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Pensions, Economics and

Public Policy

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PART ONE

— Economic Principles of Pensions —

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Pension Economics: An Overview

IMPORTANCE OF PENSIONS

Pensions are a prevalent and important component of labor compensation in the United States. In 1980, payments to private pension plans were reported by 87 percent of private employers; contributions averaged 6.2 percent of payroll.¹ These contributions will ultimately support pension income for two-thirds of the current full-time (nongovernment) work force who will retire with a private pension.² On average, they will receive a first-year pension annuity in 1984 in the neighborhood of \$6,300, approximately 23 percent of their final wage.³ In 1984, an estimated 65 million individuals were participants in the private pension system, either as active participants or beneficiaries.

In 1984, trustee and insured private pension plans held an estimated \$1 trillion in assets; public pension plans held an additional \$295 billion.⁴ These holdings accounted for over 20 percent of all publicly traded equity shares in the United States and over 50 percent of

¹See U.S. Chamber of Commerce, *Employee Benefits 1980*, Washington, D. C., 1981.

²This estimate is based on the 1979 Consumer Population Survey, which found that 65 percent of the full-time private work force aged 50–54 was covered by a private pension. This statistic is a reasonably reliable index of the proportion of the older work force that will actually receive a pension upon retirement.

³This estimate is based on the Survey of Pension Benefit Amounts conducted by the U. S. Department of Labor in 1979; the estimate represents the average first-year pension of 1978 retirees, adjusted to the 1982 price level.

⁴Private plan holdings are estimated from a sample of 5500 annual pension reports on file with the U.S. Department of Labor. Since these reports are available with a two-year lag, actual 1982 data is summarized and extrapolated to 1984 on the basis of market indexes and pension portfolio characteristics. Data for public plans is available from the American Council of Life Insurance, *Pension Facts*, Washington, D. C., 1984.

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outstanding corporate bonds; and pension net purchases represented almost 50 percent of net issues of stock and corporate bonds in the United States in 1983.⁵ If pension moneys were invested exclusively in the New York Stock Exchange, they would account for 65 percent of the stock traded on the Exchange.⁶

The emerging dominance of pensions in U.S. securities markets is a relatively new phenomenon. Prior to 1950, pensions (in real terms) held only 10 percent of the assets they held in 1983, and they held less than 1 percent of corporate equities and less than 15 percent of corporate bonds. On a per capita basis, (real) pension assets per employed worker increased fivefold from 1950 to 1980.⁷ Over this same period, pension beneficiaries as a percent of active pension participants increased from 4 percent to 30 percent.⁸ A snapshot of the private pension system in 1984 is presented in Table 1-1.

The federal government has not played a passive role in the development of the U.S. pension system. The Revenue Act of 1921 established

TABLE 1-1 Pension Facts, 1984^a

Category	Estimate
Active Participants ¹	
Primary defined benefit plans	31.3 million
Primary defined contribution plans	7.2 million
Secondary plans	15.1 million
Total (includes duplicate coverage) ^b	57.5 million
Coverage rate ²	
All ages	50%
Ages 50-54	65%
Pension amounts ³	
Initial pension annuity ³ (mean, annual)	\$ 6,360
Replacement rate ³	23%
Total, all pension benefits paid ³	\$70 billion
Retirement age ³	
Average, all pension retirees	62.5
Pension retirees (annuitants) ⁴	
All retirees	8 million
First-year retirees	515,000
Normal	230,000
Early	263,000
Late	22,000

¹Securities data are found in the Federal Reserve Board, *Flow of Funds, Accounts, Assets and Liabilities Outstanding 1961-84*, Washington, D. C., 1985.

²Potential shares are calculated by comparing pension holdings (see note 4) to NYSE values found in the New York Stock Exchange, *Fact Book*, 1984.

³See the Federal Reserve Board, *Flow of Funds*, and the *Economic Report of the President*, Washington, D. C.: U. S. Government Printing Office, 1984.

⁴These estimates are discussed in Chapter 5.

