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PENSION FUNDING POLICY

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How much should defined-benefit pension plan assets be? Should actuaries decide the answer to this question?[1]

FUNDING POLICY IN THE PRESENT LEGAL ENVIRONMENT

ERISA provisions govern minimum required and maximum deducible contributions. Not only is there a range between minimum and maximum, but the range can be moved up or down by choices of actuarial method, asset valuation method, and actuarial assumptions.

While a single-employer nonbargained pension plan is operating (that is, it has not been terminated), funding policy is primarily a financial decision of the employer. Employees get their pensions regardless of the degree of funding in excess of pay-as-you-go. Even at plan termination, employees' benefit security is often independent of the extent of the plan's funding, because solvent employers are generally responsible for accrued benefits and the PBGC is secondarily responsible for most benefits.

Below is a list of the important questions the employer may consider in making the funding policy financial decision. Many of the questions are interrelated. Discussion of these questions is beyond the scope of this paper.

- What are the alternative uses or sources for the funds that might be contributed? Do funds earn more in the pension fund than invested in the business, with appropriate adjustment for tax, PBGC variable premium, and risk considerations? Should the company borrow to make larger pension contributions?

- How will funding affect the price of the company's stock?

- How will funding affect the company's ability to raise money in the fixed-income and equity markets? Will potential liability to provide accrued benefits or to pay PBGC make it difficult to sell an operation?

- What are the tax considerations? Are corporate income tax rates more likely to rise or to fall?

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[1] This paper is written from a U. S. perspective.

- Suppose the company terminates the plan, perhaps with replacement by a defined-contribution plan. How important is the asymmetrical treatment of a deficit and surplus? (If the company is solvent, it must pay for any unfunded accrued benefits but will have to share any surplus with employees and the Treasury.)

- Are contributions recoverable from third parties because the company has cost-based government contracts or is a rate-regulated public utility?

- Will employees (or their unions) care how well the plan is funded?

- Last, but perhaps not least, if the company goes bankrupt, how much benefit security (beyond any PBGC guarantees) does it want or need to offer?

Some of these questions have different answers for the near future than for the more distant future. Consequently, the relevant time horizon of management may influence funding policy. There is no mention above of equity between generations of shareholders, because *SFAS 87* has generally resulted in pension expense calculated on an accrual basis that is more difficult to "manage" than in the past.

For plans covering public employees, many of the questions are different. Some important aspects of most public plans are the presumption that plan termination is very unlikely, the lack of a guarantee agency like the PBGC, the closer tie between funding and financial reporting, the importance of pension cost in labor negotiations, and the greater participation of employee representatives in formulating funding policy. Some are concerned with equity among generations of taxpayers. The adequacy of pension funding is, at least in part, reflected in bond ratings. In a theoretically efficient real-estate market, prices would reflect funding adequacy.[2] In this same market, a public employer would strive to arrange its affairs to borrow to the maximum extent possible (using tax-exempt instruments) to increase funding of its pension plans because of the tax arbitrage between the tax-exempt borrowing rate and the tax-free fund earnings.

HOW HAVE THE PRESENT RULES WORKED?

Before the 1974 enactment of ERISA, the funding of defined-benefit plans was regulated much less than it is now. Employers that sponsored pension plans were free—within very broad limits that were not spelled out—to choose actuarial methods and assumptions. At plan termination, any guarantee of benefits that were not funded was extremely rare. A few large unions negotiated funding and/or guarantee requirements.

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[2] Buyers should be willing to pay more for dwellings in a jurisdiction in which taxes will be lower because of lower funding requirements for public employee pensions. Often this will not require real estate buyers to be pension or municipal finance experts; jurisdictions with large costs for amortizing pension liabilities will have correspondingly higher taxes.

An employer that adopted a pension plan committed to make contributions while the plan was in effect. The employer reserved the right to terminate the plan at its option and did not commit to guarantee benefits upon plan termination.

In the present ERISA legal environment, the actions of plan sponsors have been exactly what could be expected. Defined-benefit plans have become less important and defined-contribution plans more important. Some defined-benefit plan sponsors may have reduced contributions because the PBGC guarantees some pensions or they don't want their plans to accumulate surplus that they can't recover. Plan sponsors have acted rationally. To some extent, the move to defined-contribution plans has been a move to the type of commitment that employers made under pre-ERISA defined-benefit plans—to make contributions while the plan is in effect but not to guarantee accrued benefits.

