

CHAPTER IV

INCENTIVES, INCIDENCE, AND UNINTENDED USES

This chapter begins by outlining the saving incentives built into IRAs and qualified plans, and how these incentives affect individual and national saving rates. It then considers the question of who bears the costs of pension plans. Finally, it examines some of the ways in which pensions are used for purposes other than retirement income.

EFFECTS ON INDIVIDUAL SAVING

Do qualified plans and IRAs lead people to save more? The answer is not a simple one. If the tax advantages were allowed on all personal saving, they would affect different people in different ways. Some would save more, and some would save less. But the tax advantages are allowed only on limited contributions to IRAs and qualified plans, and these limits reduce the number who are induced to save more. On the other hand, the mandatory nature of pension participation and funding may increase the number who save more (when employer contributions to a pension plan are included in personal saving).

These conflicting influences are sorted out in the following discussion, which begins by considering the tax advantages as if they were available on all personal saving, as would be the case with consumption taxation. Then the effects of IRAs and salary reduction plans, with their limits on annual contributions, are considered. Finally, the effect of qualified plans with involuntary employee participation is considered. The conclusion, based largely on empirical studies, is that qualified plans and IRAs probably do not have much effect on individual saving rates, although the tax advantages have allowed pension participants to accumulate more wealth by the time they reach retirement age.

Saving When the Tax Advantages are Unlimited

The tax advantages raise the amount of future spending achievable per dollar saved, as shown in Chapter I. If this higher return is available on

additional saving, it may induce some people to save more, just as a lower price for a product may lead some people to spend more on it. On the other hand, the higher return also means that previous levels of saving will allow an increase in future spending without further sacrifice. Some might prefer to divert part of that potential increase in future spending to current uses by saving less. Thus, people might either increase or decrease their saving if the tax advantages were available to all saving. The outcome would depend on how strongly they valued additional consumption in the future relative to the present.^{1/} Of course, an outcome of no change in saving is also possible.

Evidence on how people would respond is inconclusive. The tax advantages would raise the rate of return on saving, and numerous studies have been undertaken to determine how a higher rate of return changes the personal saving rate. Although some studies have found that higher rates of return increase saving, most have found no effect, and a few have found that a higher return decreases saving. Overall, the results are still inconclusive.^{2/}

The Effects of IRAs

The legal limit on IRA contributions reduces the likelihood that the tax advantages of IRAs raise personal saving. Consider first those people who save more than the limit before they have access to an IRA. When they gain access to an IRA, they can deposit \$2,000 (the legal limit) in the IRA, but they must continue to save the remainder in other accounts that do not earn

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1. Granting the tax advantages to all personal saving would reduce taxes and raise after-tax incomes compared with what normal income taxation would yield. If the revenue loss were offset by a higher tax on wages, then individuals would not experience the increase in after-tax income that encourages them to spend more currently (by saving less). Without this income effect, granting the tax advantages on all saving unambiguously encourages individuals to reduce their current consumption in favor of greater future consumption. In economic theory, this is referred to as the substitution effect.
 2. See Mervyn King, "The Economics of Saving: A Survey of Recent Contributions," in Kenneth J. Arrow and Seppo Honkapohja, eds., *Frontiers of Economics* (Oxford: Basil Blackwell, 1986), pp. 271-276; Mordecai Kurtz, "Heterogeneity in Savings Behavior: A Comment," Arrow and Honkapohja, p. 315; Agnus Deaton, "Life-Cycle Models of Consumption," National Bureau of Economic Research Working Paper 1910, April 1986, pp. 9-12.

the tax-advantaged rate of return. Because any added saving would not earn a higher return, these people have no incentive to increase their saving. Shifting \$2,000 of saving to an IRA increases their retirement income, however, and some of that increase would probably be diverted to current consumption through reduced saving.

Even those people who annually save less for retirement than the IRA limit may not face any incentive to increase their saving, since they can reach the annual limit by diverting other assets into the IRA. Many who were saving for retirement before the introduction of IRAs will be able to reach the maximum contribution through the transfer of already accumulated assets. Also, those without sufficient saving of their own can sometimes borrow profitably to make the maximum contribution to tax-advantaged accounts.^{3/} In these cases, the tax advantages provide no incentive to increase saving because the advantages can be claimed up to the limit by using existing saving and other funds.

Such devices for reaching the contribution limit without increasing saving have their own limits, of course. Most people do not have inexhaustible amounts of previously accumulated assets for transfer to new IRAs. Also, borrowing to finance IRA contributions is advantageous only if the interest payments on the borrowed funds can be deducted from taxable income and if the pretax interest rate on those funds is not too much higher than the rate earned by the IRA.

