoranda on the Shaw plan to 2009 effective dates and 2005 estimating assumptions, using the method described above. We found that the resulting estimates of increased debt for 2018, 2028, 2038, and 2050 based on the 2005 memorandum were within 0.3 percent of the corresponding estimate based on the 2003 memorandum. These nearly identical results suggest that our methodology does not introduce distortions into the OACT estimates of debt and interest.

8. We combine the calculations of the net *costs* stemming from private accounts (steps one through six) with the *savings* stemming from the benefit reductions (step seven) to produce the Pozen plan's total net increase in the debt for each of the years 2018, 2028, 2038, and 2050. These results are shown in the Table on page 16 of our analysis.

9. Finally, we calculate the additional *interest* caused by the additional debt in each of the four years (i.e., in 2018, 2028, 2038, and 2050). We do this by multiplying the average current-dollar amount of additional debt during that year[42] by the annual interest rate for that year used by OACT. We show this amount of additional interest in current dollars and as a percent of GDP. In addition, we show how much interest this additional debt would cost on a *2005* basis. We do this by multiplying our estimate of additional interest as a percent of GDP in 2018, 2028, 2038, or 2050, as the case may be, by *2005* GDP.

The final figure, interest on a 2005 basis, is probably the single most meaningful representation of the cost to the government of the additional borrowing and debt inherent in plans that contain private accounts. To illustrate this point, look at our results for the Pozen plan in 2038. In that year, the plan would increase debt by $5.4 trillion in current dollars, or 9.9 percent of GDP, beyond what it would otherwise be. The federal government will have to pay holders of Treasury securities an extra $306 billion in interest on that extra $5.4 trillion in debt in 2038, an amount equal to 0.6 percent of projected GDP. In 2005, 0.6 percent of GDP equals $69 billion.

It is this last figure that can be most meaningfully compared with other costs. For example, $69 billion is approximately equal to the entire federal education budget for 2005. It is about equal to the 2005 transportation budget. It also is about equal to the 2005 veterans' budget. Similarly, it is about equal to all 2005 spending on national parks, recreation, water resources, forests, environmental protection, and agriculture combined. In short, the extra interest costs generated by the Pozen plan risk squeezing out functions or agencies that provide services and benefits for the American public. Yet the Pozen plan is the least expensive of any plan that contains private accounts, other than the DeMint (2005) and McCrery plans, which cut off contributions to those accounts after fewer than a dozen years.

[42] The average additional debt in a given year equals the average of the additional debt at the start of the year and at the end of the year.