If funding requirements are considered to include PBGC premiums and deficit funding (and limited surplus reversion) at plan termination, the requirements put into place since 1974 have certainly discouraged defined-benefit plans. Although retirement promises made to employees may be better secured, employers have made fewer retirement promises. My own view is that society would be better off with more promises, not as well-secured, than with fewer promises.

VIEWS OF PARTIES INTERESTED IN THE FUNDING LEVEL OF A PLAN

The parties who are interested in the level of pension funding, not necessarily in the order of their degree of interest, are:

- Employees covered by the plan, recognizing that different types of employees have different interests
- The employer
- Any entity that is directly responsible for part or all of any pension fund inadequacy. In the U.S., this generally is limited to the PBGC, which in turn collects premiums from private defined-benefit pension plans or sponsors
- The tax collector—the federal and state treasuries that have an interest in limiting deductible contributions to those that are really necessary.
- Several parties with indirect interests, including:
  - Parties that may eventually become responsible for any pension fund inadequacy—taxpayers of a city, for example, but probably not the shareholders of a corporation
  - Parties that indirectly pay for employer contributions—ratepayers of public utilities, the federal government for defense contractors with cost-based prices, and so on

- Those who may have to support retired people with inadequate income
- Society generally, which may benefit from larger savings available for investment through pension funds (the further discussion of which is beyond the scope of this paper).

What are the best rules for funding (and related guarantees) from the standpoint of each of the parties?

Employees

In a narrow sense, the employees' interest is in maximum security provided by funding and by employer and governmental guarantees. If the employer and governmental guarantees are complete and ironclad, the employees have no real interest in funding.

But looking at funding and guarantees strictly from a security standpoint ignores an important side effect, that is, strong funding requirements and guarantees discourage the adoption and liberalization of defined-benefit plans. Employees may prefer less secure, but more liberal, benefits—even if they understand that some of the benefits eventually may not be paid. Older and retired employees may get larger benefits from less secure plans.

Less secure plans will inevitably, upon the termination of some plans, result in apparent inequities as pensions are stopped, reduced, or never started. These inequities led to the funding and guarantee provisions of ERISA. These provisions, in turn, have caused some employers to discontinue their defined-benefit plans and have discouraged other employers from adopting benefit liberalizations or new defined-benefit plans.

Employers

When advantageous from tax and corporate finance standpoints, employers want maximum flexibility to establish plans and to fund heavily, with little or no residual liability at plan termination. In other words, employers want to use defined-benefit plans to accomplish their retirement and employee-relations objectives with a commitment only to pay contributions on a regular basis while the plan is in effect.

Further, employers want to be able to recover past contributions in excess of those required, either by discontinuance or reduction in contributions while the plan is in effect or by a reversion at plan termination. To the extent that such recovery is prohibited, employers will tend to reduce their commitments and their contributions to defined-benefit plans.

Employers do not want to pay PBGC premiums to subsidize other employers' plans deficiencies, nor do they want to pay PBGC premiums for unfunded liabilities that they may regard as adequately secured by their net worth.

Employers that are near or in bankruptcy will benefit from PBGC paying part of their retirement costs—but this is really a benefit for plan participants and probably of little value to employers.

Employers don't want "retroactive" changes in rules that increase their liabilities. For example, ERISA and SEPPAA made employers responsible for unfunded pensions; *TRA 1986* and subsequent legislation restricted the ability of employers to recover overfunding through reversions.

Guarantee Agency (for example, the PBGC)

A guarantee agency's solvency depends on the existence of a combination of heavy funding requirements, residual employer liability, and limits on the ability of employers to establish new liabilities without funding them. Employers can, of course, be expected to select against PBGC to the extent permitted by its rules.

U. S. Treasury

The government's ability to spread the tax burden fairly requires rigid rules (with minimum flexibility on part of employers) to prevent employers from shifting deductible pension expense between time periods to minimize taxes. Because the federal government operates on a cash (not an accrual) basis and because legislators and the elected executive are concerned with a short time horizon, the treasury generally wants to limit deductible contributions.

Indirect Guarantors (for example, Taxpayers, Society in General)

To avoid unforeseen taxes or expenses, taxpayers generally want "adequate" funding of public plans. The issue is to assign pension costs to time periods fairly. The issue is really more an accounting issue than a funding issue. But for entities that use cash (rather than accrual) accounting for pensions, funding contributions are identical to accounting costs. "Adequate" funding may be resisted by the elected officials and legislators who make decisions for the indirect guarantors. Often these officials and legislators are most concerned with the near future and are tempted to solve current budget problems in part by reducing current pension costs.

