NATIONAL CENTER FOR POLICY ANALYSIS

To Roth or Not?

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In 2006, the Roth 401(k) plan was introduced as an alternative to regular 401(k)s. Whereas contributions to regular 401(k)s are made with pretax dollars, Roth 401(k) contributions are made with after-tax dollars. When retirees withdraw their funds from regular 401(k)s, the contributions and accumulated earnings are taxable. But since taxes have already been paid on Roth contributions, all of the funds in the Roth account can be withdrawn tax-free. Which type of 401(k) is better?

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Executive Summary

Conventional wisdom argues tax-deferred plans — regular 401(k)s and traditional IRAs — are preferable to after-tax plans because retirees will be in a lower tax bracket after they retire. But frequently that may not be the case: The retirement income of many seniors is subject to the Social Security benefits tax; as a result, they could face higher tax rates in retirement than while working. Also, the perilous long-term financial condition of our elderly entitlement programs makes future tax increases virtually unavoidable.

This study uses *ESPlanner*™ financial planning software, marketed at www.esplanner.com by Economic Security Planning, Inc., to compare the benefits of contributing to a Roth or a regular 401(k) for representative married and single-parent households at different ages and income levels. All households have two children who are born when the household adults are ages 27 and 29. Both spouses work and have similar earnings.

A household contribution of 6 percent of annual income to a regular 401(k) is compared to the Roth 401(k) contribution that would give them the same current standard of living. This study shows that saving in either type of account reduces lifetime tax burdens and increases lifetime incomes, compared to not saving in an account with tax preferences. Furthermore:

- As a general rule, any lifetime consumption stream that can be generated through a regular 401(k) can be duplicated with an appropriate contribution to a Roth account.
- The exceptions to this arise because of legal or employer limits on contributions and liquidity constraints that prevent households from transferring funds from ordinary savings to tax-favored savings.
- Under current tax law, the regular 401(k) looks better for many households subject to these constraints, but the Roth account offers the advantage of protection against future tax increases.

The complexity of the tax system and government transfer programs account for the favorability of one type of account over another at various

income levels. For instance, the Saver's Credit, a tax credit for lower-income households, provides a 50-cent federal match for every dollar a household saves into a retirement plan (up to a $2,000 match per couple). This credit favors the regular 401(k) plan since the pretax contribution that is matched by the government is larger than an after-tax Roth contribution. Once the credit phases out, the regular 401(k) looks less favorable.

One advantage of regular 401(k)s is the potential benefit of employer matching funds, because employers are not permitted to contribute matching funds to Roth accounts. However, likely future tax increases to pay the burgeoning cost of elderly entitlements favor Roths since Roth withdrawals are tax free. Thus:

- A 3 percent contribution to a regular 401(k) matched by a 3 percent employer contribution would be better for all households at all ages and income levels than the total equivalent contribution from the employee's own income to a Roth 401(k).
- However, if a firm does not offer matching contributions, and there is a 30 percent tax increase in the future, the Roth is preferable in most cases.

For example, faced with a 30 percent income tax hike on their retirement income, a 60-year-old couple earning $100,000 a year and receiving no employer match on regular 401(k) contributions would enjoy an 80 percent greater increase in their living standard by contributing to a Roth 401(k) rather than a regular 401(k).

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Introduction

The year 2006 ushered in a new way for American workers to reduce their lifetime taxes while saving for retirement — the Roth 401(k) plan.[1] Unlike regular 401(k) plans, Roth 401(k) contributions are not made with pretax dollars; employees must contribute after-tax money instead. Matching employer contributions to the Roth account are not allowed.[2] However, Roth 401(k) contributions and accrued interest can be withdrawn tax-free during the retirement years, whereas withdrawals from regular 401(k)s are taxable. Those who qualify have been able to set up Roth Individual Retirement Accounts (IRAs) with after-tax dollars since 1998. The Roth 401(k) operates just like a Roth IRA with three exceptions. First, unlike the Roth IRA, the Roth 401(k) is employer-provided. Second, whereas there are limits on the earned income of workers eligible to establish Roth IRAs ($116,000 for individuals and $169,000 for couples in 2008), there are no personal income limits for investing in a Roth 401(k). Third, Roth 401(k) contributions count toward the $15,500 limit for employee retirement savings plans, whereas IRAs have a contribution limit of only $5,000. This gives employees an opportunity to maximize their Roth savings when they encounter the restrictions of traditional Roth IRAs.

Having this new opportunity is beneficial, but choosing between regular and Roth retirement accounts isn't always easy. Conventional wisdom argues that tax-deferred plans — regular 401(k)s and traditional IRAs — are preferable, because of the assumption that retirees will be in a lower tax bracket after they retire. However, seniors may encounter the Alternative Minimum Tax or find that a large portion of their Social Security benefits is subject to federal income taxation. Or they may face higher tax rates as a result of government tax hikes. The complexity of the tax system and the prospects for higher future taxes surely leaves many employees wondering which type of 401(k) is best.

Using ESPlanner™ to Create Household Profiles

ESPlanner™ is a financial planning software program that allows individuals and couples to project how much retirement savings and life insurance they will need to maintain a given standard of living throughout their lives. They input into the program details about their current wages, interest and dividends; payroll and income taxes; living expenses such as mortgage payments and child care; and expectations about the future, such as a college education for their children and the rate of return they hope to earn on their investments.

ESPlanner™ estimates their future consumption — income left after subtracting savings, mortgage, taxes and life insurance premiums — and adjusts for inflation. This allows an individual or couple to calculate their highest sustainable and smoothest possible living standard over the rest of their lives, taking into account their economic resources, including Social Security benefits.

For this study, ESPlanner™ was used to create financial profiles of married and single-parent households at ages 30, 45 and 60 with different income levels, using a number of assumptions about their saving and consumption habits. Each household starts off with specific assets and liabilities scaled to their income level. [For details, see the Appendix.]

"Roth 401(k)s protect retirement savings from future tax increases."

Measuring the Effect of 401(k) Contributions on Living Standards

Given the potential for tax changes as well as the complexities of existing federal and state tax and Social Security benefit provisions, back-of-the-envelope calculations comparing regular and Roth accounts are highly problematic.

This study compares the effect on a household's living standard of contributing to a traditional 401(k) or a Roth 401(k). It uses representative single-parent and married, two-earner households (each with two children who live at home until they enter college), with different levels of expected lifetime earnings, savings and debts scaled to their preretirement incomes. Financial data for these households were entered into ESPlanner™, a financial planning program marketed to the public by Economic Security Planning, Inc. at www.esplanner.com, to model the effects on their current and future household living standards under current tax law and the possibility of future tax increases. [See the sidebar, "Using ESPlanner™ to Create Household Profiles."]

Living standards are measured by the dollars available for discretionary consumption after subtracting such "off the top" expenditures as taxes, contributions to tax-favored savings, mortgage payments, college tuition and life insurance premiums. It is assumed that households try to smooth their consumption income throughout their lifetimes in order to avoid drastic changes in theirliving standard.

