

# COULD TAX REFORM KILL 401(k) PLANS?

BY ALICIA H. MUNNELL\*

## Introduction

Employer plans are a critical component of the U.S. retirement income system. The existence of these plans, especially the increasingly dominant 401(k)s, seems highly dependent on their favorable tax treatment. It is less clear, however, whether the employee contributions that fund these plans are a response to the favorable tax provisions or to the 'Christmas Club' nature of pensions that make saving automatic. This issue has become increasingly important, because the reduction in the taxation of equities to date, and the near elimination of equity taxation recommended by the President's Advisory Panel on Federal Tax Reform, dramatically reduce the tax advantages of employer plans.

Two questions emerge. Will employer plans survive in the absence of any tax advantage to saving within a plan as opposed to a fully taxable account? And if employer-sponsored pensions do not survive, will saving — and retirement saving in particular — increase or decrease? One could argue that making the favorable tax provisions available to all forms of saving could encourage people to save more. Or one could argue that the 'Christmas Club' nature of pensions is key, in which case a substantial retrenchment of employer-sponsored plans could dramatically reduce saving.

## Pension History in a Nutshell

Tax benefits are clearly not the only reason why employers sponsor retirement income plans. At the end of the nineteenth century, long before the enactment of the Federal Personal Income Tax in 1916, a handful of very large employers, such as govern-

ments, railroads, utilities, universities, and business corporations, had put in place defined benefit pension plans. They did so because the pension was a valuable tool for managing their workforce. These plans provide benefits based on final pay and years on the job. As a result, the value of pension benefits increases rapidly as job tenure lengthens and motivates employees to stay with the firm. Defined benefit plans also encourage employees to retire when their productivity begins to decline.

By the end of the 1920s, 15 percent of the U.S. private sector workforce was covered by a plan. The railway industry had extended pension coverage to 80 percent of its workers. Most large banks, utility, mining, and petroleum companies, as well as a sprinkling of manufacturers, also had formal plans. While the income tax was then in effect, less than five percent of Americans were subject to the federal personal levy. Defined benefit plans thus emerged as a way for firms to manage their workforce, not as a way to pay workers tax-advantaged compensation.

During and after the Second World War, the income tax was extended to a much larger share of the workforce. And postwar tax rates were significantly higher than in the initial growth period of defined benefit pensions. So while other forces clearly contributed to the rapid growth of employer plans in the postwar period, the advantageous tax treatment became an increasingly important factor.

The transition from defined benefit to 401(k) plans, which began in the early 1980s, has enhanced the importance of the advantageous tax treatment of pensions. The 401(k) plan is essentially a savings account. The employee, and most often the employer

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as well, contribute a percentage of earnings into the account. The contributions are invested, generally at the discretion of the employee, mostly in mutual funds of stocks and bonds. When workers retire, they receive the balance as a lump sum. It is much harder to argue that this form of pension, as opposed to traditional defined benefit plans, is a key personnel management tool to retain skilled workers and encourage the retirement of older employees whose productivity is less than their wage. Once vested, workers do not forfeit any benefits when they change employers. Nor do 401(k) plans contain the incentives to retire at specific ages that employers embed in defined benefit plans. Some economists argue that 401(k) plans help employers attract and retain high-quality workers — those who have low discount rates and value saving — rather than directly affect employee productivity.<sup>1</sup> But the contribution of an employer plan to personnel management is clearly far less important today than it was in the past. The tax preferences afforded pensions, as a result, have become the major advantage of employer-sponsored 401(k) plans.

## The Tax Advantage of 401(k)s

### The Conventional 401(k)

Retirement saving conducted through typical employer plans — both defined benefit pension and 401(k) plans — is tax advantaged because the government taxes neither the original contribution nor the investment returns on those contributions until they are withdrawn as benefits at retirement. If the saving were done outside a plan, the individual would first be required to pay tax on his earnings and then on the returns from the portion of those earnings invested. Deferring taxes on the original contribution and on the investment earnings is equivalent to receiving an interest free loan from the Treasury for the amount of taxes due, allowing the individual to accumulate returns on money that they would otherwise have paid to the government.