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TABLE 1-1 (concluded)

Category	Estimate
Plans ¹	
Defined benefit plans	
Over 100 participants	25,000
Fewer than 100 participants	<u>202,000</u>
Total	227,000
Defined contribution plans	
Over 100 participants	19,000
Fewer than 100 participants	<u>542,000</u>
Total	<u>561,000</u>
Grand Total	788,000
Pension assets ²	
Defined benefit plans	\$ 700 billion
Defined contribution plans	<u>300 billion</u>
Total	\$1,000 billion
Pension asset share ³	
New York Stock Exchange (1980)	19.2%
Outstanding equity securities	22.8%
Outstanding corporate bonds	49.4%
Funding ratio (defined benefit plans) ⁷	
Legal	153%
Reported	110%
Economic	82%

¹Except for pension asset share (which includes state and local plan holdings), data in this table pertain to private pension plans only; they exclude state, municipal, and federal government pensions as well as Individual Retirement Accounts, Keoghs and so-called 401(k)s.

²Total participants double count participants for each plan they are enrolled in. Components do not add to total because some workers have several secondary plans.

SOURCE: 1. Based on projections using 1975-1982 data from the 5500 Annual Pension Plan Reports filed with the U.S. Department of Labor. Benefit payouts include lump sum distributions.

2. Daniel Beller, "Coverage Patterns of Full-Time Employees under Private Retirement Plans," *Social Security Bulletin* 44 (July 1981), pp. 3-11.

3. Based on data collected in the U.S. Department of Labor Survey of Benefit Amounts conducted in 1979; to estimate the initial pension in 1984, data is projected to 1984 using wage rate indexes. Data excludes workers retiring on disability or "special early."

4. Numbers of retirees in 1984 are based on retiree trends evinced in the Survey of Benefit Amounts and available 5500 annual report data through 1982. The distribution among early, normal, and late retirees is taken from the 1979 Survey.

5. Pension asset projections are reported in Chapters 5-7; the 1984 levels reported in the table are consistent with that data. Pension asset data is available from the Federal Reserve Board, *Flow of Funds, Accounts, Assets and Liabilities Outstanding 1961-84*, Washington, D. C., 1985, and the 5500 annual report series.

6. The data include public (state and local) pension plan holdings. Pension asset share is derived explicitly in Chapter 7. But essentially, the data comes from the New York Stock Exchange, *Fact Book, 1984*, and the Federal Reserve Board *Flow of Funds* data.

7. The relationship between legal, reported, and economic funding concepts is the subject of Chapters 3 and 4. The 1984 economic funding ratio is based on the 1981 funding ratio adjusted for assets in 1984 and liabilities (see Chapter 5). The interest rate assumptions for the legal, reported, and economic funding calculations are 13, 7, and 2 percent.

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the basic rules for tax treatment of private pensions that prevail today. The act allowed pension contributions to be deducted from the firm's taxable income, permitted tax-free accumulations within pension funds, and allowed deferral of personal income taxation on pensions until retirement.

In 1974, the Employee Retirement Income Security Act (ERISA) was enacted. ERISA imposed minimum vesting and funding standards, fiduciary rules, and reporting and disclosure requirements, and provided insurance against benefit losses arising from private pension plan terminations. In essence, the law is designed to increase the probability that a promised pension is actually received by pension plan participants upon retirement.

The sheer enormity of the pension system invites conjecture about its potential impact on economic growth in the United States. The heavy involvement of government in the pension area suggests a potential for dramatic implications for potential changes in government policy. This study does not even pretend to cope with the vast array of pension economics and dynamics. Instead, a modest goal is set to assemble available data and economic research which together can describe the development of, and, it is hoped, explain the rationale for, some of the more important financial aspects of the pension system in the United States. While different aspects of pensions will be discussed, a theme throughout is the development of the pension asset base in the nation, its potential for further growth, and its implications for labor and capital markets in the long run.