However, this study compares a 6 percent employee contribution to a regular 401(k) with an annual Roth 401(k) contribution that delivers the same living standard to the household only in the short run (through age 51).[3] A 6 percent contribution to a regular 401(k) from gross wages (before income tax payments) would leave a household with more spendable income than would a 6 percent after-tax contribution to a Roth 401(k); thus, for each household in this study, the assumed contribution rate to the Roth 401(k) is less than a household with the same gross income would contribute to a regular 401(k). Households that contribute to a regular 401(k) accumulate more retirement account assets than they would by contributing to the Roth 401(k), but assets in a regular account are subject to taxation when withdrawn. Since living standards are equalized in the short run, the focus is on determining which 401(k) option provides the highest living standard for the rest of their lives. It is important to note that the contribution rates remain constant throughout the work life in this analysis, even though the older households may have fewer "off the top" spending obligations.

Each household is modeled under two different tax policy assumptions: no change in current law and a 30 percent increase in income taxation beginning at the retirement age.

The differences in lifetime consumption — and the path of a household's living standard over time — from making either regular or Roth 401(k) contributions are measured in present value. Living standards arising when contributing to the two types of accounts are compared to the living standard that arises assuming no contributions whatsoever to retirement accounts.

Comparison of Consumption Smoothing by Two Couples

Other things equal, people will attempt to smooth consumption over their lifetimes — that is, they will try to avoid abrupt changes in their standard of living. This is the theory underlying the life-cycle model of consumption and saving used in this study. It is also the way people behave. There are two ways people can smooth their lifetime consumption: 1) They can borrow in order to increase their current consumption, or 2) They can save in order to increase their future spendable income. Borrowing requires them to lower their future standard of living (as they pay back the debt), while saving requires them to lower their current standard of living (by cutting spending). However, this is difficult for lower income people. Due to their current obligations, they often cannot increase their retirement savings. Also, they are limited in their ability to borrow in order to increase their current consumption.

For example, take two young couples starting out. The first couple consists of two creditworthy, middle-income earners who can finance some of their current consumption by borrowing. For creditworthy, higher income couples, the cost of borrowing will be lower than the rate of return on their retirement savings. During their retirement years, they live on the savings accrued during their working years in addition to Social Security benefits. Borrowing and saving allows them to smooth their consumption over their remaining lives.

The second young couple earns less and cannot finance current consumption by borrowing against their future income. The reason is that the cost of additional borrowing would be greater than the rate of return they would receive on their savings. In other words, they are borrowing constrained due to their existing debt obligations.

"Saving in any tax-advantaged account increases lifetime consumption income."

For almost all households, contributing to either type of account lowers lifetime taxes (the present value of all future taxes) and raises lifetime consumption (the present value of future consumption expenditures). Doing so comes at the price of a lower preretirement living standard, but at the gain of a higher future living standard. The reason is that most of the working households are borrowing or cash constrained. Due to their existing "off the top" spending obligations (such as mortgages and children's

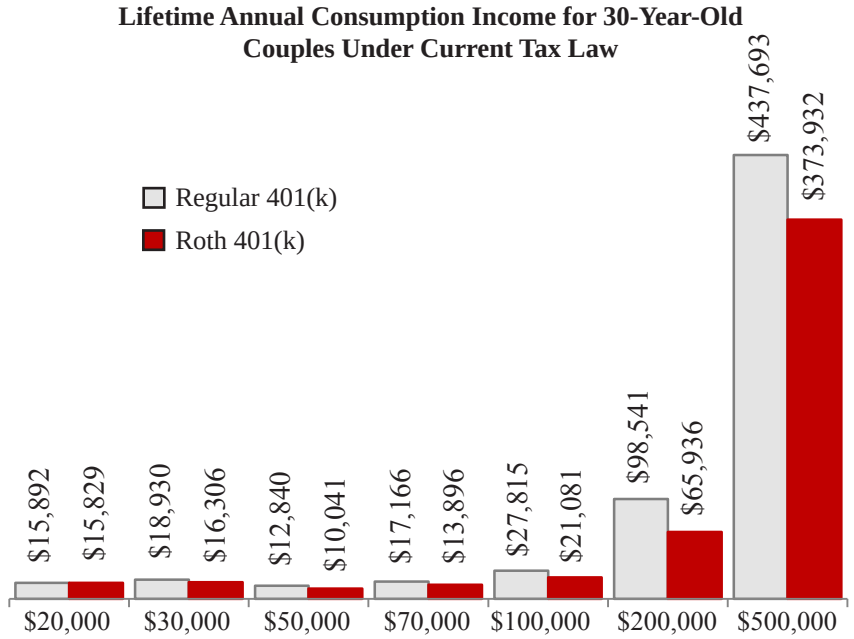
college expenses), they either opt out of their employer retirement plans or make only limited contributions to them. [For more on smoothing living standards, see the sidebar, "Comparison of Consumption Smoothing by Two Couples."]

The Regular 401(k) and Roth 401(k) Under Current Tax Law

A significant finding of all the results is that, regardless of tax law changes or which type of account is chosen, contributing to a retirement plan lowers lifetime taxes and raises lifetime consumption expenditures. But under current tax law, most households would have more lifetime consumption saving in a regular 401(k) rather than in a Roth 401(k). The exceptions — who tend to fare better with a Roth 401(k) — are households in the middle of the income distribution and younger, lower income singles.

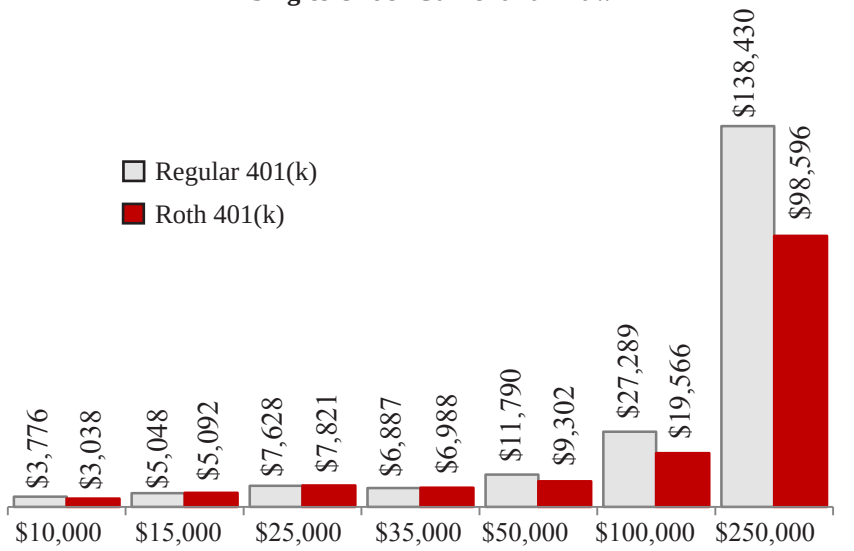
Why would one account be better than the other? One might assume that households would fare equally well with either type of account if tax rates remain as they are under current law. However, consider a single parent who is about to put two children through college. Her short-term living standard will be much higher once she no longer has to feed the children or pay tuition. In the short term, each dollar of retirement savings means roughly one dollar less in consumption. The amounts contributed to the regular and the Roth 401(k)s are set, in light of these borrowing constraints, to produce the same short-run living standard. These contribution amounts are then held constant through retirement. So even though in the short run, living standards are equalized under both contribution strategies, there is nothing to guarantee that they will be equal in the long run.