### The Roth 401(k)

Beginning January 2006, employers have the option of offering a Roth 401(k). Under this arrangement, initial contributions are not deductible. But investment earnings accrue tax free and no tax is paid when the money is withdrawn as long as the participants are at least 59 ½ and the money has been in the account for at least five years.<sup>2</sup> This arrangement is superior to saving outside a plan because no taxes are ever paid on the returns to investments.

## Conventional and Roth 401(k)s Offer Virtually Identical Tax Benefits

Although the conventional and Roth 401(k)s may sound quite different, in fact they offer virtually identical tax benefits. Unfortunately, the easiest way to demonstrate this point is with equations. Assume that  $t$  is the individual's marginal tax rate and  $r$  is the annual return on the assets in the 401(k). If an individual contributes \$1,000 to a conventional 401(k), then after  $n$  years, the 401(k) would have grown to  $\$1,000(1+r)^n$ . When the individual withdraws the accumulated funds, both the original contribution and the accumulated earnings are taxable. Thus, the after tax value of the 401(k) in retirement is  $(1-t) \$1,000(1+r)^n$ .

Now consider a Roth 401(k). The individual pays tax on the original contribution, so he puts  $(1-t)\$1,000$  into the account. (Note the original contribution in this case is smaller than for the conventional 401(k).) After  $n$  years, these after-tax proceeds would have grown to  $(1+r)^n (1-t) \$1,000$ . Since the proceeds are not subject to any further tax, the after-tax amounts under the Roth and conventional plans are identical:<sup>3</sup>

$$\begin{array}{cc} \text{Roth} & \text{Conventional} \\ (1+r)^n (1-t) \$1,000 & = (1-t) \$1,000(1+r)^n \end{array}$$

Of course, the preceding exercise assumes that the tax rate people face in retirement is the same as that when they are young. If people's tax rates decline after retirement when they withdraw the funds, then they will pay less tax and have more after-tax income with the conventional 401(k) than with the Roth. If tax rates rise in the future to cover the deficits in the budget forecasts, then today's workers will face higher taxes in retirement and will have more after-tax income with a Roth 401(k) plan than with a conventional one.<sup>4</sup> But for most people, changes in tax rates before and after retirement are not that significant, so the tax treatment of the two types of 401(k) plans can be viewed as identical.<sup>5</sup>

## The Disappearing Tax Advantage

Regardless of whether the focus is the conventional or Roth 401(k), one of the major selling points for these plans has been the tax preferred treatment under the federal personal income tax. But the value of the tax preference depends on the tax treatment of investments outside of 401(k)s. And the taxation of capital gains and dividends has been reduced dramat-

ically — particularly in recent years — making saving outside of 401(k) plans relatively more attractive than before and lowering the value of the tax preference.

The intuition is clearest when considering stock investments inside and outside of a Roth 401(k), as the amount initially saved is the same. Assume the tax rate on capital gains and dividends is set at zero. In both cases, the investor pays taxes on his earnings and puts after-tax money into an account. In the Roth 401(k) plan, he pays no taxes on capital gains and dividends as they accrue over time and takes his money out tax free at retirement. In the taxable account, he pays no tax on the dividends and capital gains as they accrue and takes the money out tax free at retirement. In short, the total tax paid under the Roth and the taxable account arrangement is identical.

How close is the assumption of a "zero" tax rate to the real world? Table 1 summarizes the maximum tax rates applied to capital gains and dividends since 1988. The 1986 tax reform legislation set the tax rate on realized capital gains equal to that on ordinary

income. The capital gains tax rate became preferential in 1991-1996, not because it changed but because the rates of taxation of ordinary income increased. Subsequently, Congress explicitly reduced the tax rate on capital gains to 20 percent effective in 1997 and to 15 percent effective in 2003.<sup>6</sup> Dividends traditionally have been taxed at the rate of ordinary income. That pattern was changed effective in 2003 when the rate on dividend taxation was reduced to 15 percent.