BUILDING BLOCKS FOR UNDERSTANDING THE U.S. PRIVATE PENSION SYSTEM

The study begins by trying to build a solid foundation for understanding the economic implications of private pensions. Why do pension plans exist? Why has there been an explosion in their growth since World War II? What is the nature of the pension contract? Do pensions entail a promise to pay real or nominal pensions? Do workers and firms agree that the firm may terminate the pension plan anytime? What are the economic funding ratios implied by the pension contract? Do they bear any relation to reported funding ratios? These questions and many more must be answered before any serious student of pensions can begin to appreciate the long-term implications of private pensions for the economy.

Private pensions are vehicles by which workers can save income generated during their productive years enabling them to maintain reasonable living standards during their older years. Individuals usually cannot and presumably do not want to work full-time forever. At some point, they plan to retire. In a world without taxation, there are many

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savings vehicles an individual could use to save for retirement. But in the United States, tax policy imposes large penalties on nonpension savings channels because of the so-called double-tax on savings. That is, income is taxed once when it is earned; it is taxed again when taxes are assessed on interest earnings as the individual tries to transfer his income to tomorrow's dollars for future consumption.

Tax policy toward pension plans not only eliminates the double-tax on savings, but it also offers workers an opportunity to defer taxation on savings, thereby affording them an income-smoothing opportunity. Given the progressive tax scheme in the United States, these privileges make pension plans a highly tax-preferred vehicle for long-term savings. Though Individual Retirement Accounts (IRAs) have been offered in limited amounts since 1974, these tax advantages have typically been made available only through pension plans offered through firms. It is inconceivable that the size of the current private system is not largely attributable to the special pension tax provisions in the U.S. Tax Code and the accompanying high marginal tax rates that have prevailed in the code since World War II. It is shown below that these advantages can easily account for 20–40 percent of retirees' private pension income.

This tax institution has generated a strong and important relation between worker and firm in the United States. The worker depends on the firm not only for current income during an active work life but also for retirement income until death. The emergence of the firm-offered pension has generated long-term relationships between workers and firms, often extending 30 years beyond the worker's retirement date.

This prolonged relationship is due in part to the near universal appeal of defined benefit plans. Ever since the emergence of significant pension growth, defined benefit plans have persisted through all kinds of economic conditions and government regulations as the primary source of pension income for American workers. These plans, which promise annuities beginning at retirement and which are usually based on the worker's years of service and average wage during the last few years of employment, are to be contrasted with defined contribution plans that are akin to tax-preferred savings accounts: firms make contributions to workers' saving accounts which (after short vesting periods) belong to workers and are usually taken as lump sums upon retirement.

It is not hard to understand the dominance of defined benefit plans as the primary pension plans in the United States. Defined benefit plans offer workers the opportunity to tie in to annuity payouts early in their career, thereby avoiding the adverse selection problem affiliated with lump sum conversion at retirement. They also offer workers the opportunity to spread out and share the investment risk affiliated with any long-term savings accounts. But the cost of this contract is determined by its long-term nature.

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The pension contract in a real sense is built on trust between the firm and worker. The defined benefit pension contract in effect involves an agreement that can extend over a period of 50 years of work and retirement. It is not surprising that such contracts have attracted attention from government regulators. But even with regulations in place, firms have the opportunity to terminate plans midstream, imposing large losses on workers. The spectacle of widespread terminations could well shake the foundation of trust that makes the implicit contract between workers and firms work. Though defined benefit plans are partly government insured and have demonstrated a capacity to survive and indeed thrive under all kinds of economic conditions, it is sobering to think how tenuous the pension contract really is.

Considerable attention is paid in this study to the nature of this contract, upon which the entire system is built. What do firms really promise workers? Do workers save for their pensions under the assumption that the firm will terminate their plan anytime? Or do they understand that the firm will not terminate the plan, even though they retain a legal right to do so? The evidence developed below supports the latter view: that an implicit contract has been struck between workers and the firm, and that the contract says that the firm will keep the pension plan intact and pay indexed pensions at retirement and even beyond. These results reinforce one's fascination with and respect for the success of such contracts that rely either on sheer trust between workers and their firm or on the reputation of the firm in labor markets. For students of long-term contracts in private markets, that (defined benefit) pension contracts work at all is amazing.