In summary, IRAs provide a possible incentive to increase saving only when the saving a person would have done otherwise is less than the IRA limit, and when there are no accumulated or borrowed assets to transfer to

3. For example, consider a taxpayer in the 28 percent tax bracket who uses \$720 from a line of credit secured against his house to help finance a \$1,000 contribution to his 401(k) account. The other \$280 comes from the tax savings he gets in the first year for the \$1,000 contribution. Under the assumptions of the examples outlined in Chapter I, and assuming that the taxpayer remains in the 28 percent tax bracket at age 60, that \$1,000 will be worth \$2,284 after taxes at that time. Assuming his mortgage lender charged him the same terms for the \$720 loan, \$2,284 is what he will also owe the lender. The loan and additional savings cancel one another, and therefore neither his net saving rate nor his retirement income has been increased. However, the taxpayer was able to deduct \$1,564 (\$2,284 - \$720) in interest during the life of the loan and thereby decrease his taxes and increase his current consumption by \$438 (\$1,564 x .28).

the account.^{4/} Even when these conditions are met, however, IRAs may not lead to increased saving. Some people may prefer to reduce their saving so as to divert the tax advantage to current spending, as explained in the case where all saving is tax advantaged.

IRAs have been available to most contributors only since 1982, and the \$2,000 contribution limit is modest. Thus, the amount of new saving caused by IRAs might be expected to be well below the amounts being deposited in them. The newness of IRAs also means that not much empirical analysis has been done to quantify their savings effect. One study, however, has tentatively concluded that IRAs increase saving.^{5/} Of course, the 1986 tax law's new restrictions on deductible contributions to IRAs will limit any such saving effect.

The Effects of Salary Reduction Plans

Salary reduction plans have structural differences from IRAs that make them more likely to increase saving. The differences are the higher contributions allowed most workers, and the frequent availability of matching employer contributions.

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4. The saving incentive of IRAs is also influenced by the additional 10 percent tax on withdrawals before age 59½. The penalty discourages added saving from those with short-term objectives who could not otherwise reach the contribution limit. However, it also increases the likelihood that an incentive will exist for increased retirement saving because people will be less likely to reach the contribution limit on just their retirement saving. The net effect on saving is unclear. Furthermore, the 10 percent tax will not completely discourage use of IRAs for nonretirement uses. The gains from tax-advantaged saving can outweigh the 10 percent penalty in many cases, and in some cases the penalty can be avoided by borrowing against other assets until the IRA assets can be withdrawn.
 5. Steven F. Venti and David A. Wise, "Tax-Deferred Accounts, Constrained Choice and Estimation of Individual Saving," *Review of Economic Studies*, vol. 53 (August 1986), pp. 579-601. The study found that if the contribution limit were raised, the increased contributions would come 50 percent from increased saving, 35 percent from reduced taxes, and 15 percent from the shifting of liquid assets to IRAs.

The conclusion is highly tentative because of the limitations of the data used. In addition, the increase in savings did not appear to be related to the tax rates of individuals. The authors instead attributed the increased saving to the heavy advertising that accompanied IRA expansion in 1982. This influence is likely to be temporary.

The higher contribution limit makes it more likely that employees will receive the tax-advantaged return on additional saving. Further, any employer matching contribution greatly increases the return on plan saving. Thus, if a higher return on additional saving leads people to increase saving, salary reduction plans are more likely than IRAs to effect that increase.^{6/} Quantitative estimates have not been made on the savings effect of salary reduction plans.

The Effects of Traditional Plans

In traditional plans, contributions (or benefit accruals in defined benefit plans) are specified in plan rules and, except for integration with Social Security, generally accrue at uniform rates among all employees. This uniformity, and other features of qualified plans, can influence personal saving as much as do the tax advantages.

Although individuals cannot adjust their contributions within traditional plans, the tax advantages may still affect their saving by influencing the choice of a plan's contribution rate. As shown in the following section, employers probably design their plans to meet the retirement saving preferences of their typical employees, and reduce wages to reflect their plan contribution. Further, in selecting a job, workers probably are influenced by the closeness of a firm's plan to their own saving preferences. Thus, to some extent the level of contributions in a traditional plan reflects employees' preferences for their own tax-advantaged saving.

