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Proposed Savings Accounts: Economic and Budgetary Effects

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Proposed Savings Accounts: Economic and Budgetary Effects

Summary

In his 2005 — 2007 budget proposals, the President proposed to substitute for the current system of tax-favored individual retirement accounts (IRAs) two new accounts: life-time savings accounts (LSAs) and retirement savings accounts (RSAs). The President's 2004 budget proposals included a similar proposal, with higher limits on the amount contributed. Senator Craig Thomas of the Finance Committee and Representative Sam Johnson of the Ways and Means Committee have introduced identical bills (S. 545/H.R. 1163 and S. 546/H.R. 1162) to create LSAs and RSAs. Expanded savings accounts also were a part of the final recommendations of the President's Advisory Panel on Federal Tax Reform.

These proposals differ from the current system of IRAs in several important ways, including the required use of a back-loaded method now used for Roth but not traditional IRAs (in back-loaded accounts contributions are not deductible but withdrawals are not taxable), significantly higher contribution limits, introduction of LSAs with no penalties for withdrawal, and elimination of income phaseouts.

Shifting to a mandatory back-loaded method, including the ability to roll over current deductible IRAs into the new system, along with some other features, has important consequences for the path of revenue loss. The Treasury projects the FY2006 plan to raise revenue from FY2006-FY2015 in the amount of $1.5 billion (for comparison the estimate for the FY2005 plan was $5.6 billion). CRS projections of long-run revenue costs (in the steady state beyond 2015) suggest a 10-year loss in the neighborhood of $300 to $500 billion. While it is difficult to estimate the cost precisely, the large limits and lack of strings attached suggest that a very large fraction of interest, dividends, and capital gains could be tax exempt.

Neither theory nor empirical evidence seems to present much of a case for a significant (or even positive) effect on private savings resulting from these provisions — particularly the back-loaded form. The change would tend to redistribute after-tax income on both a relative and absolute basis from lower- to higher-income groups in part because lower- and moderate-income individuals tend to have little or no savings — although benefits to the highest-income individuals would be constrained by the contributions limit.

The provision of tax favored savings accounts with high limits could have some consequences for certain activities and sectors of the economy. It could reduce the fraction of small businesses with pension plans, as owners elect to save in their private accounts rather than through accounts set up in their businesses. The provisions would also make a variety of currently favored investments less attractive, including tax exempt state and local bonds, life insurance products such as deferred annuities, and direct investments in owner-occupied housing. Some of these effects should increase economic efficiency. The change would discourage equity investment in unincorporated businesses and rental housing and favor investment in debt. It would have uncertain effects on the most heavily taxed investment, corporate equity. This report will not be updated.

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In his FY2004 through FY2007 budget proposals, the President proposed to substitute for the current system of individual retirement accounts (IRAs) two new arrangements: life-time savings accounts (LSAs) and retirement savings accounts (RSAs).[1] The contribution limit for each of the new accounts was $5,000 in FY2005 — FY2007, down from $7,500 in FY2004. In 2005 Senator Craig Thomas of the Finance Committee and Representative Sam Johnson of the Ways and Means Committee have introduced identical bills to create LSAs (S. 545 / H.R. 1163) and RSAs (S. 546/H.R. 1162). A year earlier the same legislators sponsored similar bills (S. 2263/H.R. 4078, and H.R. 4714). The President's Advisory Panel on Federal Tax Reform proposed similar accounts, called Save for Family and Save for Retirement accounts, with $10,000 annual limits, as a part of its final recommendations.

These proposals differ from the current system of individual retirement accounts in several important ways. First, unlike the current system, no choice is allowed between a traditional or front-loaded account (where individuals deduct contributions, pay no tax on earnings, but pay tax on withdrawals, much like a pension plan) and Roth or back-loaded accounts adopted in 1997 (where no contributions are deducted and no earnings or withdrawals are taxed, as with a tax exempt bond). The new system requires all accounts to be in the back-loaded form. While both back-loaded and front-loaded accounts effectively result in a tax rate on earnings of zero (assuming constant tax rates in the case of front-loaded accounts) the revenue paths of front-loaded and back-loaded accounts are quite different — the costs of front-loaded accounts occur much more quickly than the costs of a back-loaded account.[2] Moreover, the projected revenue effect would also reflect both the involuntary substitution of back-loaded for front-loaded accounts (because the latter would no longer be allowed) and voluntary shifts of present asset balances or contributions to employer plans with discretion, such as 401(k) plans. The form of the account also has some important implications for private savings responses.

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[1] There are other specialized tax-favored forms, such as medical savings accounts and educational savings accounts; the proposal allows a rollover of education accounts into LSAs. The President's proposal also includes a tax credit to sponsors of savings plans for lower income individuals, a much smaller and temporary provision, which is not considered in this analysis. The analysis also does not address proposals for simplifying and coordinating employer pension plans.

[2] The two approaches differ in several other ways. For a more complete discussion see CRS Report RL30255, *Individual Retirement Accounts (IRAs): Issues and Proposed Expansion,* by Jane G. Gravelle.

Secondly, the limits of the new accounts are much higher than current accounts, amounting to contributions of $10,000 ($5,000 for each account). Married couples filing jointly would have twice the limits. The 2004 proposals supported by Senator Thomas and Representative Johnson were $15,000 ($7,500 for each account). By contrast, the contribution levels of IRAs were $2,000 before the recent tax cuts and would revert back to this cap after 2010, unless the cuts were made permanent, in which case the new amounts would be $5,000.[3] These higher limits would also have important economic implications.

Thirdly, the LSA account is to be allowed with no penalties for withdrawal before retirement age. This feature makes this type of account, unlike the current IRA, a virtually perfect substitute for ordinary savings — and one would expect financial institutions to quickly set up simple types of accounts that would be eligible for the tax benefit. RSAs have penalties for withdrawing before age 58 (slightly below the current 59½ age) but like current Roth IRAs have no required minimum distribution after age 70½ (as do traditional, or front-loaded, IRAs).

Finally, the proposal eliminates all income limits on the accounts; very high income individuals are not currently eligible for the benefit, but would become so under the proposal.

Long Run Revenue Cost

The projected revenue effects of these proposals show either a small revenue gain or a small loss. The magnitude of these effects is no more than a few billion dollars over 10 years for the budget horizon, but these intermediate-term revenue effects greatly understate the eventual cost of the program beyond the budget window. This section explores a variety of approaches to estimating the long run cost that would occur after the cost has settled into a steady state, which would probably be in the tens of billions per year, and several hundred billion over a 10-year period (within the steady state, perhaps after the second or third decade). Even though the annual contribution caps differed from proposal to proposal, the revenue loss pattern is similar in every case and many conclusions remain unaffected by the difference.