One of the payoffs to developing the principles of the pension contract is that the true economic liabilities incurred by corporate sponsors can be calculated. It is shown below that reported liabilities appear to conform neither to a legal theory of pensions (that liabilities are limited to legal liabilities incurred upon immediate termination) nor to an economic theory of pensions (that liabilities reflect an implicit contract between workers and the firm that real pensions will be paid upon, and subsequent to, retirement.) It turns out that, calculated on an economic basis, true funding levels in the U.S. private pension systems have been in the range of 70 percent during the post-World War II period. Reported funding ratios can overstate true funding levels by a factor of one third; legal funding ratios can easily be twice as high as true funding ratios.

Among other things, understanding funding policies in private pensions permits a more orderly method of projecting pension assets in the United States. Asset values are subject to considerable variation due to variation in market values of portfolios, profit levels in U.S. corporations, and the like. But liabilities grow at a much more stable and predictable rate, partly because the natural maturing process in pensions is mostly on automatic pilot. By understanding long-term

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funding policy in U.S. corporations, target asset growth in the pension system is relatively easy to project, subject to the assumption that the underlying building blocks of the pension system, most notably the U.S. tax structure, remain untouched.

GROWTH OF PENSION ASSETS

If pension plans exist primarily because of favorable pension rules in the U.S. Tax Code, it is easy to predict that the veritable explosion in tax rate levels and coverage to the broad working population during World War II would ultimately lead to the creation of a huge private pension system. It was at this time that workers began to realize (what must be have been a shocking new reality) that such tax levels and coverage would never again be reduced below those levels. As new plans were formed and pension coverage expanded during the 1950s and 1960s, the ultimate consequences for long-term equilibrium gradually become apparent.

Most defined benefit plans offered some past service credit, but these credits often ad lower benefits than the future service formula. With time, covered workers would begin to find their way into the retiree ranks—it would take 25 years alone to fill these cohort ranks in most plans, and new retirees would be earning higher portions of their pensions in accordance with the full-benefit formula. Improvements in the generosity of pension plans also took place over time. These developments are traced in the chapters below, and they show that the defined benefit system will not reach maturity until early in the next century.

The growth of the defined contribution plan universe is also considered. This growth is even more dramatic than the expansion of defined benefit plans: in 1950, defined contribution plans held 9 percent of all private pension plan assets; in 1980, they accounted for 28 percent. Given the extraordinary increase in defined contribution plans, this natural question is considered: given the tenuousness of the defined benefit contract, is there any evidence that defined contribution plans are replacing defined benefit plans as the primary source of retirement income in the private pension system?

Consideration of numerous arguments and data bases shows that these fears are not entirely vacuous, that there has been some tendency for workers to switch primary dependency from defined benefit plans to defined contribution plans. But this trend is mild. Most of the growth of defined contribution plans represents secondary plan growth. Fully 33 percent of workers covered primarily by defined benefit plans now also have secondary defined contribution plan coverage.

By tracking the maturing process of defined benefit plans and considering the continued growth of (mostly secondary) defined contribution plans, it is concluded that private pension plans in the year

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2000 will hold \$2.2 trillion in assets (in 1984 dollars), one third of which will be held in defined contribution plans. This is to be compared to \$1 trillion held by private pensions in 1984, 30 percent of which is held by defined contribution plans. Adding public plan growth to this total, it is concluded that private plus public pension plans (excluding federal government plans) will hold almost \$3 trillion (1984 dollars) in the year 2000.

ECONOMIC IMPACT OF PENSIONS

The spread of pension coverage and the consequent growth of pension assets could have some dramatic implications for labor and capital markets in the United States. Two thirds of all workers, and the vast majority of all workers earning more than the median wage, will retire with a pension. Moreover, 80 percent of these will be covered by a defined benefit plan. It is shown below that defined benefit plans provide powerful incentives to workers to retire within particular "age-windows," usually between the ages 55 and 65. Workers who either quit the firm "prematurely" or retire "late" are usually subject to strong penalties through the pension plan. Thus, the pension plan can be, and is, used to control tenure in the firm.