In November 2005, the President's Advisory Panel on Federal Tax Reform presented two proposals to the Secretary of the Treasury. *The Simplified Income Tax Plan* eliminates the Alternative Minimum Tax, transforms a number of deductions to credits, and simplifies major features of the existing tax system. *The Growth and Investment Tax Plan* builds on the first proposal but moves closer to a consumption tax by allowing businesses to expense all new investments. The purpose of this *brief* is not to evaluate the proposals but simply to explore their implications for the attractiveness of 401(k) plans. The attractiveness of 401(k) plans depends crucially

TABLE 1. TOP RATES ON ORDINARY INCOME, CAPITAL GAINS, AND DIVIDENDS, 1988-2005 AND THE PROPOSALS OF THE PRESIDENT'S ADVISORY PANEL ON FEDERAL TAX REFORM

Regime	Top Rate		
	Ordinary Income	Realized Capital Gains	Dividends
1988-1990*	28.0%	28.0%	28.0%
1991-1992	31.0	28.0	31.0
1993-1996	39.6	28.0	39.6
1997-2000	39.6	20.0	39.6
2001	39.1	20.0	39.1
2002	38.6	20.0	38.6
2003-2005	35.0	15.0	15.0
President's Advisory Panel on Federal Tax Reform			
<i>Simplified Income Tax Plan</i>	33.0	8.25	0.0
<i>Growth and Investment Tax Plan</i>	30.0	15.0	15.0

\* Note: In 1988-1990, the top rate on regular income over \$31,050 and under \$75,050 was 28 percent. Income over \$75,050 and under \$155,780 was taxed at 33 percent. And any income over \$155,780 was taxed at 28 percent.

Source: Citizens for Tax Justice (2004).

on the tax rates applicable to capital gains and dividends in taxable accounts. The *Simplified Income Tax Plan* reduces the maximum tax rate on capital gains to 8.25 percent and eliminates the taxation of dividends altogether. Ironically, the *Growth and Investment Tax Plan*, which in its entirety taxes capital less, has somewhat higher rates on dividends and capital gains under the Personal Income Tax, retaining the 15 percent tax rate that applies to capital gains and dividends under current law.

Table 2 shows how the difference in return between saving through a 401(k) plan and through a taxable account has narrowed over time and the dramatic implications of the *Simplified Income Tax Plan*. The calculations are based on the following assumptions: 1) the worker earns \$1,000 and wants to save the proceeds; 2) the proceeds are invested for 30 years in equities with a 6 percent return — 2 percent paid out in dividends and 4 percent in the appreciation of the price of the stock; 3) the worker is in the maximum tax bracket; and 4) the worker does not trade the stock during his working years so capital gains taxes are due only when gains are realized at retirement.

As shown in Table 2, the preferential tax treatment afforded 401(k)s in 1988 produced a difference in the after-tax annual rate of return of 1.1 percent. This additional return may sound small, but over a thirty year period it would result in 40 percent more retirement wealth. This difference in the after-tax rates of return did not change much until 2003. The difference then narrowed dramatically — to 0.6 percent — as Congress lowered the tax rate on both dividends and capital gains. Under the *Simplified Income Tax Plan*, the tax advantage to saving in a 401(k) plan would amount to only 0.2 percent since the tax on dividends would be eliminated and the maximum capital gains rate would be reduced to 8.25 percent.

One obvious question is how to think about the employer match in the case of 401(k) plans. Some people liken it to manna from heaven that enhances the return on 401(k) investments. Economists however, tend to think that the introduction of a 401(k) match implies a reduction in cash compensation, even if it takes some time for the adjustment to occur. That is, a dollar paid in a 401(k) match is a dollar not paid in cash wages.<sup>7</sup> Therefore, the match

TABLE 2. RETURNS FOR TAXPAYERS FACING MAXIMUM TAX RATE IN TAXABLE ACCOUNT AND 401(K) PLANS UNDER VARIOUS TAX LAWS AND REFORM PROPOSALS\*