The Long Run Cost Projected From Short Run Official Estimates

The near term revenue effects of the FY2004 LSA/RSA proposal (with the $7,500 ceiling) as projected by either the Treasury or the Joint Committee on Taxation (JCT), were very small. The President's 2004 budget proposal showed a gain of $14.8 billion in the first five years and a gain of $2 billion in the first 10

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[3] The Economic Growth and Recovery Act of 2001 increased the IRA limit to $3,000 in 2002-2004, $4,000 from 2005-2007, and $5,000 in 2008 (with indexation for inflation thereafter; the provisions sunset after 2010.

years.[4] The JCT found a similar pattern (gains, then losses), but projected quite different numbers, with a loss of $4.9 billion in 2013, an overall gain of $12 billion in the first five years, and a loss of $5 billion over the 10-year period.[5] For the FY2007 proposals, with the lower $5,000 ceiling, both Treasury and JCT project small 10-year losses of $122 million (Treasury) to $275 million (JCT).[6]

The comparable Treasury 10-year estimates for FY2006 and FY2005 proposals were $1.5 billion and $5.6 billion gains, respectively.[7] JCT's estimates of the measures were $2.4 billion and $0.9 billion losses over the 10-year period, respectively.[8] Both sets of estimates show a similar pattern of revenue gains in the first years reversing into the losses in the remainder of the period.[9]

These near-term estimates (for the next 10 years) show positive or small negative effects for three reasons. First, for any new normally taxable savings that are now funneled into these tax free accounts, the cost rises very rapidly over time compared to most tax reductions (which tend to rise at the nominal growth rate of the economy, perhaps around 5%). For example, suppose $7,500 were put into an account in each year and the interest rate is 10%. In the first year the reduction in taxable income is $750 (10% of $7,500). In the next year, the previous year's

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[4] Beginning with FY2003, the proposal had an annual gain in revenue in the first four years: $1.4 billion, $10.6 billion, $4.8 billion, $1.9 billion. Revenue losses then occurred through FY2013: $0.6 billion, $1.8 billion, $1.9 billion, $2.45 billion, $2.7 billion, $2.9 billion, and $2.9 billion, according to the Treasury Department, *General Explanation of the Administration's 2004 Revenue Proposals,* Feb. 2003.

[5] See Joint Committee on Taxation, *Estimated Budget Effects of the Revenue Provisions Contained in the President's Fiscal Year 2004 Budget Proposal, Fiscal Years 2003-2013,* JCX-15-03, March 4, 2003. The estimate showed revenue gains from FY2003-FY2007 of $1.7 billion, $3.2 billion, $3.1 billion, $2.8 billion, and $1.4 billion. Losses occurred from FY2008-FY2013 in the amount of $0.2 billion, $1.6 billion, $2.6 billion, $3.5 billion, $4.4 billion, and $4.9 billion.

[6] Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2007 Revenue Proposals,* Feb. 2006, pp. 10; Joint Committee on Taxation, *Estimated Budget Effects of the Revenue Provisions Contained in the President's Fiscal Year 2007 Budget Proposal, Fiscal Years 2006-2016* in *Description Of Revenue Provisions Contained In The President's Fiscal Year 2007 Budget Proposal*, JCS-1-06, March 2006, p. 314.

[7] Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2006 Revenue Proposals,* Feb. 2005, pp. 10, 159; Department of the Treasury, *General Explanation of the Administration's 2005 Revenue Proposals*, Feb. 2004, pp. 12, 191.

[8] Joint Committee on Taxation, *Estimated Budget Effects of the Revenue Provisions Contained in the President's Fiscal Year 2005 Budget Proposal, Fiscal Years 2004-2014,* JCX-14-04 R, March 3, 2004, p. 1; Joint Committee on Taxation, *Estimated Budget Effects of the Revenue Provisions Contained in the President's Fiscal Year 2006 Budget Proposal, Fiscal Years 2005-2015,* JCX-10-05, March 9, 2005, p. 1.

[9] For example, beginning with FY2005, the proposal had an annual gain in revenue in the first five years: $3.9 billion, $8.2 billion, $5.5 billion, $2.8 billion and $0.7 billion (there were no effects in FY2004). Revenue losses then occurred through FY2014: $0.7 billion, $2.1 billion, $3.8 billion, $4.3 billion, and $4.7 billion, according to the Treasury Department.

investment is now worth $8,250 ($7,500X1.10) and adding a current investment, the total in the account is now $15,750. The second year's reduction in taxable income is $1,575, or 2.1 times the first year — a growth rate of 110%. In the third year the cost is 3.31 times the first year. Based on the model shown in the appendix which allows for contributions and withdrawals which relates each year to its eventual long-term steady state, the first year's cost (expressed in current income levels) is about 3% of the steady state cost, the fifth year's cost is about 18% and the tenth year's cost is about 41%. Overall, the first five years' cost is about 11% of a steady-state five-year cost, and the first 10 years' cost is about 20%. Thus, these losses are only a fraction of their long run losses.

Secondly, there would be a temporary revenue gain because repeal of traditional IRA provisions would reduce the cost of up-front deductions. In order to determine the loss from the expanded limits, we need to eliminate this revenue, to measure the loss, and then use the revenue pattern discussed above to project from the short term to the long term. Using this approach, we project the cost with the $7,500 limit to be at least $18 billion per year ($180 billion over 10 years with constant income levels) using the Treasury estimates. The annual cost would be slightly over $20 billion with the JCT estimates. The cost with the $5,000 limit (Treasury estimates) is about $17 billion.[10] Again, these are conservative measures.

Thirdly, individuals are allowed to roll over existing accounts into back-loaded accounts and pay for the cost over four years. Since these effects are in the first four years, we can extrapolate from a single year past that point where the cost is expected to be about 18% of the steady state. Those calculations suggest an annual cost of closer to $40 billion with relatively little difference between the $5,000 and $7,500 ceiling.[11] The projections from the Joint Tax Committee's estimates would,

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[10] In the short run, this offsetting gain would include the tax benefit of traditional IRA contributions, which were about $7 billion in 2000; at a 20% tax rate, worth $1.4 billion. Over 10 years, therefore, the current limits would be at least $14 billion even without accounting for growth, and would probably be considerably larger because of the rapid growth of the income limits. While the dollar limit of contributions is fixed at $2,000, temporary provisions in the 2001 tax cut allow increases in the dollar amounts to be contributed to IRAs, and the income limit will increase substantially over the period. The temporary provisions have been estimated to increase revenues by about $25 billion over 10 years. If we use the conservative $14 billion number and add the $25 billion, there are temporary 10-year gains of $39 billion embedded in the estimates and without those temporary gains, the gain of $2 billion for the $7,500 limit would be a loss of $37 billion. Based on the projections discussed above, the long-run steady-state cost would be five times as large or $185 billion, leading to an annual loss of about $18.5 billion. With the higher revenues reported for the FY2005 estimates (with the lower ceiling) the $39 billion would be offset by about $6 billion, for a loss of $33 billion — suggesting a total of $177 billion over 10 years, or an annual about $17 billion. Note that this analysis assumes that additional accounts would be diverted from existing accounts, and not associated with additional private savings. See the section on savings effects for a justification of this assumption.

[11] For the FY2004 Administration estimates, the appropriate year would be 2008, where the revenue cost is estimated at $1.8 billion. However, this $1.8 billion is the net of a positive gain from substitutions for front-loaded IRAs and the loss from additional back-loaded

(continued...)

however, have been smaller (about $28 billion, for the $7,500 cap). These estimates would be affected by recent legislation that allows a one-time rollover of IRAs into Roth IRAs with no income limit in 2010.