Studies have shown that these pension incentives affect workers' rate of mobility and the age of retirement. In the long run, these rules may simply influence workers to find firms whose retirement incentives are consistent with the natural tenure inclinations of workers. Thus, it is not clear in the long run whether pensions affect overall mobility and retirement age in the economy or just affect the sorting of workers among firms. What is almost certainly true, however, is that pensions provide firms with an efficient tool to control the timing of workers' departures from the firm. In this sense, especially given the presence of laws that may make other tools difficult to use to reduce quits or induce retirement,⁹ defined benefit plans may have offered firms an opportunity to significantly increase overall firm (and national) productivity.

The implications of pension growth for capital markets is more problematic. Perhaps the most important question of all—Do pensions increase overall savings and capital accumulation?—is theoretically unanswerable. On the one hand, pensions are such efficient savings vehicles, workers can attain the same target wealth positions at retirement by saving less through a pension plan. On the other hand, because of

⁹For example, age discrimination laws may make it difficult for firms to reduce wages of older employees even though they may suffer losses in productivity; the Age Discrimination in Employment Act Amendments of 1978 eliminated mandatory retirement ages lower than age 70.

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the efficiency of these vehicles, workers perceive retirement to be "cheaper" and hence many consume more of it (either through earlier retirement or higher retirement consumption), thereby triggering more savings for retirement. Empirical studies show that pensions clearly replace some nonpension savings. But do they completely displace other savings? Recent findings suggest a negative response; that is, on balance, the proliferation of the pension vehicle likely has resulted in more overall savings and therefore a more rapid rate of capital accumulation in the nation. Even if only 25–50 cents of each dollar of pension wealth is "new" wealth—numbers which are consistent with empirical estimates—this means that \$250 billion–\$500 billion of the capital stock in 1984 is attributable to pension growth.

The emergence of pensions not only has implications for the size of the nation's capital stock, but for the distribution of ownership as well. Over the past 40 years, there has been a steady transfer of corporate securities from households to pension plan trusts including contracts with life insurers, greatly accelerating the trend toward more institutional ownership of corporations. This transfer, together with the net increase in savings brought about by pensions, has made pension plans a dominant owner in the nation's capital markets. In 1950, pension plans owned less than 1 percent of corporate equity; in 1984, they owned 23 percent. In 1950, pension plans owned 13 percent of corporate bonds; in 1984, they owned 49 percent.

No one knows the implications of greater pension (and other institutional) control of the nation's productive capital stock. One thing, however, is clear: a large amount of capital is now under control of ERISA fiduciary rules. ERISA redefined the common-law concept of prudence; altered the rules governing, and the identity of parties able to bring, suits against trustees; and greatly expanded the concept of prohibited transactions.¹⁰ The impact of these rules is essentially unknown. But many puzzles exist, leading many financial experts to wonder why pension plan trustees apparently do not act to maximize asset returns: pension plans and their sponsors eschew all-bond tax strategies, avoid full funding status, and apparently earn abnormally low returns. These so-called puzzles create suspicions that the legal and regulatory structure may impose serious constraints on pension plans and indirectly on the allocation of capital in America.

Evaluation of some of these pension phenomena would justify book-length studies in themselves. In the context of this study, one particularly puzzling problem is addressed—why firms maintain underfunded pension plans. An idea is investigated below that underfunding

¹⁰Section 406(b) of ERISA reinstitutionalizes the common-trust law prohibiting self-dealing, but 406(a) identifies a whole universe of parties in interest not involving self-dealing but who nevertheless cannot deal with the pension plan and the moneys it holds.