Because society generally may have to support those with meager retirement income, society should want to encourage more defined-benefit pension plans, with some responsibility on the part of employers to fund them, recognizing the trade-off between secure pensions and the encouragement of defined-benefit plans.

Indirect Contributors (for example, Ratepayers and Government for Defense Contractors)

Ratepayers and other indirect contributors are primarily concerned with accounting, but in most cases the rules and practices are such that accounting costs are virtually identical with funding contributions. The indirect contributors want "fair" costs and contributions. Their interest is generally in sufficiently rigid rules for

contributions so that the employer cannot freely shift contributions between time periods or make contributions that will not eventually be required to provide benefits. The indirect contributors have little interest in employee security.

WHAT SHOULD LAWS PROVIDE?—TWO POSSIBILITIES

One can expect that employers will continue with the same answers to the questions posed in the first section of this paper when they set funding policy.

In the present environment employers will fund heavily when their cost of funds is low. Usually a low cost of funds will be associated with employers that are financially strong and that are not likely to terminate their pension plans (other than plans for specific locations or businesses which may be closed). Conversely, weak funding usually will be associated with employers that have high costs of funds, that are not financially strong, and that are more likely to terminate their pension plans. Only with changes in the laws will there be lighter funding from strong employers and heavier funding from weak employers.

I believe we must choose between two types of systems.

GUARANTEED PENSION SYSTEM

The first, a "guaranteed pension" system, is the system now in place. This system makes pensions very secure by making employers primarily responsible for the cost of providing pensions for their employees, with a second level of protection from the PBGC. This system is shrinking and will continue to shrink. Many employers will not promise defined benefits because of the potential liability upon plan termination and the costs diverted to employees of other employers (PBGC premiums).

If the goal is for employees to continue to be secure that and receive the pensions they have been promised, society can continue to tinker with the guaranteed pension system. The PBGC can continue to guarantee pensions under terminated plans to the extent they are not funded and the employer is not solvent. The PBGC can be protected by requiring rapid funding of new pension promises and by imposing restrictions on benefit increases for poorly funded plans. In addition, the PBGC guarantees of new pension promises can be phased in over longer periods (but this is really a reduction in pension security).

If legislation continues along these lines we can expect that defined-benefit plans will cover fewer employees and provide smaller benefits, but the benefits that have been promised will be quite secure. This may be a satisfactory result.

Under the guaranteed pension system, employer and PBGC responsibility provide employees with pension security. Funding requirements primarily protect the PBGC and, in turn, keep its premiums from growing. Funding under this system has little to do with employee pension security.

GUARANTEED-FUNDING SYSTEM

A second system, a "guaranteed-funding" system, would result in more pension promises, but they would be less secure. The employers' responsibility would be limited to making regular contributions to their defined-benefit plans.

The guaranteed-funding system would, in many aspects, be a return to the pre-PBGC and pre-SEPPAA system under which funding was the sole source of benefit security (except as an employer, perhaps as a result of collective bargaining, promises benefits upon plan termination beyond those that can be provided from the fund).

The guaranteed-funding system would not repeal ERISA. By and large, the provisions of the first three titles of ERISA would remain in place, perhaps with changes in the funding requirements. But most of Title IV (Plan Termination Insurance) would be eliminated.

Why Return to a Guaranteed-Funding System?

The reason for returning to a guaranteed-funding system is to foster the growth of defined-benefit pension plans. From the standpoint of both employees and employers, these plans do a better job of providing retirement benefits. This has been written about extensively. There is no reason for this paper to recite the arguments for defined-benefit plans.

I believe the price of the present guaranteed pension system is too high—it discourages defined-benefit plans. Many of the inequities that led to the passage of ERISA have been dealt with by ERISA's participation, vesting, and similar requirements. The loss of expected benefits that results from inadequate funding at plan termination is real, but must be weighed against the shrinking of defined-benefit plans that has resulted from legislating pension guarantees. Some of the apparent unfairness can be reduced by better design of funding requirements and better allocation of assets at plan termination. Explanation to employees of the degree of benefit security would be necessary.

In considering a return to a guaranteed-funding system, we should recognize that, for the vast majority of private pension plan participants, Social Security is the primary source of retirement income and private pension plans are supplemental. Social Security is more important for lower-paid employees than for higher-paid employees. Since pension actuaries and plan sponsor managers do not generally work with Social Security and are generally higher paid, they may overlook the fact that the security of most employees' retirement income does not depend on the security of private pension plan benefits.