Fourthly, the revenue estimates may also include some gain from the possibility of shifting some of the amounts currently contributed to 401(k) and similar plans to individual accounts (at least for amounts without an employer match), given there are no strings attached. These choices have the same types of effects as prospective future IRAs and further expand the scope for additional revenue loss.

Finally, the long run revenue cost will be slightly larger (although the effect will probably be small[12]) by the replacement of front-loaded by back-loaded accounts.

The implication from this extrapolation exercise is that the long-run steady-state revenue cost of the plans will be in the tens of billions of dollars per year, and even without accounting for all of the contributions to cost, could amount to as much $40 billion per year or $400 billion over 10 years, while the short run effect, at least according to the administration estimates, is a gain of several billion over 10 years — a dramatic contrast.

Direct Estimates of the Steady State Cost

The previous numbers extrapolated from the presumed use of these savings accounts by the Treasury and JCT revenue estimators. Another approach is to examine the total revenue collected from passive forms of investment and to estimate what fraction of that revenue will become tax exempt under the proposed plan. Since the LSA accounts have no strings attached, individuals should prefer to place all of their savings up to the limit in these accounts, including non-retirement savings. The $5,000 or $7,000 limit for each of these plans is so great that the plans could allow all savings of moderate income individuals to be contained in the account over a period of time, particularly for married couples whose LSA annual amounts would be $10,000 or $15,000 and combined LSA and RSA amounts would be $20,000 or

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[11] (...continued)
IRAs. The cost for the 2001 increases for that year was projected at $3.4 billion, and if we use a $1.4 billion cost for current IRAs, the results imply a loss of $6.6 billion — which would translate into an annual loss of $37 billion ($6.6 billion divided by 0.18) per year ($370 billion over 10 years). This estimate fixes the existing loss of front loaded IRAs at only $1.4 billion; if it were raised to $2 billion, the cost would $40 billion (($2+$3.4+$1.8)X0.1/0.18. Applying the same methods to the new 2005 estimates with the lower limit results but using 2010 (the 2005 proposal is made a year later and delays the effective date by another year), the proposal loses $0.7 billion. However, the gain from the temporary limit increase is $4.4 billion, implying a loss after backing out the temporary revenue gain of $6.5 billion, which would lead to a cost of $36 billion, also close to $40 billion if the value of current IRAs was increased.

[12] In the steady state the loss from back-loaded accounts is the interest rate times the asset balance. The loss for a front-loaded account includes this forgone interest but it is reduced by the gain from tax on withdrawals less the loss from the tax benefit of the deductions. See Jane G. Gravelle, "Estimating the Long-Run Revenue Effects of Tax Law Changes," *Eastern Economics Journal*, vol. 19, fall 1993, pp. 481-494.

$30,000. Over 10 years, savings could cumulate to as much as $300,000, an amount much greater than the typical liquid savings of most families. Thus, these families would not be expected to be constrained by the limit.

In 2000, according to the Internal Revenue Service Statistics of Income (Individual returns) dividends and interest on taxable returns were $186 billion and $140 billion, respectively. There were also capital gains distributions of $61 billion, and net gain from sales of capital assets of $623 billion. The $623 billion would include non-passive investments such as real estate and would be highly concentrated among high income individuals. Just considering interest, dividends, and capital gains distributions, the total is $387 billion, which, at a 20% marginal tax rate, would yield $77 billion in revenue, implying a potential loss from the LSA/RSA plan in that vicinity (or greater, since it excludes sales of capital assets) if virtually all assets were eventually to be placed in these plans.

The actual revenue loss would be smaller than this amount for two reasons. First, the amount already excluded from individual retirement accounts under permanent rules could change because of rising income limits (although comparisons of tax expenditure projections suggest this effect is only a few billion dollars). More importantly, some share of this amount is in high income brackets where a substantial portion of individuals might exceed the limit ($133 billion of the $387 billion is in the $100,000 and over income class). And even among more moderate income classes, some individuals will exceed the dollar limits.

To explore how much this revenue cost might be reduced by individuals saving more than the maximum amount, we first determine how much would be earned from accounts assuming the maximum had been saved and reinvested every year. The formulas for calculating these effects are shown in the appendix; in **Tables 1 and 2**, we show the dollar amount of earnings, depending on the real interest rate and the period of time that the asset is accumulating, for limits of $5,000 and $7,500, respectively. Note that these are the amounts accrued by a single taxpayer; a married couple would be able to save twice as much. They are also the amounts for the LSA rather than the combined IRA/LSA accounts.

Table 1. Accrued Earnings on Investments of $5,000 per Year

Years held	Real rate of return on asset			
	3%	4%	5%	6%
10	$2,915	$3,688	$4,451	$5,480
20	$6,850	$9,191	$12,027	$15,467
30	$12,163	$17,400	$36,557	$50,496
40	$19,334	$29,647	$44,723	$66,822

Source: CRS calculations; see text. The inflation rate is assumed to be 2%.

Table 2. Accrued Earnings on Investments of $7,500 Per Year

Years held	Real rate of return on asset			
	3%	4%	5%	6%
10	$4,373	$5,533	$6,811	$8,221
20	$10,276	$13,787	$18,041	$23,201
30	$18,254	$26,101	$36,557	$50,496
40	$29,001	$44,471	$67,085	$100,231

Source: CRS calculations; see text. The inflation rate is assumed to be 2%.

The exact amount of exempt relevant passive income would vary for every taxpayer depending on such factors as the amount of individual annual contributions and withdrawals, years of participation in the program, and the rate of return on a person's investments. Modeling each of these parameters is not possible without detailed data, particularly data that reflect age (which is not provided on tax returns). In order to estimate the magnitude of the impact, we consider several scenarios and combine them with the historic tax return data.

Sources of the relevant passive income were limited to taxable interest, dividends, and capital gains distributions in one scenario. There are several other sources of income, in particular capital gains on sales of capital assets, and much of these gains (largely representing capital gains on stock sales) is also passive income. We provide a second scenario that includes these gains as well. The 1999 income amounts were not adjusted for inflation, although that is unlikely to have a significant influence on the results.

We ignore expansions in the regular individual retirement accounts, which would increase the maximum amount that could be sheltered in the savings plans, but whose use is more difficult to predict. Ignoring RSAs would also understate the cost, particularly keeping in mind a higher contribution limit of $5,000 under the proposal. We also ignore the offsetting effect of interest earned on checking accounts, where LSA treatment would not be feasible.

As shown in **Table 3**, three illustrative annual tax-exempt LSA income threshold values of $5,000, $15,000 and $35,000 per person are selected. Thus, married filers would effectively face caps of $10,000, $30,000, and $70,000 correspondingly. The estimation process applies these assumed thresholds to a sample of historic 1999 individual income tax returns supplied by the IRS.[13]

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[13] Internal Revenue Service, Statistics of Income Division, Individual Statistics Branch, *1999 Public Use Tax File*, Jan. 28, 2003. The data in this file are blurred (actual returns are averaged and some other changes are made) in order to protect taxpayer confidentiality. These data are the most recent available. We also use the tax rates in force in 1999, which are different from the current rates, but consistent with permanent rates.