Regime	Annual Rate of Return		Difference between 401(k) and Taxable Account
	Taxable Account	Conventional/Roth 401(k) Plan	
1988-1990	3.7%	4.8%	1.1%
1991-1992	3.5	4.7	1.2
1993-1996	2.8	4.2	1.4
1997-2000	3.0	4.2	1.2
2001	3.1	4.3	1.2
2002	3.1	4.3	1.2
2003-2005	3.9	4.5	0.6
President's Advisory Panel on Federal Tax Reform			
<i>Simplified Income Tax Plan</i>	4.4	4.6	0.2
<i>Growth and Investment Tax Plan</i>	4.1	4.7	0.6

\* Note: Assumes appreciation of 6 percent per year, 2 percent from dividends and 4 percent from increase in the price of the equities.

Source: Author's calculations based on rates in Table 1 and assumptions described in the text.

is probably most usefully viewed as part of a contribution to a conventional 401(k) plan rather than an increase in the return on employee contributions. With this view, the tax advantage to saving through 401(k) plans virtually disappears under the *Simplified Income Tax Plan*.<sup>8</sup>

## Will 401(k) Plans Survive Such Low Tax Rates?

With virtually no tax advantage to investing in equities through employer-sponsored pensions, the question arises as to the future of such plans. Here several issues are relevant.

First, the tax discussion applies only to the investment in equities. Interest from bonds and other fixed income investments will continue to be taxed at ordinary income tax rates outside of employer plans. Thus, participants would continue to receive a substantial tax advantage by saving in pensions to the extent that they concentrated on interest-bearing investments. Such concentration, however, would require a major change in the allocation of pension assets. As shown in Table 3, more than 60 percent of investments in defined contribution plans are currently in equities, counting both direct investments and equities held in mutual funds.<sup>9</sup> Replacing those equity holdings with fixed-income investments would have major implications for both financial markets and for the ability of individuals to accumulate an

adequate retirement income without the higher returns — albeit higher risk — associated with equity investment.

Second, maybe the provision of a work-based saving plan — even without tax advantages — is a useful mechanism for attracting a better class of worker. And employers could value such plans as a way to promote an orderly retirement process. If employers see sufficient personnel management advantages, they will continue to sponsor these plans. After all, employer-based pensions — albeit the far more powerful management tool of the defined benefit plan — originated without any tax advantage.

On the other hand, people do not like locking their money up for long periods of time with limited access. Generally speaking, the money in 401(k) plans cannot be withdrawn until age 59 ½ without a 10-percent penalty. Borrowing is possible but only up to limited amounts. Thus, if owners, managers, and highly compensated employees want equity investments and resist locking their money up without tax advantages, pensions could be an endangered saving vehicle. (The generous limits under the President's Advisory Panel's "Save for Retirement" and "Save for Family" plans are also likely to reduce the desire for work-based plans, but this *brief* is a story about the impact of lower rates.)

## Will Workers Save More or Less with Low Tax Rates?

Virtually all saving by the working-age population currently takes place within employer-sponsored pension plans (Figure 1). Most individuals save virtually nothing on their own. The results are evident in the asset holdings of households approaching retirement (those aged 55-64), who in 2001 had, on average, only \$37,000 in financial saving outside of pensions. The value of their claims in defined benefit and defined contribution pension plans by contrast exceeded \$300,000. The fact that workers clearly accumulate retirement saving within an employer-sponsored plan does not help to sort out whether the saving reflects the tax advantages of pension saving or the 'Christmas Club' aspect of pensions, harking back to days when workers committed to set aside \$10 or so each week so they would have money to buy presents at Christmas time.