Most employees' saving preferences will not be matched exactly by the level of saving embodied in the employer's plan. Employees who would prefer to save less may be forced to save more. Some may be able to offset the plan by reducing other saving of their own, or by borrowing more. Many will find this difficult to do, however, and the employer's prescribed contri-

6. One difference between salary reduction plans and IRAs has an uncertain effect on saving. The loan provisions in salary reduction plans increase the willingness and ability of individuals to use them for nonretirement purposes. This effect extends the incentive to save for purposes other than retirement, which should increase saving, but it also increases the likelihood that people will reach their plan's contribution limit with the saving level they had before the plan's introduction.

tribution rate will cause them to save more than they would choose to save otherwise. ^{7/}

Employees who, in the absence of the plan, would save more than the plan contribution on their behalf will receive no tax incentive from the plan to increase their saving. They can be expected to reduce their other saving by the amount of saving done on their behalf in the plan. They may even reduce their other saving further in order to spend some of the tax advantage from their pension saving before retirement.

Other characteristics of traditional plans that may affect employees' total saving are the pressures for retirement that have traditionally accompanied retirement plans, the uncertainty of benefits, and the favorable rates on life annuities purchased through employer plans. Pressures for retirement could increase saving on the part of those who would not retire so soon otherwise, while uncertainty about plan benefits and favorable annuity rates could increase or decrease employees' saving compared with what it would be without a pension.

A number of empirical studies have been made to determine the effects of traditional plans on saving. They have found that pensions raise worker's wealth, but by less than the amount of wealth they accumulate in their pension plans. Thus workers with pensions offset a portion of their pension plan saving by reducing their other personal saving. Estimates of the size of the increase in wealth have varied considerably, with recent

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7. It can be difficult to reduce saving done for other purposes (such as for medical emergencies, unemployment, or children's education) because the saving in traditional employer plans usually will not be available before retirement. Borrowing against other assets is possible, particularly a home, but many people either do not own homes, have little equity in their homes, or are reluctant to borrow against them to offset pension accumulations they are uncertain of claiming.

Those people forced to save more than they prefer by the uniform contribution rates do not necessarily pay for their extra saving through reduced current pay. As will be explained in the next section, the burden of making these contributions may fall on other employees more interested in high saving. Nonetheless, the contributions represent saving and, unless they are offset by other dissaving by the employees, they represent an increase in national saving.

studies placing the increase for older workers at 30 cents to 40 cents per dollar of pension assets. 8/

Pension participants' greater wealth will translate into a somewhat smaller increase in after-tax retirement income because pension assets are taxed fully when paid as benefits. Had the workers not been in pension plans their assets would have been in nonqualified accounts, like savings accounts or stocks, which would be taxed partially if at all when liquidated. Thus, a 30-cent to 40-cent wealth advantage for pension participants could yield an after-tax income gain of only half or two-thirds as much. 9/

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8. For a summary of studies, see Alicia H. Munnell, "Impact of Public and Private Pension Schemes on Saving and Capital Formation," in International Social Security Association, *Conjugating Public and Private: The Case of Pensions* (Geneva: ISSA, 1987), pp. 230-232. The studies typically estimate how much pension participants reduce their nonpension wealth because of their pension wealth. Recent studies find that older workers reduce their nonpension wealth by 60 cents to 70 cents per dollar of pension wealth, which is equivalent to a 30-cent to 40-cent increase in total wealth per dollar of pension wealth.

Estimates of the the offset in non-pension wealth have varied considerably, ranging from almost nothing to at least 70 percent. Most of these studies are biased toward understating the size of the offset because they assume that persons without pensions have the same desire for retirement saving as those in pension plans. However, it has already been pointed out that people with greater desire for retirement saving are likely to choose to work at firms with pension plans. Thus, some of the greater wealth of people in pension plans may be due to their greater preference for saving, rather than to the pension plan itself.

9. An example shows the relation between differences in wealth and differences in after-tax income. Consider two older workers who are similar except that one participates in a pension. In accordance with the recent studies, assume that the pension participant has \$1 of pension assets plus between 30 cents and 40 cents in other assets. The other worker has \$1 of nonpension assets. Suppose the workers retire and liquidate their assets to use as retirement income. The amount of after-tax income they each have depends on their marginal tax rate and on the fraction of nonpension assets that are subject to tax. (All pension assets are taxable.) In 1983, the average marginal tax rate of pension recipients was 16 percent. Furthermore, a study cited below found that pension wealth substitutes mostly for other financial wealth, like stocks and bonds, which could owe some tax when liquidated. Assuming that one-fourth of nonpension assets are subject to taxation and that all income is taxed at 16 percent, the after-tax income of the pension participant is between \$1.13 and \$1.22. The nonparticipant has 96 cents. The pensioner's after-tax income is between 17 cents and 28 cents above the other worker's, or between 56 percent and 66 percent of the wealth difference. The finding that pension wealth substitutes mostly for financial wealth appears in Robert B. Avery, Gregory E. Elliehausen, and Thomas A. Gustafson, "Pensions and Social Security in Household Portfolios: Evidence from the Survey of Consumer Finances," in F. Gerald Adams and Susan M. Wachter, eds., *Savings and Capital Formation: Policy Options* (New York: Lexington Books, 1986).

