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PBGC Solvency: Balancing Social and Casualty Insurance Perspectives

- ◆ Concern has been voiced regarding the financial viability of the Pension Benefit Guaranty Corporation (PBGC) and whether, as with the savings and loan episode, a general taxpayer bailout will be necessary. The focus is on PBGC's net worth deficit of \$2.5 billion in the single-employer fund; an estimated \$31 billion in underfunding within individual insured plans; and \$13 billion which PBGC classifies as a "serious risk" because of financial problems of the sponsor company. The overall defined benefit pension system, however, presently has \$1.3 trillion in assets to cover \$900 billion in liabilities. Therefore, while there is \$31 billion in underfunding within individual plans, there are also sufficient resources available within the defined benefit system itself—the payers of PBGC premiums—to cover this underfunding, making a general taxpayer bailout unnecessary.
- ◆ The urgency surrounding PBGC's current financial condition and what, if any, legislative changes are necessary varies with whether the corporation is viewed from a pure social insurance or a pure casualty insurance perspective, or a mix of the two. The social insurance perspective was the foundation of Title IV of ERISA, but legislative changes since 1974 have introduced casualty insurance provisions.
- ◆ The social insurance perspective maintains that PBGC should encourage the maintenance of defined benefit pension plans and function as a transfer agency in a social insurance system where the insured cross-subsidize one another in the event that a definable loss should occur. It argues for the insurance of all reasonable benefits that a sponsor is willing to provide for its employees.
- ◆ The casualty insurance perspective argues that the PBGC insurance scheme is flawed in its design and that these flaws are the cause of any existing deficit problems. The system is not designed on sound insurance principles even though it is supposed to be an insurance system protecting participants' pension benefits. The design creates financial incentives for undesirable sponsor behavior and allows the opportunity for underfunding of defined benefit pension plans.
- ◆ Four proposals have been introduced to change PBGC's current operation. The proposals, while maintaining PBGC's social insurance tradition, represent a further movement toward casualty insurance concepts. The proposals minimize PBGC's exposure by increasing recoveries and minimizing claims. The proposals maintain a social insurance program's objectives by attempting to alter the behavior of the participating plans and plan sponsors while maintaining cross subsidies and the present premium structure.
- ◆ A balance between social insurance and casualty insurance principles is most likely to sustain an overall strong and continuing defined benefit pension system, providing a continuing base of premium payers for the PBGC.

◆ Introduction

Since the enactment of the Employee Retirement Income Security Act (ERISA) in 1974, employer-sponsored pension plans have assumed an increasingly important role in providing retirement income security. The Pension Benefit Guaranty Corporation (PBGC) was created under ERISA to strengthen retirement security by guaranteeing some benefits for employer-sponsored defined benefit pension plan participants. **PBGC was designed according to social insurance principles to function primarily as a transfer agency. It was intended to transfer assets among plan sponsors to the extent necessary to provide pension benefits to participants of plans that terminate with insufficient assets to cover promised benefits.** The law has been amended several times since 1974 to improve the functioning of the program. While PBGC has always operated with a net deficit, large plan terminations in fiscal years 1991 and 1992 have increased PBGC's net deficit to \$2.5 billion as of year-end 1991. Eastern Air Lines' pension plans terminated with an estimated \$700 million in underfunding, and Pan American World Airways' plans terminated with about \$900 million in underfunding.

PBGC's increasing deficit has caused some to question its ability to continue insuring pension benefits in the long term. **PBGC believes that incorporating traditional casualty insurance principals into the current insurance scheme would minimize its exposure and reduce incentives inherent in the current system for sponsors to transfer pension debt to PBGC.** PBGC and other proponents of the casualty insurance perspective believe that PBGC insurance system's current structure has led to the increasing net deficit. The casualty insurance perspective holds that PBGC would ideally operate with no net deficit. Some argue that, unless the system is altered, PBGC's deficit could ultimately lead to a general taxpayer bailout reminiscent of the Federal Savings and Loan Insurance Corporation (FSLIC) episode. **Proponents of the social insurance perspective argue that worker retirement security is PBGC's primary objective, and that**

PBGC's operation must take into account the defined benefit system's assets and the long-term payout stream represented by pension payments. This *Issue Brief* examines the defined benefit system's funding status; solvency questions surrounding PBGC; the appropriateness of the FSLIC analogy; the adequacy of PBGC's current system from both social and casualty insurance perspectives, and possible solutions.