Table 3. Revenue Impact Under Assumed Thresholds in a Steady State

Assumed threshold value, $	Revenue impact, without sales of capital assets, $ billions	Revenue impact, with sales of capital assets, $ billions
5,000	26.7	31.4
15,000	43.2	55
35,000	54.1	75.4

Source: CRS calculations; see text.

For example, consider two single taxpayers' returns in the case of a $5,000 threshold: the first one with the sum of interest, dividends, and capital gains distributions in 1999 of $3,000 and the second one with $11,000. Under the $5,000 assumption, the first taxpayer would be able to exempt all of the relevant passive income, since it is less than $5,000. The second one would be able to exclude just the first $5,000 of $11,000, and pay the tax on the remaining $6,000. Under $15,000 or $35,000 cap scenarios, both of them would be exempt on all of their relevant passive income. Therefore, the sum of these taxpayers' deductions in the first case of $8,000 would increase to $14,000 in the second case, because of the higher income taxpayer's increased LSA deduction.

As the cap value increases, the impact grows larger, because higher income taxpayers could exempt larger shares of their relevant passive income and each dollar deducted by taxpayers in higher marginal tax brackets would be costlier than the one deducted by taxpayers in lower marginal tax rate brackets. The revenue cost increases much more slowly, proportionally, than does the cap. A tripling of the cap increases costs by 60%; a seven-fold increase doubles the cost.

The results are sensitive to the limits chosen, but even the very modest $5,000 limit indicates a cost of $27 billion per year. Since close to half of all capital gains is typically associated with sales of stock,[14] if we take the intermediate limit of $15,000 (associated with a savings period of around 25 years at a 4% to 5% return with a $5,000 limit) and average the last two columns, the estimate is around $50 billion. The general magnitude of effects is consistent with a study last year by Burman, Gale, and Orzag, who used a similar approach to estimate the FY2004 revenue loss, which they project to be in the neighborhood of $50 billion at current (2003) income levels.[15] (Given the modest increase in revenue cost with an increase

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[14] See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Cambridge, MIT Press, 1994, p. 130; Leonard E. Burman, *The Labyrinth of Capital Gains Tax Policy*, Washington, D.C., The Brookings Institution, 1999, p.25; Janette Wilson, "Sales of Capital Assets Reported on Individual Income Tax Returns, 1999, Internal Revenue Service, *Statistics of Income Bulletin*, summer 2003, pp. 132-154.

[15] Leonard E. Burman, William G. Gale, and Peter Orszag, "The Administration's Savings (continued...)

in limits at this level, there is probably not a lot of difference between the $5,000 and $7,500 limit).

One revenue cost that is not included in this analysis is the loss arising from arbitrage. For example, individuals who actually have smaller savings than that eligible for IRAs could potentially borrow from a home equity line of credit and reinvest in IRAs creating an artificial tax saving. This artificial tax saving would be constrained by the spread between the rate charged on loans and the rate earned on investments, but it is possible that markets will develop to take account of such arbitrage possibilities.

Projections from Current Costs of IRAs

A final way of gaining some notion of the magnitude of long run revenue cost is to consider the tax expenditure estimate for the current IRA provision, which is $20 billion, according to the tax expenditure compendium for 2008, the last year for which estimates have been made.[16] Some provisions have been in the law a long time, others since 1997, and the most recent changes were made in 2003 (and reflecting a limit of $5,000), so the provision is below its steady-state level. If one just recognized that the dollar limits will be tripled (in comparison to the $5,000 cap), if everyone tripled the size of the assets in their accounts, the cost would be an additional $40 billion. This estimate is overstated because all individuals will not be at the ceiling, so that one could not simply add $40 billion to account for this effect. However, the income limits will be completely removed, which would add to the cost, and the cost is not at its steady-state level. The cost would also be larger if compared to a $2,000 limit. But, in general, since current IRA provisions are relatively costly (i.e. $20 billion), it should not be surprising that such a dramatic expansion is also quite costly and could, again, easily be in the tens of billions of dollars.

Summing Up the Evidence for Long-Run Costs

While it is not possible to place a precise price tag on the long run cost of these proposals, they are clearly much more costly than is suggested by the near-term revenue estimates. An estimate of $300 to $500 billion, or even more, over a 10-year period does not seem unreasonable — a significant contrast to the $2 billion revenue gain in the short run projected by the Treasury for its FY2004 proposal, the $4 billion loss projected by the Joint Committee on Taxation for that same plan, or the $5.5 billion gain projected by the Treasury for the FY2005 proposal.[17] This huge

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[15] (...continued)
Proposals: Preliminary Analysis," *Tax Notes*, March 3, 2003, pp. 1423-1446.

[16] Joint Committee on Taxation, "Estimates of Federal Tax Expenditures for Fiscal Years 2004-2008," December 22, 2003.

[17] A recent CBO working paper, "A Steady-state Analysis of Proposals to Reduce the Tax on Saving," by Paul Burnham, February 2006, estimated a loss of $17 billion per year in a steady state, well above the official annual cost estimates of the first ten years of the (continued...)

discrepancy occurs for two reasons: the losses from additional savings in tax favored forms are small in the short run relative to the long run, and the temporary short- run revenue gains from the substitution of back-loaded for front-loaded plans and rollovers is large enough to more or less offset these losses.

Economic Effects: Savings, Distributional Effects and Interaction with Other Tax Favored Savings

Several important economic issues arise with respect to expanding savings incentives. The focus of the Administration and perhaps of other supporters of the plan is to increase savings and economic growth. Critics are often concerned about distributional effects; savings incentives tend to favor higher income individuals. The ceilings on contributions, however, limits the benefit available to high income individuals. The expansion of tax preferred savings vehicles, particularly a general one, will have consequences for other tax favored forms including pensions, individual retirement accounts directed at pensions, tax favored educational savings accounts, and other forms of tax preferred investment income including tax exempt bonds and life insurance annuities. This section discusses these economic effects.

Effects on Savings

There has been extensive debate about the effect of individual retirement accounts on savings.[18] This debate has addressed both theoretical and empirical

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[17] (...continued)
program. The estimate appears to reflect an assumption that only 20% of corporate stocks can be shifted into these accounts. The author gives no rationale behind this assumption, and due to a very non-restrictive nature of the proposed accounts, it may be conservative.