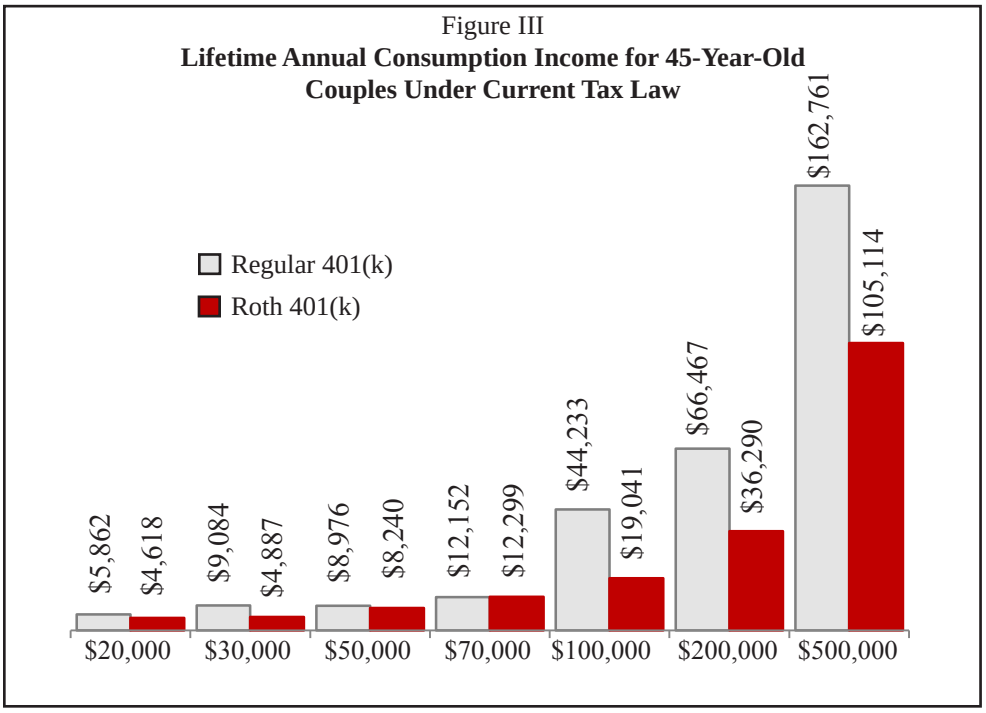
Figure I
Lifetime Annual Consumption Income for 30-Year-Old Couples Under Current Tax Law



Indeed, absent future tax hikes, middle-class, single-parent households fare slightly better using a Roth than using a regular 401(k) in most cases. This is due to the fact that single-parent households qualify for tax credits and transfer programs that lower their current tax liability, so they do not benefit as much from tax-deferred savings.

Figure II
Lifetime Annual Consumption Income for 30-Year-Old Singles Under Current Tax Law

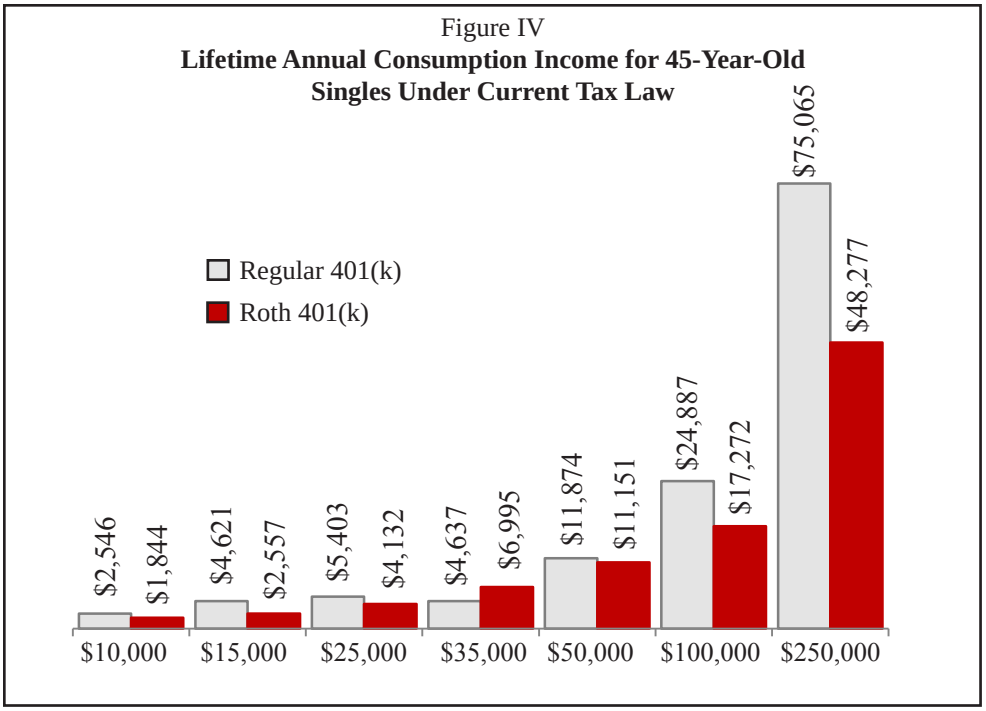




30-Year-Old Couples. Figure I shows the differences in the present value of lifetime consumption between the regular 401(k) and the Roth 401(k) for married couples at various ages and income levels. Under current tax law, most couples at all income levels would have slightly higher lifetime consumption under a regular 401(k) than a Roth 401(k). For example:

- Couples earning a combined income of $20,000 a year would have only slightly more lifetime consumption under a regular 401(k) than a Roth 401(k).
- However, couples earning $30,000 to $70,000 would have about $2,600 to over $3,200 more lifetime consumption under a regular 401(k) than a Roth 401(k).
- And couples earning $500,000 a year would have almost $64,000 more in lifetime consumption under a regular 401(k)!

It is important to note, however, that gains in the amount of lifetime consumption do not necessarily increase as earnings rise. For example, the $20,000 a year couple gains $15,892 in lifetime consumption from contributing to a regular 401(k), while the $50,000 a year couple gains only $12,840. This is due to the Saver's Credit, which is not available to middle- and upper-income couples.[4]



30-Year-Old Singles. For 30-year-old single households, the regular 401(k) provides greater lifetime consumption than the Roth 401(k) for only the lowest and highest income brackets. The reason? The lowest earning singles receive the Saver's Credit for each dollar of contributions, and since contributions to the regular 401(k) are larger than contributions to the Roth, the Saver's Credit makes the regular 401(k) relatively more valuable. For higher income singles, the regular 401(k) lowers their tax liability during their high-income working years, when their tax rates are highest.