An increase in after-tax retirement income of the magnitude indicated by these studies can be explained by the tax advantages of qualified plans and does not necessarily indicate higher saving by the participants. In fact, the examples outlined in Chapter I and the simulation results discussed in Chapter III, both of which assume that qualified plans do not cause any increase in individual saving rates, show larger potential increases in retirement income than do the empirical studies just mentioned. This comparison suggests that participation in qualified plans did not increase the saving rates of those the studies examined. 10/

The recent empirical studies have been limited in scope, however. In the main, they excluded workers who had little wealth outside of their plan assets, and may thus not reflect the full effect of pensions on saving. Although a relatively small number of such workers are likely to be pension participants, the effect on those who are could be substantial because they lack sufficient amounts of other assets to offset their pension saving through higher consumption. 11/

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10. By providing a higher return on saving, the tax advantages may also encourage people to work more in their younger years, build up their savings, and then retire earlier than they would otherwise. The pressures for retirement built in or accompanying many traditional employer plans may accentuate this effect. Few studies have tried to measure this bunching of the labor supply into the younger years. One has found evidence that such bunching occurs. Richard A. Ippolito, "Income Tax Policy and Lifetime Labor Supply," *Journal of Public Economics*, 26 (April 1985), pp. 327-347. The bunching would be modest, however, if the aforementioned studies are correct in finding little increased saving among pension recipients.
 11. Tabulations from the 1983 *Survey of Consumer Finances* found that 27 percent of families have a net worth, outside qualified plans, of less than \$3,300. When home equity is excluded from net worth, half of all families have net financial assets of \$2,300 or less. While many families have significant home equity, they are not likely to encumber such equity for long periods of time merely to offset qualified plan assets. Thus, many families have insufficient assets to offset pension accumulations. Many of them would also have difficulty borrowing to offset pension accumulations because they have low incomes as well as low net worth. The information on wealth holdings comes from Robert B. Avery and Gregory E. Elliehausen, "Financial Characteristics of High-Income Families," *Federal Reserve Bulletin*, 17:3 (March 1986), p. 167, and R.B. Avery, G.E. Elliehausen, Glenn B. Canner, and Thomas A. Gustafson, "Survey of Consumer Finances, 1983," *Federal Reserve Bulletin*, 79:9 (September 1984), p. 685.

In sum, the evidence shows that qualified plans have caused participants to have more retirement income but not necessarily higher saving rates. The simulation in Chapter III is in keeping with these findings insofar as it assumes that qualified plans neither raise nor lower individuals' savings rates and that all gains from the tax advantages are used solely in the form of more consumption in the retirement years.

EFFECT ON NATIONAL SAVING

Even though qualified plans apparently cause little or no increase in individual saving rates, they result in greater gross saving for the nation as a whole. In essence, the revenue losses of the government are being saved for future retirement income. This increases net national saving if the government covers the losses by raising other taxes or by reducing spending. On the other hand, if the government meets the revenue losses through higher borrowing, then national saving, on net, is not increased. This potential match of greater retirement assets with greater government debt is particularly relevant in assessing the net effect of expanding IRAs to all employees as of 1982. The revenue loss from that expansion may well have added to the federal deficit, which mushroomed at that time. Thus, any increase in saving resulting from the expansion of IRAs needs to be offset by whatever increase in the deficit is attributed to their expansion.

WHO PAYS FOR PENSIONS?

Contributions to qualified plans by employers are an alternative to money wages as a form of compensation for the workers covered by such plans. For any particular worker, however, a dollar in the form of a plan contribution may replace more or less than a dollar of money wages. Several factors determine to what extent money wage reductions finance qualified plan contributions and their allocation among workers. The following section first outlines the basic processes by which qualified plan contributions become part of workers' compensation. It then discusses the complications added by the tax code's nondiscrimination rules and the skewing of benefits to long-service workers in defined benefit plans.

Qualified Plans as a Component of Compensation

Employers maintain pensions and other types of qualified plans as a part of their compensation structures for several reasons. First, in large enterprises that require very structured and long-term commitments from their workers, employers prefer defined benefit pensions because aspects of those plans arguably make their workers and, therefore, their firms more productive.^{12/} Second, by maintaining formal retirement plans, many employers satisfy the sense of responsibility that they feel toward loyal workers. Third, some employers establish qualified plans because the workers that they wish to attract or retain appear to want such plans. Finally, in closely held businesses, the desire of employers themselves and their key managers for tax-advantaged retirement savings often determines whether plans are established.