[18] For a more complete discussion of the savings literature, see Jane G. Gravelle, *The Economic Effects of Taxing Capital Income* (Cambridge, MA., MIT Press, 1994), p. 27 for a discussion of the general empirical literature on savings and pp. 193-197 for a discussion of the empirical studies of IRAs. Subsequent to this survey, a paper by Orazio P. Attanasio and Thomas C. DeLeire, "The Effect of Individual Retirement Accounts on Household Consumption and National Savings," *Economic Journal*, vol.112, July 2002, pp. 504-538, was published. That study found little evidence that IRAs increased savings. For additional surveys see the three articles published in the fall 1996 *Journal of Economic Perspectives*, vol. 10: R. Glenn Hubbard and Jonathan Skinner, "Assessing the Effectiveness of Savings Incentives," (pp. 73-90); James M. Poterba, Steven F. Venti and David A. Wise, "How Retirement Savings Programs Increase Saving," (pp. 91-113); Eric M. Engen, William G. Gale, and John Karl Scholz, "The Illusory Effects of Savings Incentives on Saving," (pp. 113-138). An International Monetary Fund working paper by Alun Thomas and Christopher Towe, "U.S. Private Saving and the Tax Treatment of IRA/401(k)s: A Re-examination Using Household Saving Data," Aug. 1996, found that IRAs did not increase private household saving. A study by Eric M. Engen, Federal Reserve Board, and William G. Gale, Brookings Institution, found that 401(k) plans, which are similar to IRAs in some ways, did not have much effect on savings. See "Debt, Taxes, and the Effects of 401(k) Plans on Household Wealth Accumulation," May 1997. A recent simulation study in the *American Economic Review*, while not based on direct empirical evidence, suggests only a small (continued...)

evidence on savings incentives in general, and on the particular effects of individual retirement accounts, which were made available to all individuals in the period 1981-1986.

If one begins with overall evidence on savings with incentives without caps or strings attached, even this evidence does not necessarily suggest private savings would increase. The effect of a tax reduction on savings is theoretically ambiguous because of offsetting income and substitution effects. The increased rate of return may cause individuals to substitute future for current consumption and save more (a substitution effect), but, at the same time, the higher rate of return will allow individuals to save less and still obtain a larger target amount (an income effect). The overall consequence for savings depends on the relative magnitude of these two effects.

Empirical evidence on the relationship of the rate of return to the saving rate is mixed, indicating mostly small effects of uncertain direction. Thus, individual contributions to IRAs may have resulted from a shifting of existing assets into IRAs or a diversion of savings that would otherwise have occurred into IRAs. A more stark illustration of the uncertainty of increasing savings with a higher rate of return is the juxtaposition of high returns in the stock market with a dramatic reduction in the personal savings rate — suggesting that income or wealth effects dominated behavior. This fall in the savings rate in the face of high returns provides some additional evidence that expanded IRAs may not be successful in increasing savings rates.

IRAs are even less likely to increase savings because they are subject to contribution limits. For those who have saving in excess of the limit, there is no marginal incentive. In this case, only the income effect dominates.

There is one caveat about this theoretical point — in the case of front-loaded (or traditional) IRAs, there is some reason to expect that the tax cut itself would be saved or largely saved. That is because the savings plan has a future tax liability attached to it (when withdrawn) so that even if an individual were not affected by the savings incentives in the normal way, he or she would wish to save the tax cut to pay the future tax. (This choice would keep consumption fixed.) This analysis applies, however, only to front-loaded IRAs, and not to the back-loaded forms in the Administration proposal.

Note that despite this conventional analysis of IRAs and savings, some economists have argued that IRA contributions were largely new savings. The theoretical argument has been made that the IRAs increase savings because of psychological, "mental account," or advertising reasons. Individuals may need the attraction of a large initial tax break; they may need to set aside funds in accounts that

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[18] (...continued)
fraction of IRA contributions represent net savings. See Ayse Imrohoroglu, Selahattin Imrohoroglu, and Douglas H. Joines, "The Effect of Tax-Favored Accounts on Capital Accumulation," vol. 88, Sept. 1998, pp. 749-768.

are restricted to discipline themselves to maintain retirement funds; or they may need the impetus of an advertising campaign to remind them to save.

There has also been some empirical evidence presented to suggest that IRAs increase savings. This evidence includes both some simple observations that individuals who invested in IRAs did not reduce their non-IRA assets and a variety of statistical studies, especially estimates by Venti and Wise, that showed that IRA contributions were primarily new savings.[19]

However, the fact that individuals with IRAs do not decrease their other assets does not prove that IRA contributions were new savings; it may simply mean that individuals who were planning to save in any case chose the tax-favored IRA mechanism. The Venti and Wise estimate has been criticized on theoretical grounds and another study by Gale and Scholz using similar data found no evidence of a savings effect.[20] A study by Manegold and Joines comparing savings behavior of those newly eligible for IRAs and those already eligible for IRAs found no evidence of an overall effect on savings, although increases were found for some individuals and decreases for others; a study by Attanasio and DeLeire also using this approach found little evidence of an overall savings effect.[21] And, while one must be careful in making observations from a single episode, there was no overall increase in the savings rate during the period that IRAs were universally available, despite large contributions to IRAs. Similarly, the household savings rate continued (and actually accelerated) its decline after expansion of IRAs in 1997.[22]

An important issue for evaluating the Administration proposal is that, in any case, the argument regarding private savings of the up front benefit and the debate on the psychological effects of IRAs on savings concerned the effects of front-loaded, or deductible, IRAs. These arguments do not apply to back-loaded IRAs. If the objective of the plan were to encourage private savings, the front-loaded form would have been more appropriate. Indeed, by repealing the front-loaded form and requiring back-loaded approaches, there should be a direct reduction in savings from this effect, even if savings incentives otherwise have no effect on savings. Individuals who now effectively "prepay" their taxes (which gives the government its revenue gain) should reduce their savings by an equal amount.

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[19] This material has been presented by Steve Venti and David Wise in several papers; see, for example, "Have IRAs Increased U.S. Savings?," *Quarterly Journal of Economics*, vol. 105, Aug. 1990, pp. 661-698.

[20] See William G. Gale and John Karl Scholz, "IRAs and Household Savings," *American Economic Review*, Dec. 1994, pp. 1233-1260. A detailed explanation of the modeling problem with the Venti and Wise study is presented in Jane G. Gravelle, "Do Individual Retirement Accounts Increase Savings?," *Journal of Economic Perspectives*, vol. 5, spring 1991, pp. 133-148.

[21] See Douglas H. Joines and James G. Manegold, "IRAs and Savings: Evidence from a Panel of Taxpayers," University of Southern California; Orazio P. Attanasio and Thomas C. DeLeire, "IRA's and Household Saving Revisited: Some New Evidence," National Bureau of Economic Research Working Paper 4900, October 1994.

[22] See CRS Report RS20224, *The Collapse of Household Savings: Why Has It Happened and What Are Its Implications?*, By Brian Cashell and Gail Makinen.

Of course, the effectiveness of an expansion of IRAs is also affected by contribution limits, since anyone contributing at the limit would not be affected at the margin. For some individuals, there is currently no marginal effect but would now be one which would tend to induce savings; for other new contributors who are still at the limit, there would be no marginal effect and the income effects will reduce savings. Higher contribution limits increase the fraction of revenue loss that is associated with marginal investment. Nevertheless as shown in **Tables 4 and 5**, under our simulations, a significant amount of revenue goes to individuals who are at the maximum limit (excluding sales of capital assets, 56% at the lower limit and 24% at the higher limit).