Thirty-year-old low-to-middle-income earners qualify for tax deductions and credits, such as the Earned Income Tax Credit, the Saver's Credit and the child tax credit. But these credits will phase out as they

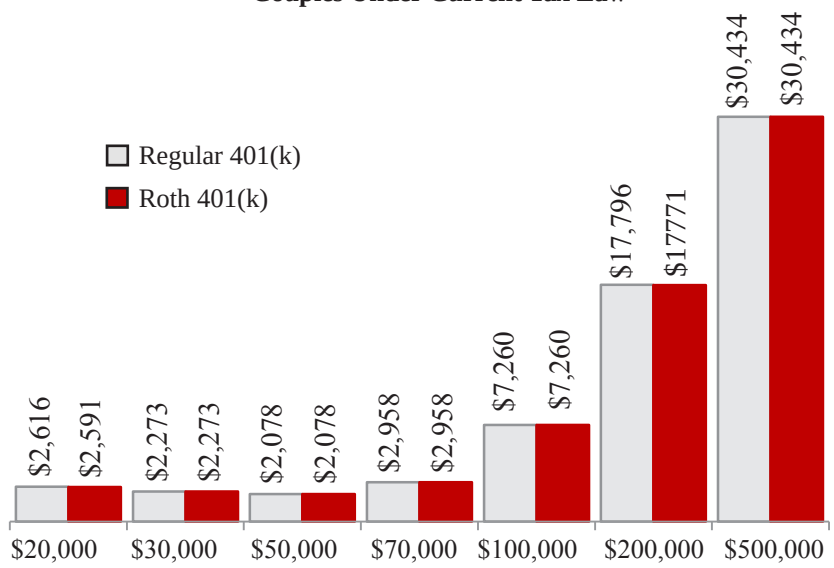
age and their children leave home. As a result, they will have a greater tax liability when they retire; thus the Roth 401(k) is more favorable. For instance [see Figure II]:

- Singles earning $10,000 a year would have slightly more lifetime consumption under the regular 401(k) compared to the Roth 401(k).
- However, singles earning $15,000 to $35,000 a year would have more lifetime consumption income (up to $200) under a Roth 401(k).
- But at $50,000 or more, the regular 401(k) would increase lifetime consumption income; in fact, singles earning $250,000 a year would have nearly $40,000 more under a regular 401(k) than a Roth 401(k).

"Many low- and middle-income retirees now face higher tax rates in retirement."

45-Year-Old Couples. For middle-aged couples, the regular 401(k) generates more lifetime consumption than the Roth 401(k), with the exception of couples earning $70,000 a year. The $70,000 a year couple would benefit only slightly more from a Roth 401(k), increasing their lifetime consumption by $147. [See Figure III.] At this age, the Earned Income Tax Credit is reduced since one of the children has left for college, thus 45-year-old couples have a higher tax liability because they qualify for fewer transfer benefits. This makes the regular 401(k) more attractive. For example:

Figure V
Lifetime Annual Consumption Income for 60-Year-Old Couples Under Current Tax Law



- Couples earning a combined income of $20,000 a year would have $1,244 more in lifetime consumption from a regular 401(k) than from a Roth 401(k).
- This small dollar difference between the 401(k) options increases for higher-income earners.
- Households earning $500,000 would have over $57,000 more in lifetime consumption compared to a Roth 401(k)!

45-Year-Old Singles. As with 45-year-old couples, singles of all income levels would fare slightly

Figure VI
Lifetime Annual Consumption Income for 60-Year-Old Singles Under Current Tax Law

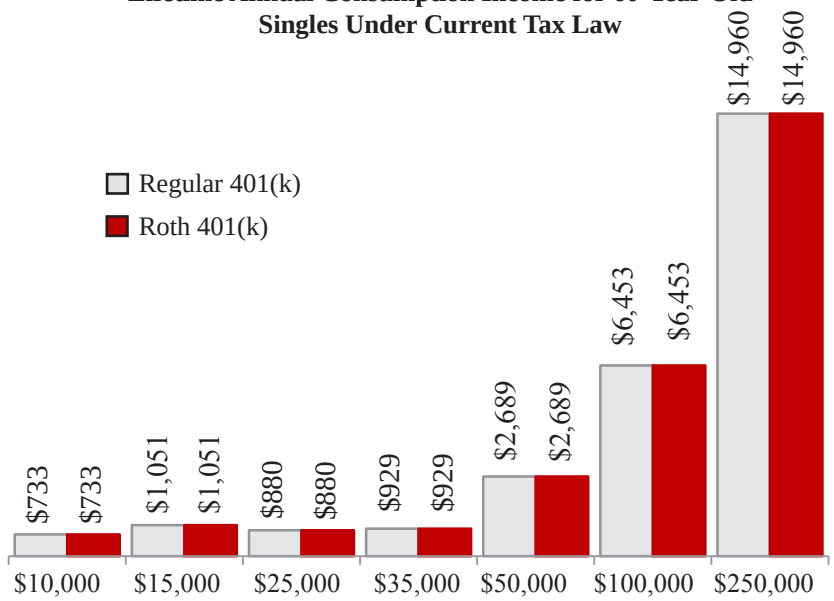
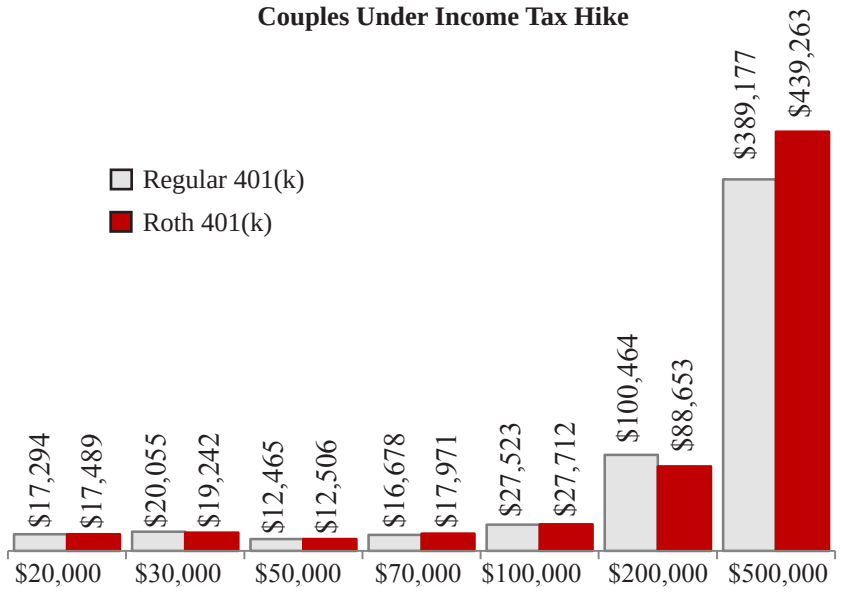