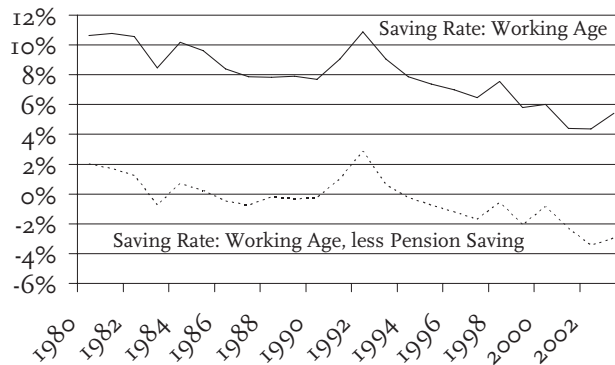
It seems logical that reducing or virtually eliminating the taxation of returns to saving would encourage people to save more. In fact, however, economic theory is ambiguous on this point. A higher after-tax return makes saving more attractive relative to consumption, thereby encouraging saving. But for those

TABLE 3. DISTRIBUTION OF PRIVATE PENSION ASSETS BY FINANCIAL INSTRUMENT, 2004

Financial Instrument	Defined Benefit	Defined Contribution
Equities	39.8%	36.5%
Mutual Funds	11.4	36.3
Bonds	29.3	6.8
Cash	8.5	4.8
Guaranteed Investment Contracts	5.0	10.5
Other	6.0	5.1
Total	100.0	100.0

Source: Board of Governors of the Federal Reserve System (2005).

FIGURE 1. NIPA PERSONAL SAVING RATE: WORKING-AGE POPULATION WITH AND WITHOUT PENSIONS, 1980-2003



Source: Bureau of Economic Analysis (2005) and Munnell et al. (2005).

with a specific savings goal — target savers — a higher return could actually enable them to save less and still meet the desired goal. Empirical studies on this point have produced a range of estimates about the response to a higher after-tax return, but the preponderance of evidence, at least from this author's perspective, suggests a modest increase.

According to favorable tax treatment to all forms of saving will clearly reduce the attractiveness of employer-sponsored retirement plans. To the extent that employer plans recede, the generally modest positive savings response to higher returns would be offset by the loss of the institutional aspects of employer plans that contributed to their success as retirement saving arrangements. Without employer-sponsored plans, workers would be on their own. They would need to decide each month how much of their paycheck to put aside for the future. They would have to find a mechanism for investing these funds, for changing these investments as they age, and some form of self discipline to keep the money invested until retirement. Available evidence shows that most people are not very good at this. In fact, the experience with 401(k)s has exposed people's proclivity to make mistakes at every step along the way.<sup>10</sup> Thus, the loss of work-based pensions could lead to substantially less saving.

## Conclusion

Today's employer retirement plans are to a significant extent supported by their favorable tax treatment. But tax rates on investment income outside of employer plans, and thus the relative advantage given employer plans, has sharply declined. And they could decline even more in the near future. Lower tax rates on investment income could result in an increase in saving outside of employer plans. But narrowing the tax preference afforded employer plans could result in a significant decline in the share of the workforce participating in employer retirement plans. The implications of such a decline for saving, and for retirement saving in particular, should be part of any debate about tax reform.



## Endnotes

1 Ippolito (1997).

2 These are so-called 'qualified distributions' from a Roth 401(k). Nonqualified distributions may be subject to taxes and a 10 percent penalty on earnings.

3 While the arithmetic says the tax treatment is the same, the two plans differ in terms of both perception and legalities. The most obvious issue of perception is that contributions to conventional 401(k)s produce an immediate tax cut. Roth 401(k)s do not provide tax relief today and therefore may not seem as appealing to the typical taxpayer. On the other hand, there is something nice about knowing the money in your account is the amount you will have available to spend. Since no further taxes are required on a Roth 401(k), the full amount is available for support in retirement. Funds in a conventional account will be taxed upon withdrawal, so the amount available for support is always less than the account balance. In terms of legalities, the primary difference between the two types of 401(k)s is that the Roth 401(k) is more generous in terms of contribution amounts. This is not obvious given that individuals can contribute \$15,000 under either plan in 2006. But for the individual in, say, the 25 percent personal income tax bracket, a \$15,000 after-tax contribution is equivalent to \$20,000 before tax. Thus, in effect, the contribution limit is higher under the Roth 401(k).