This discussion relates only to private savings. If the deficit increases in the long run, then national savings could fall even if private savings did rise.

Most of the evidence presented here suggests that the proposal is unlikely to increase savings, or if it does increase savings, the effects would be small. However, one point is clear: by choosing a form of subsidy that reduces short-run revenue costs, the Administration is also choosing a form that is least likely to increase private savings and most likely to reduce them.

Table 4. Revenue Impact and Contributions Limits in a Steady State, Excluding Sales of Capital Assets

Assumed threshold value	Total revenue impact	Revenue impact from returns with			
		Passive income below threshold		Passive income over threshold	
$	$ million	$ million	%	$ million	%
5,000	26,698	11,802	44.2	14,896	55.8
15,000	43,106	26,576	61.7	16,530	38.3
35,000	54,150	41,424	76.5	12,726	23.5

Source: CRS calculations.

Table 5. Revenue Impact and Contribution Limits in a Steady State, Including Sales of Capital Assets

Assumed threshold value	Total revenue impact	Revenue impact from returns with			
		Passive income below threshold		Passive income over threshold	
$	$ million	$ million	%	$ million	%
5,000	31,408	16,579	52.8%	14,829	47.2%
15,000	55,020	38,399	69.8%	16,620	30.2%
35,000	75,379	62,322	82.7%	13,056	17.3%

Source: CRS calculations.

Distributional Effects

Tax proposals vary in the extent to which they benefit high income versus low income individuals. Savings subsidies typically benefit higher income individuals, who are far more likely to have significant savings. The benefits of IRAs are somewhat constrained for high income individuals compared to other savings subsidies, however, because of the dollar ceilings and, in the case of current IRAs, the income limits, which are particularly severe for traditional individual retirement accounts. This proposal raises the contribution limits and ends the income limits.

To examine the distributional effects, we return to the assumptions used to assess the general magnitude of the long run revenue estimates. **Tables 6 and 7** show for every assumed threshold what share of the total tax savings is attributable to every income class, average tax savings per return, and share of these savings in adjusted gross income (AGI) of the income class. In **Table 6**, for example, in the case of a $15,000 cap, taxpayers with AGI between $50,000 and $75,000 would receive 15.77% of the total tax savings received by all filers in all income classes. On average, each return in the group would see $394 in tax savings, which represents 0.65% of AGI.

Table 6. Illustrative Distributional Effects of the Proposal Under Assumed Thresholds in a Steady State, Excluding Gains on Sales of Capital Assets

Assumed threshold		$5,000			$15,000			$35,000		
AGI range ($000s)		Share of liability reduction	Average reduction per return, $	Reduction as a share of AGI	Share of liability reduction	Average reduction per return, $	Reduction as a share of AGI	Share of liability reduction	Average reduction per return, $	Reduction as a share of AGI
0	10	1.22%	12	0.40%	0.78%	12	0.41%	0.62%	12	0.41%
10	20	4.96%	54	0.36%	3.71%	65	0.44%	2.94%	65	0.44%
20	30	6.10%	87	0.35%	5.06%	116	0.47%	4.10%	119	0.48%
30	40	6.41%	127	0.37%	5.56%	178	0.51%	4.73%	192	0.55%
40	50	6.81%	179	0.40%	6.37%	269	0.60%	5.79%	309	0.69%
50	75	16.93%	263	0.43%	15.77%	394	0.65%	14.44%	457	0.75%
75	100	14.92%	500	0.58%	14.21%	766	0.89%	13.33%	909	1.06%
100	200	22.88%	846	0.64%	23.01%	1,369	1.04%	22.85%	1,720	1.30%
200	500	13.34%	1,857	0.64%	15.84%	3,547	1.23%	17.80%	5,039	1.74%
500	1000	3.88%	2,904	0.43%	5.47%	6,593	0.97%	6.95%	10,587	1.56%
1000	NA	2.54%	3,234	0.10%	4.22%	8,664	0.28%	6.44%	16,717	0.53%
Total/Average		**100.00%**	**206**	**0.45%**	**100.00%**	**331**	**0.72%**	**100.00%**	**418**	**0.91%**

Source: CRS calculations.

Table 7. Illustrative Distributional Effects of the Proposal Under Assumed Thresholds in a Steady State With Capital Gains

Assumed threshold		$5,000			$15,000			$35,000		
AGI range ($000s)		Share of liability reduction	Average reduction per return, $	Reduction as a share of AGI	Share of liability reduction	Average reduction per return, $	Reduction as a share of AGI	Share of liability reduction	Average reduction per return, $	Reduction as a share of AGI
0	10	1.59%	18	0.63%	0.98%	20	0.68%	0.71%	20	0.68%
10	20	4.60%	60	0.40%	3.37%	77	0.52%	2.49%	78	0.52%
20	30	5.68%	97	0.39%	4.52%	136	0.55%	3.47%	143	0.58%
30	40	6.12%	146	0.42%	5.10%	214	0.61%	4.13%	237	0.68%
40	50	6.58%	208	0.46%	5.97%	330	0.74%	5.14%	389	0.87%
50	75	16.99%	317	0.52%	15.39%	504	0.82%	13.52%	606	0.99%
75	100	15.45%	622	0.72%	14.58%	1,029	1.20%	13.28%	1,283	1.49%
100	200	24.27%	1,079	0.82%	25.46%	1,982	1.50%	26.01%	2,775	2.11%
200	500	13.08%	2,188	0.76%	16.16%	4,736	1.64%	19.26%	7,730	2.67%
500	1000	3.46%	3,111	0.46%	4.97%	7,834	1.16%	6.66%	14,386	2.13%
1000	NA	2.17%	3,327	0.11%	3.49%	9,360	0.30%	5.31%	19,544	0.62%
Total/Average		**100.00%**	**247**	**0.54%**	**100.00%**	**433**	**0.94%**	**100.00%**	**593**	**1.29%**

Source: CRS calculations.

Current IRA provisions are designed to limit the benefits to high income individuals both through ceilings and income limits. However, a significant benefit accrues to the highest income taxpayers for this proposal. Comparing **Table 6** with **Table 8**, which contains a distribution of the population, we see, for example, that in the case of the $15,000/$30,000 assumed cap, the bottom 40% of the population gets 4% of the tax cut, the top 15 % gets about 60%, and the top 2% gets a quarter. The dollar benefit per return rises rapidly across the income classes because higher income individuals save much more that lower income ones, and, to a lesser extent, because of higher marginal tax rates.

Table 8. Number of Returns by Income Class

AGI Range ($000s)		Returns	
		Number	Share
0	10	27,456,833	21.6%
10	20	24,076,129	18.9%
20	30	18,335,165	14.4%
30	40	13,137,813	10.3%
40	50	9,955,658	7.8%
50	75	16,817,353	13.2%
75	100	7,798,113	6.1%
100	200	7,066,359	5.6%
200	500	1877722	1.5%
500	1,000	349,122	0.3%
1,000	NA	204,920	0.2%
Total		**127,075,187**	**100.0%**

Source: CRS calculations.