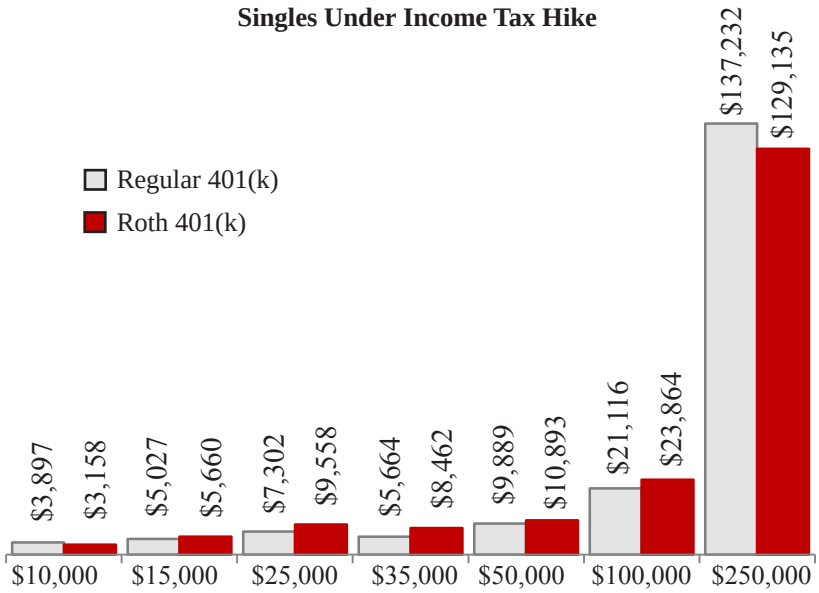
Figure VII
Lifetime Annual Consumption Income for 30-Year-Old Couples Under Income Tax Hike



better under regular 401(k)s with the exception of one group: those earning $35,000 a year. The reason for this exception is that at this income level, the household becomes ineligible for the Saver's Credit, and its current-year income tax liability is small. Again, the immediate tax deduction of a regular 401(k) allows households to contribute more, which means households eligible for the Saver's Credit get a larger credit if they invest in a regular 401(k) than if they invest in a Roth. Households earning $50,000 a year or are taxed more heavily because they don't qualify for the Earned Income Tax Credit or, at even higher income levels, the child tax credit. Thus, the regular 401(k) helps reduce their short-run tax liability, while still providing greater lifetime consumption over the Roth 401(k). For example [see Figure IV]:

- For singles earning $10,000 to $25,000 a year, the regular 401(k) provides up to $2,000 more lifetime consumption than the Roth 401(k).
- Households earning $35,000 a year would increase their lifetime consumption by $2,358 more under a Roth 401(k) than a regular 401(k).
- Singles earning $50,000 a year would increase their lifetime consumption by only $700 under a regular 401(k) compared to a Roth, but the increase is even more dramatic for singles earning up to $250,000 a year.

Figure VIII
Lifetime Annual Consumption Income for 30-Year-Old Singles Under Income Tax Hike



60-Year-Old Couples and Singles. For 60-year-old couples and singles, there is no difference in the present value of future consumption regardless of which retirement vehicle they choose. Because 60-year-old households are no longer borrowing constrained, their short-term consumption is equal to their long-term consumption; they have finally achieved smooth consumption. Therefore, the Roth contribution required to yield the same *short-term* consumption as the regular 401(k) contribution also provides the same consumption *long-term* — that is, for the rest of their lives. Thus, at this point in

their lives, regardless of whatever future tax rates they face, they can always choose a Roth contribution level that gives the exact same living standard as the regular contribution. [See Figures V and VI.]

The Regular 401(k) and Roth 401(k) Under a Future Tax Increase

Now consider the Roth under a 30 percent tax hike. Such a tax increase is a distinct possibility. It is roughly the increase in the personal income tax rates necessary to fund the projected shortfall in federal revenues compared to benefits promised future cohorts of seniors. Assuming that taxes are increased at the retirement age of each representative household, the pending tax hike makes the Roth look more favorable — and in some cases, clearly preferable. But this is not always the case.

"Possible future tax hikes would make a Roth 401(k) preferable for most workers."

30-Year-Old Couples. For 30-year-old couples, the results vary across income levels. [See figure VII.] For example:

- The lowest earning couples, at $20,000 a year, would have $195 more in lifetime consumption under a Roth 401(k); the difference is small because their current tax liability is minimal and even with a tax hike, their future tax liability is minimal; however, a Roth will protect them from a future tax hike.
- But couples earning $30,000 will have $813 more in lifetime consumption under a regular 401(k).
- This pattern continues through the remaining income levels, alternating between Roth 401(k) and regular 401(k) up through the $500,000 income level.

In fact, the wealthiest couples ($500,000 annually) could add al-

Figure IX
Lifetime Annual Consumption Income for 45-Year-Old Couples Under Income Tax Hike

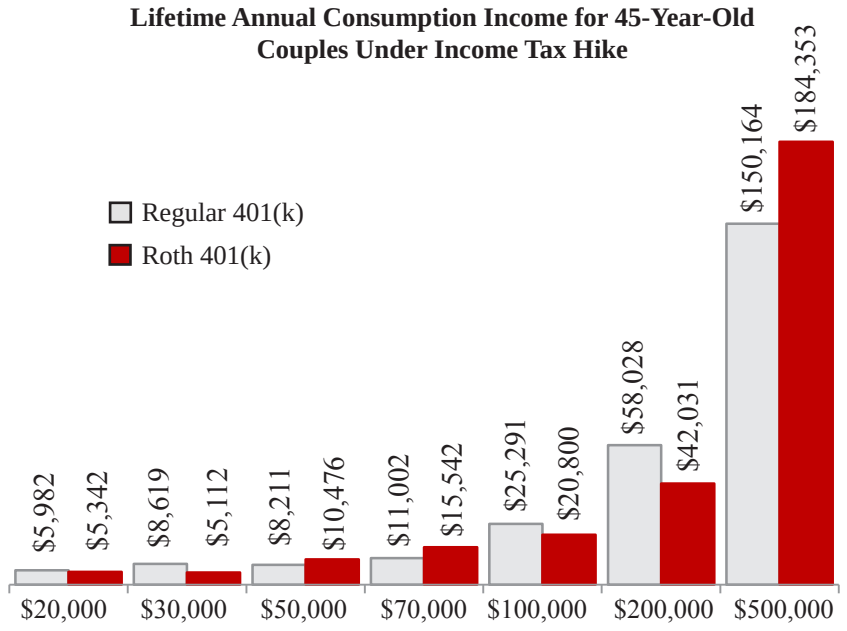


Figure X
Lifetime Annual Consumption Income for 45-Year-Old Singles Under Income Tax Hike