As noted, many workers want their employers to sponsor a pension or some other form of qualified plan. For many, the higher before-tax yield of qualified plans makes them a preferred way of saving for retirement. Certain other features of traditional pension plans also make them attractive: the specified promises that employers make in defined benefit plans; the savings discipline and investment expertise provided by money purchase plans like TIAA-CREF; and the access to annuity distributions at favorable group rates offered by most pensions.

These complementary desires of employers and workers for pensions or other qualified plans sort themselves out in the labor market in several ways. Although most workers must simply accept or reject the compensation packages that their potential employers offer, workers presumably gravitate to employers whose compensation offers--including the qualified plan components (if any)--are attractive or, at least, do not strongly conflict with their career goals. Employers presumably have rearranged these offers over time in order to retain and attract the types of workers who best fit their needs. By offering similar compensation packages, employers in a given occupational specialty or job area may seem to be affording little choice to potential workers in that specialty or field. Usually, however, there is enough job mobility within an occupation, and

12 Vesting requirements and, more importantly, the lock-in effects that exist in defined benefit plans from the effects of preretirement inflation on benefit levels, may help employers recoup training costs and keep workers during the peak productivity years. Subsidized early retirement provisions and the absence of accruals for work performed after a plan's normal retirement age then encourage workers to leave at ages in which their productivity arguably begins to decline.

substitutability among related jobs, that these standard compensation packages comport with what the majority of workers in the occupational specialty or job area are willing to accept. In some instances, pensions are the product of explicit wage negotiations--as with the large pension plans that cover most unionized hourly wage workers in the basic industries.

Moreover, a successful compensation practice in one firm tends to spread to other firms and become an industrywide practice. If its pension structure enables a particular firm to obtain better results from its workers than its competitors get for the same compensation cost, then they probably will establish similar pensions. Arguably, the workers will benefit from gains that pensions may induce, since the competing firms in the industry will use their greater profits to hire more workers or purchase more capital. In an economy at high employment, compensation in the industry will tend to rise as a result. As discussed more fully later, these increases in compensation may be reflected in the very generous benefits that defined benefit plans pay to long-service workers.

Workers--as a group--must ultimately absorb the costs of any employer-sponsored retirement plan (less any productivity increases the plan causes). To remain competitive, a firm's labor costs cannot exceed those of its competitors.^{13/} Because a firm's contributions to a pension or other qualified plans are part of its labor costs, the amounts it can pay for wages or other nonwage benefits (such as employer-sponsored health insurance) are less than if it did not maintain the retirement plan. At the same time, competing firms not only must pay similar compensation to similarly skilled workers, but must also give them what they appear to want with respect to the components of their pay--that is, so much in current wages, in current nonwage income, and in deferred compensation. In sum, a firm's compensation structure must conform to the preferences of a majority of its workers.

13. If a firm pays less than the going rate for workers of the type that it needs for its business, its products or services will suffer in quantity or quality, and it will be surpassed by its competitors. Similarly, if a firm pays more than its competitors, either the prices for its goods or services will be higher or its return to capital invested in the firm will be lower. The firm's customers and investors will begin to move their business and capital to other firms, forcing the firm either to adjust its compensation costs downward or eventually to cease operations.

Effect of the Nondiscrimination Rules

The desire for a particular qualified plan may not be uniform among the workers concerned. For those in the lower tax brackets, the tax advantages of qualified plans are relatively weak. Further, because they can expect a relatively high replacement of preretirement income from Social Security, many workers in the bottom half of the wage distribution may decide that they need little more in the way of retirement savings to maintain their current standard of living. Conversely, among higher-wage workers, the tax advantages of qualified plans are relatively attractive and the replacement-rate value of Social Security relatively small.

But preferences may differ even among workers with generally comparable wages. Some will have spouses who work and who may also be covered by pensions. Workers also differ in their asset holdings, their retirement preferences, their expectations about future earnings and job mobility, their desire for the nontax advantages of pensions, and all the other economic and psychological matters that affect an individual's or family's decisions about saving for retirement. Thus, within any group of workers, some will be relatively enthusiastic participants (or would-be participants) in a qualified plan, and some will be relatively reluctant participants (or would-be participants).

To some extent, the tax code's nondiscrimination rules--those having to do with coverage and integration--allow employers to draw distinctions about which workers they will cover, and to what degree. Thrift and salary reduction plans allow individual workers some degree of choice within the plans. Nonetheless, the nondiscrimination rules--especially in the wake of the Tax Reform Act of 1986--place fairly severe limitations on how many workers can be excluded from coverage and on the extent to which benefits or contributions may differ by income levels.