When examining absolute tax savings or the distribution of tax benefits, high income individuals tend to have larger benefits (absent restrictions on availability through caps or exclusions) because they have much higher incomes. Almost any general tax cut would exhibit some degree of this pattern. There is a case for using, instead, a relative measure of redistribution. A way to measure the relative distribution is to examine the tax savings as a percent of income (ideally as a percent of after-tax income). This relative distribution measure still indicates a shift in relative income from lower incomes to higher incomes through most of the income distribution. Where the peak is reached depends on the cap used and the inclusion of full capital gains; however, in both **Table 6 and Table 7**, the peak generally is reached in either the $100,000 to $200,000 income class or the $200,000 to $500,000 class, suggesting that the relative benefit rises through 90% to 95% of the income distribution. Thus, except for the very wealthiest income classes (that is, the top 5% or 10% of the population), the provision increases the relative share of disposable income for higher income people — that is, redistributes income shares to the well-off.

Effects on Other Types of Tax Favored Savings

The final economic consequence of a new savings account proposal, particularly one with no strings attached, is that it would reduce participation in alternative tax

favored savings, as a new substitute becomes available. There are several types of tax favored uses that might be reduced, including employer pensions, standard individual retirement accounts, insurance plans, tax favored education savings accounts, tax exempt bonds, owner occupied housing, and tax favored capital gains and dividends. The displacement of tax favored accounts may be a desirable or an undesirable outcome for purposes of efficiency gains. For example, the current tax rules favor investment in owner-occupied housing, and diverting funds out of housing and into other types of investments may be desirable. The shift into passive forms of investment also favors debt finance, disfavors equity investments in unincorporated businesses, and has mixed effects on corporate equity. Encouraging employer pensions through tax benefits has some potential benefits but may also involve some distortions.

Following the release of the FY2004 proposals, much attention was focused on the effect of employer plans in discussion, and most attention will be devoted to that issue. This possible effect is cited as one of the reasons for scaling down the limits from $7,500 to $5,000.

Employer Pension Plans. Actually, the Administration proposal also proposes to simplify employer plans, including substituting Employee Retirement Savings Accounts for existing employer plans such as 401(k)s and allowing after tax (back-loaded style) employee contributions. The objective is to simplify these plans for employers (although the switch to back-loaded plans could reduce private savings and affect revenue patterns just as in the case of LSAs and RSAs).

While it is possible that the simplifications in the proposal could increase employer coverage, much more attention has been devoted to the possible effects of the individual plans on employer pension plans, particularly in the case of LSAs. Since LSAs have no strings attached, individuals might find it more attractive to reduce their voluntary 401(k) or similar contributions not matched by employer contributions and put such money instead into LSAs. Because these plans could be easily tapped for non-retirement uses, the LSAs could actually reduce retirement savings.

An even more serious issue arises with small business plans, and relates not only to the LSAs but also to the linking of benefits of highly paid employees and rank-and-file employees. Many small-business owners find setting up a plan complicated, but may still do it to make their own retirement plans (and plans of their highly compensated workers) more tax-favored. Qualification for tax purposes requires a plan to cover rank and file employees as well as owners and top officers. The basic argument made in many of these discussions is that small-business owners, finding individual retirement plans with high ceilings and, in the case of LSAs, no strings attached, will now prefer to save through individual accounts rather than by setting up retirement plans within their firms for themselves and their employees. With a $7,500 ceiling in each account (LSA and RSA), a married couple could save $30,000 per year (and save additional amounts in children's accounts).

These views have been expressed by a number of different groups and organizations. For example, the executive director of the American Society of Pension Actuaries (ASPA) stated: "It is an understatement to suggest that the impact

of these proposals on small business retirement plan coverage will be anything less than devastating."[23] Similarly, the president of the Profit-Sharing 401k Council of America (PSCA) stated: "The proposed changes significantly erode the tax code incentives that encourage employers to accept the fiduciary obligation and expense that come with offering a retirement plan ... The current approach links the availability of tax benefits for decision makers and better off workers with the retirement savings of lower paid employees. This linkage requires that employers incentivize lower paid workers to save for retirement by using expensive matching contributions as well as conducting aggressive educational campaigns."[24] Jack VanDerhei, a business professor associated with the Employee Benefit Research Institute, when commenting on the benefits of LSAs and RSAs, stated, "That's probably enough for most small employers, who could jettison doing anything for their employees and still get enough of a tax break."[25] Many other groups have made similar arguments.[26] There are also arguments that even larger employers might abandon plans because of the availability of individual tax deferred savings for their employees.

While there is no way to know for certain the effects of the proposal on employer plans, it does seem possible — and, according to the groups quoted above, likely — that the individual savings accounts, despite simplification for employer plans, ultimately reduce the coverage of employer pensions.

Individual Retirement Accounts and Life Insurance Products. Individual retirement accounts for individuals not at the limit of their combined savings could be displaced by the LSAs, which have no penalties for early withdrawal or other strings attached. Under the latest Administration proposal such conversion becomes mandatory.

Any life insurance product that has a savings elements involves a tax subsidy in the form of deferred taxes on earnings. Even term life policies if they have level premiums involve an accumulation of earnings tax free, and whole life policies explicitly provide inside buildup. Finally, life insurance companies offer plans that are particularly aimed at achieving tax benefits in the form of annuities.

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[23] "ASPA Opposes Bush Administration Savings Initiative," ASPA Press Release, February 2, 2003.

[24] "President's Proposals Will Reduce the Appeal of Employer Plans," PSCA Press Release, Febreuary 5, 2003.

[25] This statement is quoted in Aaron Bernstein, "Bush's Retirement Rx is Bad Medicine," *Business Week Online*, February 18, 2003, [http://www.businessweek.com/careers/content/feb2003/ca20030218_8886_ca030.htm], visited Deccember 31, 2003.

[26] Criticisms have also been made by the American Institute of Certified Public Accountants (AICPA) Tax Section (whose letter was the subject of a September 2, 2003 response from the Treasury Department). See also the comments reported in CRS Report RS21541, *Retirement Savings Accounts: The President's Budget Proposal for 2004*, by Patrick Purcell.

Since the tax exemption benefit for LSAs and RSAs is greater than the deferral benefit, the attractiveness of these products, particularly in cases where tax reduction is a principal objective, could fall substantially.

These shifts may not involve efficiency costs — and may involve gains — but they would be disruptive for the life insurance industry.

Education Savings Accounts. Tax benefits are provided for a variety of educational savings accounts, whose tax-favored benefits depend on using the funds for educational purposes. Under the Administration's FY2007 proposals, LSAs would either displace these accounts or include them as a kind of sub-account. Although certain types of education plans could be retained, for example due to state-provided tax benefits, the attractiveness of a no-strings-attached LSA should lead to the displacement of many of the educational accounts for those who are not saving at the limit. Qualified tuition plans are more likely to remain concentrated among high income individuals, where the incentive probably matters least, and less likely to apply to moderate income individuals where the relative benefits may actually influence decisions on how much to spend on education.