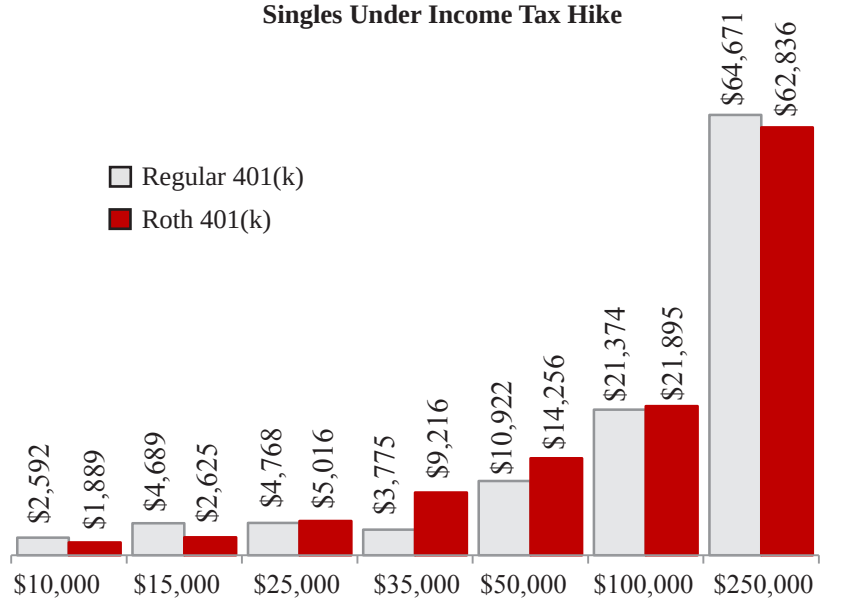
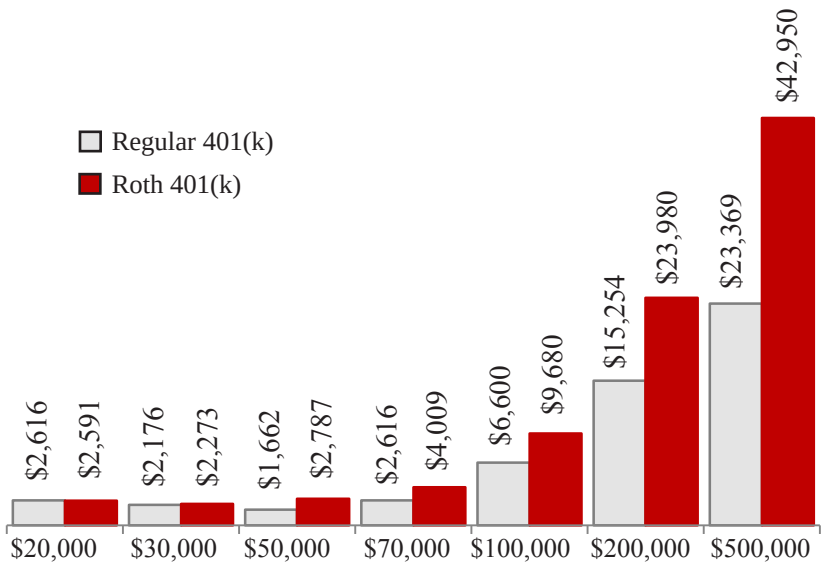


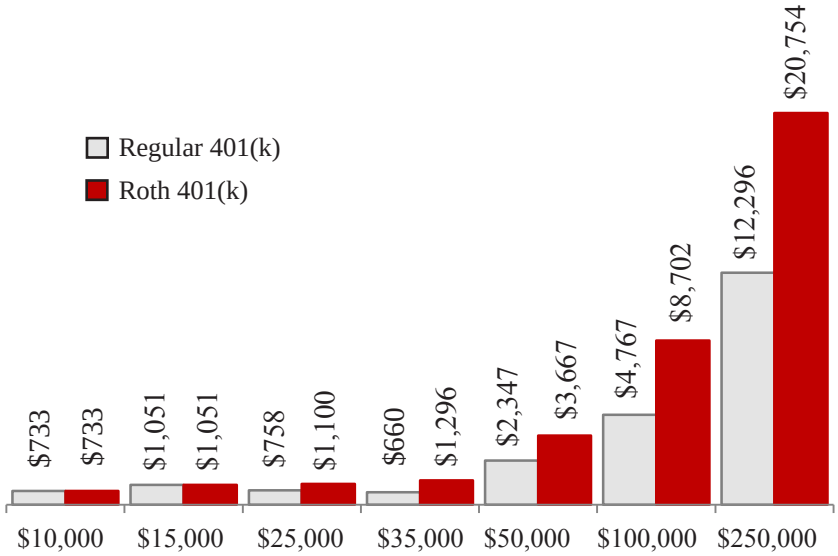
Figure XI
Lifetime Annual Consumption Income for 60-Year-Old Couples Under Income Tax Hike



most a year's wages to their lifetime consumption, compared to if they had not saved at all. The regular 401(k) produces an additional $389,177 in lifetime consumption, whereas the Roth 401(k) adds $439,263; thus the Roth beats the regular 401(k) by about $50,000 in lifetime consumption!

30-Year-Old Singles. For 30-year-old single households, the results lean more heavily in favor of the Roth 401(k) for the majority of households, with a few exceptions.

Figure XII
Lifetime Annual Consumption Income for 60-Year-Old Singles Under Income Tax Hike



For the lowest earners, the regular 401(k) is preferable; again, this is due to the fact that these earners receive the Saver's Credit and have little to no tax liability in retirement [see Figure VIII]:

- Singles earning $15,000 to $100,000 a year will have more lifetime consumption under a Roth 401(k).
- The tax hike matters especially for those earning $100,000 a year; they now have more lifetime consumption under a Roth 401(k) than they would with a regular 401(k), the opposite of what would happen under current tax law.
- For the highest earning singles, lifetime consumption income increases by $137,232 under a regular 401(k), compared to $129,000 under a Roth 401(k).

Thus, for some higher earning single households, which type of retirement vehicle is better depends on future tax policies. For the highest earning singles ($250,000 or more), the regular 401(k) will always provide more lifetime consumption, but for some a 30 percent tax increase at retirement will substantially outweigh any tax preference they receive now from contributing to a regular 401(k) and therefore tip the balance toward a Roth 401(k).

45-Year-Old Couples. For 45-year-old couple households, the regular 401(k) compared to the Roth 401(k) is a mixed bag, similar to the 30-year-old couples. [See Figure IX.] For instance:

- Those in the lower income range of $20,000 to $30,000 will benefit more from a regular 401(k), with up to $3,500 in additional lifetime consumption.