These constraints can create dilemmas for an employer trying to establish or maintain a plan when a significant number of employees--for example, lower-wage hourly workers--are unwilling to absorb the costs of the plan in the form of reduced wages. If those reluctant participants have the alternative of moving to employers who do not maintain plans and impose no such wage reductions, and if they cannot be replaced by workers willing to accept the plan and the attendant wage reductions, then the plan potentially becomes too costly.

An employer can try to compensate for resistance to wage reductions among those workers not interested in the firm's qualified plan by lowering

the contributions that the firm otherwise would make on behalf of workers who are relatively enthusiastic about the plan--probably the higher-wage employees. That difference in amounts--between the pension contributions for the enthusiastic participants that would have been made in a world unconstrained by the nondiscrimination rules and those actually made--is then used to pay for the contribution costs of the more reluctant participants. This diversion of contributions makes possible a solution that does not reduce the wages of the reluctant participants, while the more enthusiastic participants--especially at the higher income levels--can still be better off in terms of potential lifetime income. Because pension contributions for the higher-wage workers will earn for them a favorable before-tax rate of return, the present value of those, albeit smaller, contributions can remain greater than a larger amount paid as current wages. This shifting of contributions from one group of workers to another has its limits, of course. Once the present value of pension contributions for enthusiastic participants becomes less than what they might receive from other employers as wages or pension contributions, they too may begin to leave the employer who is maintaining the plan.

On balance, the nondiscrimination rules probably have the following effects. First, among a firm's workers in the same general pay range and tax bracket, an implicit compromise is reached between those who desire qualified plans as part of their compensation and those who are less interested. To the extent that those who strongly favor qualified plans dominate the implicit compromise, the others are required to save more in the plan than they would otherwise unless they are able to switch employers. This situation will be especially true where employers in a given locale or occupation all make qualified plans part of their standard compensation package in a way that comports with the majority preferences of workers in that area or occupation (for example, among salaried workers).

Second, because higher-wage workers tend to favor participation in qualified plans more than lower-wage workers, some of the costs probably are redistributed away from lower-wage workers. For example, in large companies that employ workers at all wage levels, higher-wage workers probably have smaller plan contributions made on their behalf than would be the case in a less constrained world; and their lower-wage colleagues are able to escape from some or all of the costs of the contributions made on their behalf. This situation may also occur in closely held, small firms where, because of the top-heavy rules, owners and top management are effectively required to share some of their tax-advantaged rate of return in qualified plans with employees who are unwilling to incur wage reductions.

Special Allocation Issues in Defined Benefit Plans.

The foregoing analysis applies to defined contribution and defined benefit plans alike. But these two types of plans differ in one key respect: defined contribution plans skew benefits toward long-service workers. The question thus arises as to how the costs of a defined benefit plan are allocated among workers of differing tenures and ages. Three explanations have been advanced--that workers absorb the costs proportionately across their work lives, generally in line with the employer's contributions; that they absorb the costs in accord with the increasing present value of their accrued benefits; or that the plans effectively pay for themselves by making the workers and the sponsoring firm more productive.

Under the first view, workers covered in defined benefit plans incur the costs of those plans in accord with the employer's funding method--that is, the pattern of the employer's yearly contributions to the plan. To comply with one of the acceptable methods that employers must use to fund such plans, the contributions are, by design, relatively level--as a percent of workers' wages--from year to year. Accordingly, the covered workers experience more or less proportionate reductions in their wages while under the plan, regardless of their length of stay, and regardless of their ages. These proportionate reductions in wages may or may not track exactly with the employer's actual funding method, but they have the same general profile.

Under the second view, workers covered by defined benefit plans incur the costs of those plans in accord with the increasing worth of their benefits. As already seen, the year-by-year increases in the present value of a full career worker's benefits under a defined benefit plan are relatively trivial in the initial years, climb slowly in the middle years, and increase considerably in the later years. By the same token, workers hired relatively late in their lives accrue substantially larger benefits than younger workers hired at the same time. Under this second explanation, then, full career workers presumably experience minimal reductions in wages in their initial years as a consequence of coverage under the plan, somewhat larger reductions in their middle years, and very substantial reductions in their last years. Similarly, older workers entering a firm have their wage offers more substantially reduced than do younger workers.