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is used to create incentives for unionized workers to forgo the use of power inherent in a union that could be used to dethrone firms from their competitive status; instead, workers are given a stake in the long-term viability of the firm. If the firm fails, union workers lose substantial portions of their pension wealth because the pension plan is substantially underfunded. The theory is important because it provides a sound rationale why firms appear to act so "irrationally."

It turns out that the theory is quite robust. Various data analyzed are supportive of the theory. Indeed, the theory and the results explain many characteristics and recent developments in the pension industry hitherto unexplained: the creation of "past service credits" when most major plans were created; the supergenerosity of union pension plans and their superunderfunded status; and the absence of defined contribution plan coverage in the union sector. The theory is also consistent with firms' peculiar acquiescence to ERISA insurance and unions' strong preference for it; and with a preponderance of union plans claiming federal insurance transfers after ERISA and the abnormally high incidence of profit sharing and stock bonus plan creation in the union sector during the post-ERISA period. Even if some readers are not convinced of the validity of the underfunding theory, they will be impressed by the important influence of the unionization of participants on virtually every aspect of the pension market.

PUBLIC POLICY TOWARD PENSIONS

ERISA fiduciary rules are only some of the constraints imposed by federal agencies on the operation of private pension plans. Tax law, discrimination provisions, federal insurance, and the like also impose strong forces that influence, and even define, the shape of the U.S. private pension system. When pension plans were small, errors in public policy design could be expected to impose small costs on the economy as a whole. But given their current size and prevalence, it behooves the federal government to structure its rules in ways that minimize the distortions imposed on free market equilibrium. The following are a series of recommendations developed that are aimed at improving the efficiency and performance of the pension system and the labor and capital markets it affects. All recommendations are discussed in Chapters 12 and 13.

If public policy is to be designed to encourage an efficient private pension system, the following limited set of recommendations appear to be supportable by theory and evidence:

1. *Retain the tax deferral treatment of pension savings.* Current tax treatment of pensions essentially mimics an expenditure-tax structure. While a progressive expenditure tax may not be unambiguously

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superior to a progressive income tax, there is no reason to believe that a change in the current tax code toward a comprehensive income tax will improve the allocation of resources.

2. *Retain the tax treatment of pension contributions in the corporate tax code.* This rule preserves tax neutrality between IRAs and private pensions, and therefore does not distort choice between immediate cash wages and deferred wage schemes (through pension vehicles). An unfortunate corollary of this tax provision is that wage deferral through pensions is tax superior to wage deferrals through other schemes.

3. *Tax social security contributions and benefits in the same way that private pensions are treated.* Currently, income tax treatment of social security and private pensions induces rational individuals to prefer a mix of public and private pensions, even if only one or the other vehicle would be preferred in a zero-tax world. By taxing public and private pensions in the same way, individuals will no longer be biased by the income tax code to favor private and public systems. Assuming that the size of social security is determined by aggregate workers' "votes," tax neutrality in retirement savings vehicles will generate a more appropriate size of the social security system compared to the private pension system. Moreover, by altering the tax treatment of social security to conform to the treatment of private pensions, all savings for retirement will be made through vehicles that foster neutrality between current and future consumption. This change in tax policy went into effect in 1984 but affects only a small portion of the retiree population.¹¹ All social security recipients should be taxed on the same basis.

4. *Eliminate all limits on Individual Retirement Accounts.* This change would make IRAs fully competitive with private pensions. Such a provision (together with the corporate pension tax deduction) would ensure that private pensions would survive in the long run if either significant efficiency gains are generated by deferred-wage schemes or annuity rates are reduced substantially by mandatory group participation. Otherwise, the pension plan will be replaced by IRAs. The introduction of salary reduction 401(k) plans in 1981 is not a perfect substitute for the expansion of IRAs but nevertheless represent a significant step toward introducing more flexibility into the private pension system.

5. *Eliminate all constraints on private pension plan rules.* Given the availability of unconstrained IRAs, individuals have access to favorable tax treatment without joining private pensions. It can therefore

¹¹One half of social security benefits are taxable only if (married) retirees' taxable income exceeds \$32,000. If Congress does not periodically increase this limit, higher proportions of retirees will be subject to this tax.