- Households earning $200,000 will also have almost $16,000 more lifetime consumption under a regular 401(k) compared to a Roth 401(k).
- However, middle-income earners (from $50,000 to $70,000) and the highest earners ($500,000) will benefit more from a Roth 401(k).

45-Year-Old Singles. As is the case with 45-year-old couples, the lowest and highest income single-earners would have greater lifetime consumption under a Roth 401(k). [See Figure X.] For example:

- Singles earning up to $15,000 a year would have up to about $2,000 more in lifetime consumption under a regular 401(k).
- However, singles earning $25,000 to $250,000 annually would have more lifetime consumption under a Roth 401(k).

60-Year-Old Couples. With a future income tax hike, 60-year-old couples of all income levels, except the lowest, would fare better under a Roth 401(k). This is quite a different result from their scenario under current law, where there is virtually no difference between investing in a Roth 401(k) and a regular 401(k). This difference is explained by the fact that a Roth 401(k) contribution that is equivalent to a regular 401(k) contribution under current tax law becomes relatively more valuable when the assets in the regular account are taxed at higher rate. [See Figure XI.] For example:

- The lowest earning couples would benefit more from a regular 401(k) than a Roth, but only by $25.
- However, couples of all other income levels would have more lifetime consumption under a Roth 401(k).
- Notably, the highest earning couples ($500,000 a year) would have almost $20,000 more in lifetime consumption income under a Roth 401(k) than with a regular 401(k).

For the highest earning 60-year-old couples, the choice between a Roth 401(k) and a regular 401(k) in the presence of a tax hike has an astounding effect on their lifetime consumption.

60-Year-Old Singles. For 60-year-old singles, the lowest income earners would experience no difference in lifetime consumption whether they contributed to a regular 401(k) or a Roth 401(k). [See Figure XII.] This is because in both the present and future, their tax liability is zero, even with expected tax hikes. But all other income levels would fare better with a Roth 401(k). Most significantly, singles earning $250,000 annually would have an additional $20,754 under a Roth 401(k), compared to only $12,296 in lifetime consumption under a regular 401(k).

Employer Matching Contributions

In some cases, regular 401(k) account contributions are matched by the employer. However, Roth 401(k)s are not eligible for an employer match. If each representative household contributes 3 percent of its salary to a regular 401(k), and is matched by a 3 percent employer contribution, all ages and income levels will be better off with a regular 401(k) than with a Roth 401(k). In the previous examples with no employer match, households were contributing 6 percent of their own income. While this is twice what they are contributing under an employer match system, their compensation is not being reduced under the employer match. The 3 percent match from the employer is in addition to their regular earnings; thus, in all cases, they will have more lifetime consumption.

Conclusion

Which vehicle is best? The answer depends on the characteristics of the households and potential tax changes. Assuming that households are not liquidity-constrained and have assets to transfer to tax-favored savings, the Roth 401(k) can provide the same standard of living as a regular 401(k) and can protect households against future tax increases.

However if existing tax provisions are retained through time and households are liquidity-constrained, contributing to a regular 401(k) generates more lifetime consumption than does contributing to a Roth 401(k). The regular 401(k) is particularly attractive when employers offer matching contributions.

Given the considerable uncertainty facing American workers concerning the future nature of tax policy, the best option when it comes to choosing a retirement account vehicle is surely to diversify and allocate a sizeable share of one's tax-advantaged saving to each type of account.

Appendix

Consumption is defined by ES-Planner as all expenditures apart from "off the top" spending. Off-the-top spending includes college tuition and other special expenditures, housing expenditures, taxes, life insurance premiums, regular saving, taxes, and contributions to retirement accounts. Thus, consumption expenditures correspond to disposable spending.

In modeling a household's standard of living, let C represent a household's total consumption expenditure, s for its living standard per adult, k_i for the number of children age i, 0_i for relative cost of a child age I, N for the number of adults, and v for the degree of economics of shared living. The relationship between C and s in a given year is:

$$C = s(N + \sum_i \theta\ i,k_i)^v$$

The analysis is based on 14 representative couples, each at three different age levels: 30, 45 and 60. The households differ with respect to their marital status, annual labor earnings, assets, housing expenses, college expenses (when the children are ages 19 to 22), and age [see Appendix Table I]. The 30-year-olds are assumed to have two children, ages one and three. Each household invests 6 percent of its annual income in a regular 401(k) retirement account; in all cases this amount falls within the allowable contribution limit. Investment accounts earn a 3 percent real rate of return (adjusted for inflation). Labor earnings are fixed throughout the working years (no real increase in wages) and couples live to age 100.

Using the results from these initial runs, each household's assets, retirement account balances, and mortgage balances are extracted at ages 45 and 60. These three different age profiles are then used to compare contributions from the household's current age through age 65 at a) 6 percent of earnings with no employer match to a regular 401(k), b) the percent of earnings to a Roth 401(k) needed to generate the same living standard in the short term as arises from contributing to the regular 401(k), and c) nothing to either regular or Roth 401(k) accounts.

Characteristics of Our Stylized Households

Single Households

Total Household Income	Assets at 30	Annual College Expense	House Value	Mortgage	Monthly Mortgage Payment	Annual Property Taxes	Annual Home Maintenance
$10,000	$2,500	$2,500	$30,000	$24,000	$300	$300	$150
$15,000	$3,750	$3,750	$45,000	$36,000	$450	$450	$225
$25,000	$6,250	$6,250	$75,000	$60,000	$750	$750	$375
$35,000	$8,750	$8,750	$105,000	$84,000	$1,050	$1,050	$525
$50,000	$12,500	$12,500	$150,000	$120,000	$1,500	$1,500	$750
$100,000	$25,000	$25,000	$300,000	$240,000	$3,000	$3,000	$1,500
$250,000	$62,500	$50,000	$750,000	$600,000	$7,500	$7,500	$3,750

Married Households

Total Household Income	Assets at 30	Annual College Expense	House Value	Mortgage	Monthly Mortgage Payment	Annual Property Taxes	Annual Home Maintenance
$20,000	$5,000	$5,000	$60,000	$48,000	$600	$600	$300
$30,000	$7,500	$7,500	$90,000	$72,000	$900	$900	$450
$50,000	$12,500	$12,500	$150,000	$120,000	$1,500	$1,500	$750
$70,000	$17,500	$17,500	$210,000	$168,000	$2,100	$2,100	$1,050
$100,000	$25,000	$25,000	$300,000	$240,000	$3,000	$3,000	$1,500
$200,000	$50,000	$50,000	$600,000	$480,000	$6,000	$6,000	$3,000
$500,000	$125,000	$50,000	$1,500,000	$1,200,000	$15,000	$15,000	$7,500

Notes

[1.] For nonprofits, the new Roth option is called a Roth 403(b). In what follows, references to Roth 401(k) plans also include Roth 403(b) plans.