Limited evidence indicates that the former view more accurately reflects how labor markets adjust to the costs of defined benefit plans. If long-service and older workers in firms with generous defined benefit plans were absorbing the costs of their plans in accord with the increasing present

value of the accrued benefits, then their wages would decline in later years, especially as compared with workers not participating in defined benefit plans. Recent research indicates that wage profiles by age and job tenure are not markedly different for those who are participating and for those who are not.^{14/} These findings are more consistent with the view that workers incur wage reductions on a proportionate basis. In that case, younger short-service workers in defined benefit plans have been systematically experiencing reductions in their wages that exceed the benefits they have been accruing. In effect, those disproportionate reductions have been used to fund benefits to older long-service workers that exceed their lifetime wage reductions. Assuming that this is correct, younger and short-service workers could have improved their situation by moving to employers that do not sponsor defined benefit plans. It is, however, difficult for any worker to predict how long he or she will remain under a given pension plan; each member of a group just starting out under a plan may believe that he will remain long enough to become a net winner, or at least break even, under the plan. In some instances, that calculation will be validated; in other instances, for any number of reasons, a worker will leave employment under a plan before that point is reached. In addition, jobs often are attractive enough in other respects to offset whatever losses a worker may be incurring in a pension plan. (For example, a younger worker may be willing to accept implicit losses in the company's pension plan in order to obtain unique on-the-job experience in that particular company.)

A third theory argues that defined benefit plans cause some enterprises--especially large companies--to be more productive than they would be otherwise, and that this extra productivity finances the comparatively large retirement benefits for workers who make long-term commitments to the firm. In this view, workers under a defined benefit plan generally receive no less in money wages (or other current compensation) than they would in the absence of the plan. Older and long-service workers receive greater total compensation in the form of generous retirement benefits, while younger and short-service workers, because of the limited value of their accrued pension benefits, receive little--a result which, according to this model, is appropriate because they did not contribute very much to the increase in the firm's long-term productivity.

14. Richard A. Ippolito, *Pensions, Economics, and Public Policy* (Homewood, Illinois: Dow Jones-Irwin, 1986), pp. 49-51 and 57-62.

One difficulty with the proposition that defined benefit plans accurately reflect the increased productivity of long-service workers is that the age-tenure configuration in such plans depends critically on inflation, a factor that is unpredictable. As discussed earlier, by having defined benefit plans operate as a reward for longevity, workers are encouraged to stay through their peak productivity years. (Often they are encouraged to leave thereafter, through early retirement subsidies in the plan.) The strength of that longevity incentive, however, depends greatly on inflation. An employer may choose a defined benefit plan in a time of high inflation only to discover after inflation subsides that the plan's lock-in effects have become minimal. Alternatively, if inflation increases greatly, an employer may find the firm's workers more reluctant to leave at the plan's early retirement age, both because the workers wish to have their pensions based on higher wage levels and because they are worried about retiring with unindexed benefits. As a result of inflation's uncertain effects on defined benefit incentives, there is some question whether the longevity incentives of defined benefit plans really represent an attempt by employers to optimize their production processes, and if so, whether they can be effective. If the incentives for long-term employment are not effective tools for assuring more efficient production, then they cannot be generating extra profits to pay for the large benefits accruing to long-service workers.

These three conflicting views as to how costs are allocated under defined benefit plans lead to somewhat different conclusions on the equity and economic efficiency of those plans. Nevertheless, it is clear that all taxpayers--including those workers who receive little or no increases in retirement income from qualified plans--pay for the tax advantages through higher tax rates or forgone government spending. In contrast, the gains in increased retirement income, as shown by the simulation presented in Chapter III, accrue disproportionately to that subset of taxpayers who were long-service workers.

USES OF QUALIFIED PLANS FOR NONRETIREMENT PURPOSES

Pension plans are sometimes used by employees and employers for purposes other than retirement. Lump-sum disbursements can be consumed instead of saved, and employers may be able to use plan assets to finance company investment.

Nonretirement Uses by Individuals

When employees leave a plan during their working years, they may receive a lump sum equal to their accrued benefits. ^{15/} Until 1982, employees could also tap their assets indirectly by taking unlimited loans against them. Qualified plans have also been used as a means to accumulate large bequests with tax-favored rates of return.

These nonretirement uses of qualified plans have become a major concern to the Congress in recent years. Increasingly, it has adopted the view that the tax advantages of the plans should exist solely to promote retirement income. At the same time, the concern exists that younger employees might be unwilling to participate in qualified plans--especially plans such as 401(k)s that depend on individual employee decisions--unless they could have access to their assets in case of emergency. Consequently, in-service distributions have been restricted although they are still allowed under some circumstances in profit-sharing plans. Also, loans against qualified plan assets have been subjected to much tighter limits on their size and terms, and some distributions after the age of 70½ are now required in order to prevent assets from accumulating as bequests.

More important has been the development of an "additional income tax" to recapture at least some of the tax advantages of plan assets that are distributed before retirement. ^{16/} This provision originated in the context of IRAs and, by the Tax Reform Act of 1986, has been extended to all qualified plan distributions. In the future, when workers receive lump-sum payments before retirement, a 10 percent additional income tax will be imposed. This additional income tax can be avoided by putting the lump-sum payments into rollover IRAs or, if permitted, into the next employer's qualified plan. In addition, income averaging no longer will be generally available to mitigate regular tax liability on these payments.