4 A recent publication by Vanguard (2005) argues that because future tax rates are uncertain, employees ought to have both a conventional and Roth 401(k) plan.

5 Although the federal personal income tax had six rates in 2003 (10, 15, 25, 28, 33, and 35 percent), only 23 percent of taxpaying units faced rates above 15 percent (Tax Policy Center (2005)). Thus, for the vast majority of taxpayers, the applicable rate does not exceed 15 percent — either before or after retirement.

6 For taxpayers in the 10-percent and 15-percent tax bracket, the tax rate on capital gains is 5 percent.

7 The potential tradeoff between a 401(k) match and lower wages may be somewhat more complicated than a simple one-for-one offset. For example, the introduction of a deferred compensation arrangement might increase productivity by reducing employee turnover or shirking, or facilitating retirement of less productive workers, and thus make employers willing to increase total compensation.

Even if the tradeoff between pensions and wages occurs in the aggregate, it may not happen on a person-for-person basis. For example, raising pensions for minimum wage workers could not lead to a reduction in wages, because the employer cannot reduce wages below this level. Similarly, since to qualify for special tax treatment plans employers must cover at least some lower-paid employees, who may have no interest in saving for retirement, plan sponsors may have to use some of the tax benefits to increase the total compensation of participants who do not much value this deferred compensation.

8 The issue of employer match may or may not be relevant in the future. On the one hand, both the *Simplified Income Tax Plan* and *Growth and Investment Tax Plan* would eliminate the 401(k) plan. Specifically, both have provisions for three classes of tax-sheltered saving plans. "Save at Work" plans would replace 401(k) and other defined contribution plans; "Save for Retirement" plans would replace IRAs; "Save for Family" plans would replace non-retirement tax-favored plans. On the other hand, "Save at Work" plans would "...allow employers to avoid nondiscrimination testing altogether if the "Save at Work" plan is designed to provide consistent employer contributions to each plan participant, regardless of their compensation". Because "Save for Retirement" and "Save for Family" plans both would allow \$10,000 annual contributions irrespective of income, the only employee demand for contributions to "Save at Work" plans would come from very highly compensated employees who want to save more than \$20,000 per year. So, some mechanism — perhaps employer contributions — would almost certainly be needed to meet the nondiscrimination test. (President's Advisory Panel on Federal Tax Reform (2005)).

9 About 70 percent of mutual fund assets held by defined contribution plans are equities (Investment Company Institute (2002)).

10 Munnell and Sundén (2004).

## References

- Board of Governors of the Federal Reserve System. 2005. *Flow of Fund Accounts of the United States*. Washington, DC.
- Bureau of Economic Analysis. 2005. *National Income and Product Accounts*. Washington, DC.
- Citizens for Tax Justice. 2004. "Top Federal Income Tax Rates on Regular Income and Capital Gains Since 1916." Washington, DC.
- Investment Company Institute. 2002. "Mutual Funds and the U.S. Retirement Market in 2001." *Fundamentals* 11(2). Washington, DC.
- Ippolito, Richard A. 1997. *Pension Plans and Employee Performance*. Chicago, IL: University of Chicago Press.
- Kangas, Steve. 2005. *Historical Economic Statistics*.
- Munnell, Alicia H. and Annika Sundén. 2004. *Coming Up Short: The Challenge of 401(k) Plans*. Washington, DC: Brookings Institution Press.
- Munnell, Alicia H., Francesca Golub-Sass and Andrew Varani. 2005. "How Much are Workers Saving?" *Issue in Brief* No. 34. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Tax Policy Center. 2005. "Percent of Tax Filers by Marginal Tax Rate, Selected Years, 1985-2003." Washington, DC.
- The President's Advisory Panel on Federal Tax Reform. 2005. *Simple, Fair, and Pro-Growth: Proposals to Fix America's Tax System*. Washington, DC.: US Government Printing Office.
- Vanguard Center for Retirement Research. 2005. "Tax Diversification and the Roth 401(k)." Volume 18.



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