Funding Rules

Under a guaranteed-funding system, the purpose of funding is to secure benefits. Consequently, funding requirements should be designed to secure accrued

benefits. Funding requirements should be based on liabilities for accrued benefits, either at the valuation date or projected into the future.

Below are three possibilities for minimum funding requirements:

a. The unit credit (UC) normal cost (the value of benefits accruing during the year including increases in accrued benefits due to increases in final average pay), plus amortization of the unfunded liability for accrued benefits (initially or due to amendment) over a fixed period—perhaps 10 or 15 years

b. The projected unit credit (PUC) normal cost plus amortization of the PUC unfunded liability over a fixed period—perhaps 15 or 20 years

c. The greater of (a) or (b) above, where the amortization period is shorter under (a) than under (b). For example, if the amortization periods were 10 and 15 years, respectively, the requirement would usually be 10-year amortization of the UC unfunded liability under dollars-per-year-of-service plans and 15-year amortization of the PUC unfunded liability under final-average-pay plans.

Under any of the above requirements, losses might be required to be amortized over 5 to 10 years. Gains might also be amortized over 5 to 10 years or might be applied to reduce all remaining amortization payments pro rata. In determining gains or losses, assets should be marked to market, as are liabilities. Changes in actuarial assumptions would result in gains or losses, not in separate amortization bases. Employers who want to avoid the risk of big increases in contributions because of poor investment experience can adopt conservative investment policies that match the durations of assets and liabilities.

If funding is for benefit security, there seems to be no justification for different economic assumptions for different plans. The ability of a fund to provide benefit security at plan termination depends on the market value of the fund and the benefits that be can "settled" by that market value. The investment return should be indexed to something that can be expected to approximate real settlement prices, such as yields on long treasury bonds (at the date of the valuation, not some moving average). If assumptions on increases in general pay levels, Social Security taxable wages and the CPI are relevant (generally under the PUC method rather than the UC method), it might be desirable to have a regulator fix them.

It might even be desirable to fix mortality assumptions. Of course, assumptions that are peculiar to the plan (including most decrements) should be the best estimate of the plan's enrolled actuary.

What about maximum deductible contributions? At least since 1939, the Internal Revenue Code and regulations have provided for a range between minimum required and maximum deductible contributions for defined-benefit plans. This

certainly encourages pension funding but permits an employer to manage its taxes. If a range is desirable, should it be wider for plans with larger unamortized accrued liabilities? Should employers be able to use the entry-age-normal actuarial method to widen the range? Should employers with defined-benefit plans have a more favorable tax deductible range than employers with defined-contribution plans? (Although there is a range available under profit-sharing plans, the choice within the range affects employees' benefits.)

Should investment allocation affect funding requirements? Consider two identical pension plans. The first plan's assets are largely fixed-income instruments whose duration, and perhaps cash-flow, tracks the liabilities. The second plan's assets are 70% in common stocks (perhaps with a large unhedged foreign exchange risk) and the remainder in short-duration fixed-income instruments and real estate. If we are carefully regulating progress to a precise funding target, is it sensible to require the same contributions for both of these plans? It may be. Can funding requirements be adjusted for asset allocation using considerations similar to risk-based capital for financial institutions, without producing investment inefficiency and an administrative nightmare?

What should happen when minimum funding requirements are not met? Rather than requiring plan termination immediately, might suspension for three to five years be permitted? While a plan is suspended, no further benefits would accrue, but pensions would continue to be paid.

Allocation of Assets on Plan Termination

Prior to ERISA, typical asset priority allocation provisions upon plan termination of plans gave almost full preference for retirees. This has been largely continued by Section 4044 of ERISA (although this is less important because of PBGC plan-termination insurance). I believe the implicit allocation of past employer contributions by these provisions unfairly favors retirees. For many plans, a small reduction in retirees' pensions will provide a meaningful allocation to nonretired employees. While the details of what priority allocations, if any, should be required are beyond the scope of this paper, consideration should be given to allocations in proportion to all vested benefits, perhaps phasing in the effects of amendments.

After all accrued benefits have been provided, should reversion of excess assets to the employer be permitted? I think so; otherwise we unduly discourage heavy funding.

Employer Liability

While I favor no employer liability at plan termination, modest amounts might be provided. Any employer liability would, of course, move the compromise toward benefit security and away from defined-benefit plans.

How Do the Parties Fare?