To the extent that these provisions encourage workers to continue to shelter their qualified plan assets, the underlying policy of promoting retirement income will be advanced. To the extent that they do not, the previous tax advantages given to those asset accumulations will be recaptured when they are used for nonretirement purposes.

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15. In-service distributions are also permissible under some limited circumstances in profit-sharing and stock-bonus plans.
 16. In general, the benchmark for these purposes is whether the distribution takes place before age 59½. Unless the distributions are annuity payments, most pre-59½ distributions will be subject to the 10 percent additional income tax.

Nonretirement Uses by Businesses

The Congress has also been concerned that sponsoring employers may use qualified plan assets for business purposes. Partly for this reason and partly to limit self-aggrandizement by employers acting as fiduciaries, the law since 1974 has limited the extent to which employers can invest plan assets in their own enterprises or borrow plan assets for such purposes.

Nonetheless, under current law, employers are able to use plan assets indirectly for investment in their own businesses. Under current funding practices, a plan that is acceptably funded in terms of its "ongoing" liability can be substantially overfunded in terms of its "termination" liability.^{17/} In these situations, an employer can terminate the plan, pay off accrued benefits to participating workers, possibly create a successor plan that meets minimum funding requirements, and use the "excess" funds from the first plan--known as reversions--for investment purposes. Because the excess funds in the qualified plan have accumulated at a tax-free rate of return, they are greater than if the employer had been accumulating them as retained earnings in a taxable account.

In the event of a termination, workers can lose in several ways. The employer may not create a successor plan, or, if it does, the new plan may be less generous and may not give credit for service under the predecessor plan. Even if the old plan is effectively reestablished with credits for previous service, the new plan will be encumbered with significant start-up liabilities. These initial unfunded liabilities place both covered workers and the Pension Benefit Guaranty Corporation (PBGC) at considerable risk if the new plan subsequently folds.

Until recently, the Congress has been unwilling to prohibit or severely restrict such actions for fear that employers might become less willing to sponsor defined benefit plans. In order to discourage plan terminations for these purposes, however, the Tax Reform Act of 1986 imposed a 10 percent tax on reversions over and beyond an employer's regular tax liability for such amounts. This excise tax is similar in purpose

17. On-going liability reflects the benefits that will be paid workers on the basis of their projected salaries at retirement for all their past and future years of service. Termination liability reflects only the benefits to which workers are entitled on the basis of their current salaries for past years of service.

to the 10 percent additional income tax discussed above. To the extent that it discourages reversions, the funding of qualified plans will be made more secure, increasing the possibility that the excess funds will be used to liberalize plan benefits. To the extent that the excise tax does not eliminate reversions, at least some of the previously given tax advantages will be recaptured by the government.

In addition, in early 1987 the Administration came forward with a comprehensive proposal about the funding and termination of defined benefit plans. In part, the proposal is prompted by continuing concerns about asset reversions in situations where firms then recreate their previous plans.^{18/} On the one hand, the proposal would allow employers with well-funded plans to withdraw assets from them, rather than having to terminate an old plan and then recreate it as a successor plan. The amounts that could be withdrawn, however, would be limited to just those assets that exceed the higher of two alternatives--either 125 percent of a plan's termination liability, or that portion of a plan's ongoing liability that has already accrued (using the projected unit credit funding method).^{19/} The number of withdrawals that could take place, and their aggregate amount, over any 10-year period would be limited. On the other hand, the proposal stipulates that if a firm wanted the full amount of a plan's excess assets (vis-a-vis termination liability), the firm would have to terminate all of its defined benefit plans and could not establish a new defined benefit plan for another five years.

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18. The Administration's proposal would also tighten the definition of termination liability, clarify how ERISA diversification rules apply to "floor offset" plans, allow some shifting of assets from pension plans to retiree medical benefit plans, and, most importantly, shorten the periods over which certain amounts of unfunded accrued liabilities must be amortized. This funding proposal also has a companion proposal from the PBGC concerning the insurance premiums it charges plans, especially those with unfunded liabilities. For more discussion of minimum funding standards and the liabilities of PBGC, see the forthcoming CBO paper *Federal Insurance of Private Pension Benefits*.
 19. As discussed in Chapter VI, if defined benefit plans adjusted the salaries of workers for inflation between the time a plan is terminated and the plan's normal retirement age, the resulting redefinition of termination liability would be similar to the definition of accrued liability calculated under the projected unit credit method.