◆ Retirement Security

Pension Plans and Retirement Security

Pension plans, along with personal savings and government programs, seek to provide economic security to workers during their retirement years. **In 1990, private pension benefit payments totaled \$141.2 billion, or 30.9 percent of all retirement benefit payments made to retired workers and their families.** From 1975 to 1988, the total number of tax-qualified employer-sponsored defined benefit and defined contribution plans increased from 311,000 to 730,000, and gross participation (active workers, separated vested participants, survivors, and retirees) in such plans rose from 45 million to 78 million over the same period. The assets in these plans grew from \$260 billion in 1975 to \$1.5 trillion in 1988 (Turner and Beller, 1992). In 1990, 55.3 percent of all civilian, nonagricultural workers had an employer who sponsored a pension plan, while 42.9 percent participated in a plan. In 1990, among the ERISA work force (i.e., civilian, nonagricultural, wage and salary workers aged 21 and over with at least one year of tenure and who reported working at least 1,000 hours in the year), 66.4 percent had an employer who sponsored a pension plan, and 58.4 percent participated in a plan. According to the Advisory Council on Social Security, the percentage of elderly families receiving income from employer-sponsored pensions is expected to increase from the current 40 percent to 76 percent by 2018 (1991 Advisory Council on Social Security, 1991).

There are two types of employer-sponsored pension plans—defined benefit and defined contribution plans.

A defined benefit plan promises the participant a specified monthly benefit on retirement, the size of which typically depends on salary and/or years of service. The plan sponsor is responsible for making contributions to the plan's fund and investing pension assets so that the fund has sufficient assets to fulfill the promised benefits when they are due.¹ With a defined contribution plan, each participant has an account to which the employer and/or employee may contribute, depending on the specifics of the plan. A participant's pension benefit consists of the contributions and investment returns of these contributions. The employee bears the risk of poor investment returns and gains the reward of good returns.

There has been a general trend toward the establishment of defined contribution plans as opposed to defined benefit plans over the last 20 years. Some employers, particularly small ones, have eliminated their defined benefit plans. Many larger businesses have supplemented the defined benefit plan with a defined contribution plan and reduced the rate of benefit growth in the former. Cash balance plans, which are essentially a defined benefit/defined contribution hybrid, have also grown in popularity recently among large employers. These plans are legally defined benefit plans but combine features of both defined benefit and defined contribution plans.² Probably more important, the sectors of the economy in which traditional defined benefit plan coverage is most firmly established, including heavily unionized and older industrial sectors, have generally contracted or grown more slowly than other sectors in which plan diversity is greater. In 1975, there

¹A defined benefit plan can have individual accounts, as is the case with deferred annuities, although this is generally not the case.

²Because cash balance plans are legally defined benefit plans, they are included in the PBGC insurance system. In these plans, each participant has an account that is credited with a dollar amount that resembles an employer contribution, generally determined as a percentage of pay. Each participant's account is also credited with interest. The plan provides benefits in the form of a lump-sum distribution or annuity. On termination of employment, the amount of the lump-sum distribution is equal to the participant's vested account balance.

were 103,000 defined benefit plans with 33 million gross participants³ and \$186 billion in assets. In 1988, there were 146,000 such plans, down from the peak of 175,000 in 1982 and 1983. The number of gross participants has remained in the 40 million–41 million range since 1983, and plan assets amounted to \$912 billion in 1988 (Turner and Beller, 1992). More recently, Employee Benefit Research Institute (EBRI) tabulations show single-employer defined benefit assets grew to \$885 billion as of September 30, 1991. Over the same time period, the number of defined contribution plans increased from 208,000 to 584,000. The number of gross participants increased from 12 million to 37 million in 1986, and remained at that level in 1988. The amount of assets in such plans increased from \$74 billion to \$592 billion between 1975 and 1988 (Turner and Beller, 1992). EBRI research shows assets in these plans at \$486 billion as of September 30, 1991.



While PBGC has always operated with a net deficit, large plan terminations in fiscal years 1991 and 1992 have increased PBGC's net deficit to \$2.5 billion as of year-end 1991.



When requested, the Internal Revenue Service's (IRS) Office of Employee Plans and Exempt Organizations issues determination letters regarding the tax-favored status of private plans when they are established, amended, and terminated. Since IRS first compiled determination letter statistics by plan type in 1976, favorable letters have been issued for 220,000 new defined benefit plans and 131,000 defined benefit terminations. This represents a ratio of new to termi-

³Includes active, separated, vested, survivors, and retired. Not adjusted for double counting of individuals participating in more than one plan.

nated plans of 1.7:1. At the same time, IRS issued favorable letters for 586,000 new defined contribution plans and 176,000 defined contribution terminations, for a ratio of new to terminated plans of 3.3:1. **While IRS determination letter activity is at best an imperfect measure of plan starts and terminations, the trends in this measure are striking and consistent, providing additional (if not independently conclusive) evidence of a total system shift toward defined contribution plans. Most recently, in fiscal years 1989, 1990, and 1991, the number of favorable letters issued regarding defined benefit terminations exceeded the number issued in response to initial defined benefit applications by large margins.** However, the number of favorable letters issued regarding defined contribution terminations exceeded the number issued in response to initial defined contribution applications for the first time in fiscal 1990. The two were equal in fiscal 1991. This may indicate that the growth trend in defined contribution plans is flattening. The defined benefit system is stronger than it was in 1974. There are more plans that are better funded, and the move to cash balance plans, as opposed to a total shift to defined contribution plans, maintains the premium base with a plan design that is most likely to be well funded.