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be presumed that private pension plans, together with their attendant rules, will persist only if they stimulate substantial productivity or other efficiency effects. Rules that stem from various Revenue Acts or ERISA regulations that constrain either the design of pension plan rules or the creation of stylized plans for particular groups in the firm or the participation of employees at different voluntary rates of contribution should be eliminated. Again, the 401(k) plans represent a positive step in introducing more flexibility into the pension system but are not sufficiently far-reaching to accomplish significant reductions on pension plan inefficiencies.

6. *Eliminate the earnings test in the social security system; allow firms to erect penalties to retirement through the pension plan.* Currently, firms that wish to retain workers past age 65 must compensate workers for associated penalties imposed by social security for continued work during older ages. Thus, even though it may be efficient to extend the length of the worker's tenure in the firm, the social security earnings test (together with actuarial penalties for work past age 65) may make these contracts unprofitable. This distortion is easily remedied by removing the effective social security tax on work at older ages. Firms will then no longer be penalized if they arrange private pensions to induce retirement at ages that are inconsistent with the social security formula. The impact of the social security earnings test is scheduled to be eliminated by the year 2010;¹² it should be put in place immediately.

The decision to remove the federal government from the business of influencing retirement ages evinced by an enlightened policy for the social security system (in the future) should be extended to private pensions. Given the existence of age-related discrimination rules and the elimination of constraining mandatory age rules, pensions are one of the few tools left for firms to schedule their workers for retirement "on time" in the sense of enhancing overall firm productivity. Proposals to interfere with retirement incentives in pension plans should not be enacted.

7. *"Privatize" federal pension insurance.* Proposals to either eliminate ERISA insurance or replace it with bankruptcy laws that make pensions superior credit claims should not be pursued until a better understanding is developed of why federal pension insurance exists and why pension plans are not fully funded. If underfunded defined benefit plans contribute to firm productivity, then vigorous pursuit of either a full-funding standard or a full insurance standard may hinder an efficiency attribute of defined benefit pension plans. Conversely, if

¹²While the effective tax on earnings will be reduced, it will not be eliminated; but actuarial benefit adjustments to retirees after age 65 will be close to actuarially fair which is equivalent to eliminating the earnings test. See "Social Security Amendments of 1983: Legislative History and Summary of Provisions," *Social Security Bulletin*, July 1983.

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ERISA insurance was established in response to a problem that was insoluble in the private market, elimination of federal pension insurance may lead to a similar reduction in efficiency.

The federal insurance scheme, however, should be transferred to the private sector. The federal government can mandate insurance coverage (at current levels) in the private market, providing reinsurance to rule out solvency problems in the face of catastrophic temporal events. The private market will establish economic premium structures that will include the institution of risk-related premiums. The establishment of this scheme will provide a litmus test for legitimate support of ERISA itself. If ERISA insurance is not "privatized," the Pension Benefit Guaranty Corporation should set premiums that mimic the private-sector solution and they should immunize current liabilities by selecting an all-bond portfolio.

8. *Recoup tax gains embedded in reversions.* To ensure that firms do not use pension plans for reasons other than to pay pension benefits, a reversion tax should be assessed on reversions arising from plan terminations. This makes the termination-for-reversion decision tax neutral.

9. *Construct mechanisms to permit efficient contracting.*

- a. Under current law, firms cannot bind themselves to award reversions to workers in the pension contract; a legal mechanism should be constructed to make the plans irrevocable trusts.
- b. The Treasury should issue indexed bonds.¹³ This would permit firms and workers to immunize workers from capital losses from terminations.
- c. Except for making these environmental changes, refrain from redefining asset ownership in pension plans.

¹³This proposal has been endorsed by the Office of Pension and Welfare Benefit Programs. See Robert A. G. Monks, "Administrator's Musings on the Management of Pension Funds" (Speech given at the Pension Real Estate Association Spring Conference, Washington, D.C., May 8, 1984).