[2.] Employers are not allowed to contribute to Roth accounts, but they can match an employee's Roth 401(k) contributions with a contribution to an employee's regular (tax-deferred) account. In fact, employees can establish and contribute to both a tax-prepaid account (Roth) and a tax-deferred account within a company's 401(k) plan, provided the plan rules allow it. Since the purpose of this study is to compare Roth savings to tax-deferred savings, a mix of savings in the two types of accounts is not considered. See IRS, "Retirement Plan FAQs Regarding Designated Roth Accounts;" available at http://www.irs.gov/retirement/article/0,,id=152956,00.html.

[3.] The age of 51 was selected for the short run since this is the age at which most of the representative households will no longer be borrowing constrained.

[4.] The Saver's Credit provides a federal match of up to 50 cents for every dollar a worker contributes to a retirement plan, not to exceed $2,000 a year. The credit is available to married households with adjusted gross incomes of less than $52,000 and single households with adjusted gross incomes of less than $39,000.

About The NCPA

The NCPA is a nonprofit, nonpartisan organization established in 1983. Its aim is to examine public policies in areas that have a significant impact on the lives of all Americans — retirement, health care, education, taxes, the economy, the environment — and to propose innovative, market-driven solutions. The NCPA seeks to unleash the power of ideas for positive change by identifying, encouraging and aggressively marketing the best scholarly research.

Health Care Policy.

The NCPA is probably best known for developing the concept of Health Savings Accounts (HSAs), previously known as Medical Savings Accounts (MSAs). NCPA President John C. Goodman is widely acknowledged (*Wall Street Journal*, WebMD and the *National Journal*) as the "Father of HSAs." NCPA research, public education and briefings for members of Congress and the White House staff helped lead Congress to approve a pilot MSA program for small businesses and the self-employed in 1996 and to vote in 1997 to allow Medicare beneficiaries to have MSAs. In 2003, as part of Medicare reform, Congress and the President made HSAs available to all nonseniors, potentially revolutionizing the entire health care industry. HSAs now are potentially available to 250 million nonelderly Americans.

The NCPA outlined the concept of using federal tax credits to encourage private health insurance and helped formulate bipartisan proposals in both the Senate and the House. The NCPA and BlueCross BlueShield of Texas developed a plan to use money that federal, state and local governments now spend on indigent health care to help the poor purchase health insurance. The SPN Medicaid Exchange, an initiative of the NCPA for the State Policy Network, is identifying and sharing the best ideas for health care reform with researchers and policymakers in every state.

NCPA President John C. Goodman is called the "Father of HSAs" by *The Wall Street Journal*, WebMD and the *National Journal*.

Taxes & Economic Growth.

The NCPA helped shape the pro-growth approach to tax policy during the 1990s. A package of tax cuts designed by the NCPA and the U.S. Chamber of Commerce in 1991 became the core of the Contract with America in 1994. Three of the five proposals (capital gains tax cut, Roth IRA and eliminating the Social Security earnings penalty) became law. A fourth proposal — rolling back the tax on Social Security benefits — passed the House of Representatives in summer 2002. The NCPA's proposal for an across-the-board tax cut became the centerpiece of President Bush's tax cut proposals.

NCPA research demonstrates the benefits of shifting the tax burden on work and productive investment to consumption. An NCPA study by Boston University economist Laurence Kotlikoff analyzed three versions of a consumption tax: a flat tax, a value-added tax and a national sales tax. Based on this work, Dr. Goodman wrote a full-page editorial for *Forbes* ("A Kinder, Gentler Flat Tax") advocating a version of the flat tax that is both progressive and fair.

A major NCPA study, "Wealth, Inheritance and the Estate Tax," completely undermines the claim by proponents of the estate tax that it prevents the concentration of wealth in the hands of financial dynasties. Actually, the contribution of inheritances to the distribution of wealth in the United States is surprisingly small. Senate Majority Leader Bill Frist (R-TN) and Senator Jon Kyl (R-AZ) distributed a letter to their colleagues about the study. In his letter, Sen. Frist said, "I hope this report will offer you a fresh perspective on the merits of this issue. Now is the time for us to do something about the death tax."

Retirement Reform.

With a grant from the NCPA, economists at Texas A&M University developed a model to evaluate the future of Social Security and Medicare, working under the direction of Thomas R. Saving, who for years was one of two private-sector trustees of Social Security and Medicare.

The NCPA study, "Ten Steps to Baby Boomer Retirement," shows that as 77 million baby boomers begin to retire, the nation's institutions are totally unprepared. Promises made under Social Security, Medicare and Medicaid are completely unfunded. Private sector institutions are not doing better — millions of workers are discovering that their defined benefit pensions are unfunded and that employers are retrenching on post-retirement health care promises.

Pension Reform.

Pension reforms signed into law include ideas to improve 401(k)s developed and proposed by the NCPA and the Brookings Institution. Among the NCPA/Brookings 401(k) reforms are automatic enrollment of employees into companies' 401(k) plans, automatic contribution rate increases so that workers' contributions grow with their wages, and better default investment options for workers who do not make an investment choice.

The NCPA's online Social Security calculator allows visitors to discover their expected taxes and benefits and how much they would have accumulated had their taxes been invested privately.

Environment & Energy.

The NCPA's E-Team is one of the largest collections of energy and environmental policy experts and scientists who believe that sound science, economic prosperity and protecting the environment are compatible. The team seeks to correct misinformation and promote sensible solutions to energy and environment problems. A pathbreaking 2001 NCPA study showed that the costs of the Kyoto agreement to reduce carbon emissions in developed countries would far exceed any benefits.

Educating the next generation.

The NCPA's Debate Central is the most comprehensive online site for free information for 400,000 U.S. high school debaters. In 2006, the site drew more than one million hits per month. Debate Central received the prestigious Templeton Freedom Prize for Student Outreach.

Promoting Ideas.

NCPA studies, ideas and experts are quoted frequently in news stories nationwide. Columns written by NCPA scholars appear regularly in national publications such as the *Wall Street Journal*, the *Washington Times*, *USA Today* and many other major-market daily newspapers, as well as on radio talk shows, on television public affairs programs, and in public policy newsletters. According to media figures from Burrelle's, more than 900,000 people daily read or hear about NCPA ideas and activities somewhere in the United States.

What Others Say About the NCPA

"The NCPA generates more analysis per dollar than any think tank in the country. It does an amazingly good job of going out and finding the right things and talking about them in intelligent ways."

Newt Gingrich,
former Speaker of the U.S. House of Representatives

"We know what works. It's what the NCPA talks about: limited government, economic freedom; things like health savings accounts. These things work, allowing people choices.We've seen how this created America."

John Stossel,
co-anchor ABC-TV's *20/20*

"I don't know of any organization in America that produces better ideas with less money than the NCPA."

Phil Gramm,
former U.S. Senator

"Thank you . . . for advocating such radical causes as balanced budgets, limited government and tax reform, and to be able to try and bring power back to the people."

Tommy Thompson,
former Secretary of Health and Human Services

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