Tax Exempt Bonds. Tax exempt bonds carry lower interest rates than equivalent taxable bonds. With favorable tax treatment for many other investments, the demand for tax exempt bonds should contract which would raise financing costs for state and local governments. Many analysts have criticized the tax subsidy for state and local bond finance, which is largely an accident of history and of constitutional interpretation, and might support this displacement. But it will place an additional burden on the States and localities.

Owner Occupied Housing, Debt and Business Equity. The tax exemption would shift investment into passive forms and out of equity investments in owner occupied housing and unincorporated business including rental housing). In general, the shift out of owner-occupied housing should increase economic efficiency because this type of investment is favored. The shift out of unincorporated business equity may decrease efficiency. The effects on corporate equity, the most heavily taxed type of investment, is uncertain: while the changes favor corporate equity relative to investments in other types of equity, the savings proposals also favor interest more than dividends and capital gains (which are subject to lower rates) — and thus shifts assets into debt.

Simplification

The Administration justifies its proposal on the grounds of simplification as well as incentives to save. For most taxpayers, the current choice is either a back-loaded or a front-loaded retirement, education, health, or other account, with restrictions more limited on back-loaded plans and income limits differing. (Individuals whose incomes exceed the ceilings can invest in a non-deductible tax-deferred account.) The proposal would replace these choices with two plans that individuals could invest in simultaneously, the RSA and the LSA. The proposal may simplify rules by eliminating disparities among currently existing tax-preferred

accounts. It is important to keep in mind, though, that the substantial long-run costs of the proposal may make this simplification effort a very costly one.

Although simplification may serve as an impetus for this change, it is unclear how much simpler the resulting system would be. There would still remain a disparity between RSAs and LSAs. The LSA rules are less restrictive than those of RSA because they do not have age-based withdrawal penalties.

Furthermore, some disparities do not disappear under the FY2007 proposal but rather become less conspicuous. For example, it retains some qualified tuition plans as sub-accounts within LSAs. The funds within RSAs may be treated differently depending on their origin: rollovers from some existing accounts may be subject to various additional requirements compared to the new contributions. The FY2007 proposal would also retain limited traditional IRAs. Finally, at this point the Administration's proposal is just a conceptual framework, free of all the intricate details that ultimately determine the complexity or simplicity of the whole system.

If simplification were the principal goal, it would be much easier to permit a certain dollar amount of passive income to be excluded, without requiring the complications of keeping accounts, at least for LSAs. This approach would, however, cost more in the short run because the growth of the accounts limits the initial revenue cost.

Appendix A

This appendix presents the method of estimating the growth pattern of a back-loaded tax favored savings account for projecting revenue,[27] and also for determining the interest amounts in **Table 1**.

To estimate the pattern, we assumed that each year money is put into an account where it grows for 15 years and then is withdrawn as a level annuity for the next 10 years. We assumed that contributions in each case are a constant share of output. While variations in holding periods and withdrawal patterns will affect the results, this example illustrates the general pattern.

Because of the time path of a Roth IRA, the cost is very small in the beginning but grows rapidly.[28] For example, in the first year, earnings from a Roth IRA that are exempt from tax per dollar of contributions is r, where r is the interest rate, assuming an annual interest payment. In the second year, the value is r(1+r) +r, or slightly more than double (the first term is interest on the original first year contribution, while the second is the interest on the second year contribution).

Based on calculations assuming a 7% interest rate and a 3% growth rate (g), and keeping all measures constant relative to GDP, in the first year assets in the accounts (and revenue costs) are 3% the size of their steady-state value. By the fifth year, they are 18% of the value of the steady state size relative to GDP (which is reached in 25 years). By the 10th year, they are 41% of the size. On average, over the five-year period, the cost is 11% of the steady state cost; over a 10-year period, the cost is only one-fifth of the steady-state value relative to GDP.

A Roth-type IRA's costs are directly related to the interest rate, since they involve forgoing tax on interest. If interest rates are relatively low during the estimating period, as there is some reason to believe to be the case, the revenue loss will be even further below the steady-state values. This effect does not occur with traditional deductible IRAs, whose costs in the short run are related only to contribution levels.

Mathematically, to perform the calculations, designate the period the IRA grows prior to withdrawal as T' and the entire period the IRA exists as T. To measure the revenue cost for the Roth IRA, we estimate the cumulated value of assets in the fund. For t years in the future, t less than T', for each value of a dollar invested currently, there are e^{-gt} dollars invested that have grown at rate r, so the value of that vintage of accounts is $e^{(r-g)t}$. Integrating the value of assets yields a value at time t of:

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[27] The pattern of both forms is estimated in Jane G. Gravelle, "Estimating Long run Revenue Effects of Tax Law Changes," *Eastern Economic Journal*, vol. 19, fall 1993, pp. 481-494.

[28] This revenue cost assumes that Roth IRAs displace other investments, a finding consistent with empirical evidence and with economic theory (which suggest that these provisions can either decrease or increase savings). In any case, the *relative* pattern of costs should be similar as long as some cost occurs.

(1) Cumulative value at time:

$$t = (e^{(r-g)t} - 1) / (r - g)$$

For t greater than T' but less than T, one must take account of the value of funds that have been partially withdrawn. An annuity for a dollar that grows at rate r for T' years and then is withdrawn over (T - T') years is $e^{(rT')}\ r/(1-e^{-r(T-T')})$. The remaining value in the asset account is:

(2) $$V(t) = \left(\frac{e^{rT'}\left(1 - e^{-r(T-t)}\right)}{1 - e^{-r(T-T')}} \right)$$

when t reaches T, the numerator becomes zero.

To cumulate these amounts over time, recognize that the value in (2) is multiplied by e^{-gt}, and integrate from T' to t, to obtain:

(3) Cumulative value of (2) at time t =

$$[e^{rT'}/(1 - e^{-r(T-t')})]\{e^{-gT'} - e^{-gt} / g - e^{-rT}(e^{(r-g)t} - e^{(r-g)T'}) / (r - g)\}$$

For period t, t greater than T' but less than T, the total asset value is (1) plus (3), with t set at T' in (1). For t greater than T, substitute T for t in (3) and obtain the steady state (relative to GDP) results by adding (1) and (3). If we set the second first term in the curly brackets (the one divided by r-g) to zero and multiply the result by the interest rate, the formula gives us the cumulative value of withdrawals at time t, which are relevant to traditional IRA revenue losses.

For present value calculation each year's revenue loss is discounted at rate r-g. For a constant relative to GDP cost, the share of the cost allocable to the first t years is $1 - e^{-(r-g)t}$.

To determine the ceilings in **Table 1**, assuming that contributions are indexed to inflation levels, note that a contribution made t years ago grows by the nominal interest r and thus has grown to a value that is e^{rt} times the original contribution. At the same time; each contribution t years ago is $e^{-\pi t}$ for each dollar today, where π is the inflation rate. Integrating over all the investments, we obtain:

(4) Cumulative value at time $t = (e^{(r-p)t} - 1) / (r - p)$

and the current earnings are:

(5) Current earnings at time $t = r(e^{(r-p)t} - 1) / (r - p)$

Earnings are therefore a function of the nominal interest rate, the inflation rate, and the period of time the asset has been accumulating.