Under the guaranteed-funding system, I believe employers would be better off than they are now. They give up some ability to manage contributions by managing methods, assumptions, and the choice within the minimum-maximum range. But they gain the ability to sponsor defined-benefit plans without full liability for benefits; they do not have to support other employers through PBGC premiums; and they can recover excess assets at plan termination.

Employees' benefit security will be reduced, but I believe there will be many more defined-benefit plans. If that is correct, employees on the whole will be better off, but some will find their pensions were not secure.

The PBGC will eventually disappear.

The Treasury may benefit from less flexibility on the part of employers to manage contributions, but the Treasury will suffer if there are more defined-benefit plan contributions. It will also suffer because the receipt of taxable benefits under defined-benefit plans is deferred longer than under defined-contribution plans.

The indirect guarantors will benefit if the system does result in more defined-benefit plans. The indirect contributors will be better off if employers have less ability to manage methods and assumptions.

Communication

Obviously, the different nature of their benefit security must be explained to employees.

Transition

There would clearly be many problems in phasing out the present guaranteed-benefit system. Perhaps those who gave us the original $1.00-per-year-per-participant PBGC premium can solve them.

THE ACTUARY'S ROLE

I believe that the actuary for a pension plan should not take on the responsibility of deciding on a funding policy or funding target. No one has given the actuary this responsibility, and no one should. The actuary's responsibility is to inform the client of the range of outcomes of various actions the client may choose to take and to help the client make the choice.

Actuaries, through their professional and trade associations, should not try to form a consensus on the "correct" funding target for a pension plan. Doing so prevents the parties who are interested in the level of pension funding from selecting among the wide range of possible answers, using their own sets of values together with their views of the likelihood of various future events.

Of course, where the actuary has been given a responsibility—if there is a legal or other external standard for the actuary's work—the actuary must faithfully discharge that responsibility. If, as under ERISA, the standard requires the actuary to use assumptions that are the actuary's best estimate of future experience, the actuary should use the best estimate—not choose a broad range and let the client select a point in the range. But the actuarial cost method and funding policy will be decided by the plan sponsor, except as they may be collectively bargained under some plans.

The actuary should give advice on the client's or the company's economic interest, as long as his or her role is clear. Accordingly, it is proper for an actuary for an employer to suggest a funding policy that might result in the PBGC eventually paying for pensions under the employer's plans, or for an actuary for employees in a collective bargaining unit to help bargain benefits that might result in unforeseen employer costs.

Actuaries should not shun participation in public debates on rules that govern pension funding. But we should not, citing our technical expertise, preempt the funding policy decisions from our clients, our employers, or others. Further, we should not send a message to lawmakers, regulators, and other policymakers that funding policy is so technical that they should simply leave funding policy decisions to us.

SUMMARY

Under present law, when a single-employer nonbargained pension plan is operating, funding policy is primarily a financial decision of the employer. Employees get their pensions regardless of the degree of funding in excess of pay-as-you-go. Even at plan termination, employees' benefit security is often independent of the extent of the plan's funding because solvent employers are generally responsible for accrued benefits and the PBGC is secondarily responsible for most benefits.

The responses of plan sponsors to ERISA have been exactly what could be expected. Defined-benefit plans have become less important and defined-contribution plans more important. Although retirement promises made to employees may be better secured, employers have made fewer retirement promises. My view is that society would be better off with more promises, not as well-secured, than with fewer promises.

Employees may prefer less secure, but more liberal, benefits—even if they understand that some of the benefits eventually may not be paid. Older and retired employees may get larger benefits from less secure plans.

A return to the pre-ERISA, pre-SEPPAA "guaranteed-funding" system would result in more pension promises, but they would be less secure. Employers' responsibility would be limited to making contributions on a regular basis to their defined-benefit plans. The provisions of the first three titles of ERISA would remain in

place, perhaps with changes in the funding requirements, but most of Title IV (Plan Termination Insurance) would be eliminated.

In considering a return to a guaranteed-funding system, we should recognize that, for the vast majority of private pension plan participants, Social Security is the primary source of retirement income and private pension plans are supplemental.

Three possibilities for minimum funding requirements, all based on the unit credit or projected unit credit methods, are suggested.

If funding is for benefit security, there seems to be no justification for different economic assumptions for different plans.

Under Section 4044 of ERISA, the asset priority allocation provisions give too much priority to retirees. For many plans, a small reduction in retirees' pensions will provide a meaningful allocation to nonretired employees.

After all accrued benefits have been provided, reversion of excess assets to the employer should be permitted. Otherwise, we unduly discourage heavy funding.

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