The growth of defined contribution plans, which arguably was encouraged by the creation of section 401(k) plans by the Revenue Act of 1978, has implications for retirement income security in that it serves to shift the burden of responsibility for retirement income adequacy planning from the employer to the employee. Also, the increasing incidence of preretirement lump-sum distributions in both defined contribution and defined benefit plans, in which workers receive their entire pension benefit from an employer in one payment, implies a further shift to individual responsibility for retirement security. It is the individual's decision whether to roll over a lump-sum distribution into an individual retirement account (IRA) or another retirement savings vehicle on job change. In general, an individual who does not roll over the distribution into an IRA or other tax-qualified vehicle must pay

both regular income tax and an additional 10 percent penalty tax on the taxable portion of the amount received. In 1988, 8.5 million workers reported that they had received more than \$48 billion in lump-sum distributions from prior jobs; 11 percent rolled the entire distribution into a tax-deferred retirement account, while 34 percent consumed⁴ the entire amount (Piacentini, 1990). This raises the issue of the adequacy of individual planning for future retirement security.

Legislation and Retirement Security

Given that the primary social objective served by employer-sponsored pension plans is to promote economic security in retirement, legislation governing minimum plan funding has been enacted over time to try to ensure that pension promises are kept. These regulations govern only defined benefit plans; defined contribution plans are by nature always fully funded because a participant's benefit is his or her retirement account balance. **ERISA set minimum funding standards for defined benefit pension plans that were subsequently tightened by the Omnibus Budget Reconciliation Act of 1987 (OBRA '87). If a plan is underfunded,⁵ regulations govern how quickly this underfunding must be amortized. While these minimum funding regulations serve to create a funding floor, they may not be enough to completely insure retirement security, particularly when an industry reaches a point at which its retiree population grows rapidly while the active work force shrinks.**

On the other hand, legislation has restricted sponsor funding of some defined benefit plans. The 150 percent full funding limit, also instituted by OBRA '87, established a stricter upper limit on tax-deductible contribu-

⁴Includes purchase of a car, education expenses, expenses incurred during a period of unemployment, and other uses.

⁵Whether or not a plan is underfunded is determined on a termination basis, i.e., whether the plan fund has assets sufficient to cover the present value of accrued benefits projected to the end of the current plan year.

tions to defined benefit plans than previously existed.⁶ If a plan is more than 150 percent funded on a termination basis, any additional contributions to the fund are not tax deductible at that time. As a result, some sponsors have not made contributions to their plans since the effective date.



TRA '86 reduced the longest allowable cliff vesting schedule for most private single-employer plans from 10 years to 5 years.



There also is a limit on the benefits that defined benefit plans can provide to individual participants on a tax-deductible basis. The Tax Reform Act of 1986 (TRA '86) set the annual benefit dollar limit for individuals retiring at age 65 at \$90,000, to be adjusted annually for changes in the Consumer Price Index (CPI). Because this is the maximum allowable annual benefit, a plan cannot fund on a tax-deductible basis a greater benefit level even though projected final salary may result in a retirement benefit that is greater than the current limit, and the limit adjusted with the CPI may eventually exceed the projected final benefit. (The 1992 limit is \$112,221.)

Legislation enacted to increase retirement security has also served to increase sponsors' liability. TRA '86 reduced the longest allowable cliff vesting schedule for most private single-employer plans from 10 years to 5 years. Vesting schedules determine when plan participants gain a legal right to a pension benefit attributable to employer contributions or benefit accruals. Benefits that have been accrued but not vested are forfeited if a participant separates from service. With cliff vesting,

⁶Congress has long imposed upper limits on the amount of plan contributions an employer can claim as a federal income tax deduction (IRC section 404).

the participant becomes entitled to all accrued benefits at one point in time. Reducing the allowable time prior to cliff vesting thereby increases small lump-sum distributions to short service workers but employers may respond by reducing the retirement benefit of long service workers (benefits cannot be reduced retroactively, however). If benefits of longer service workers are not reduced, faster vesting by necessity increases employers' liability. The move to five year vesting in defined benefit plans was estimated to have increased employers' required contributions by an average of 2.4 percent (Employee Benefit Research Institute, 1980).

ERISA, PBGC, and Retirement Security

ERISA, which was signed into law on September 2, 1974, brought about significant changes in the private pension system designed to improve the security of pension promises made by employers to employees. Congress was motivated by what it saw as potential lapses in the security of these pension promises. The intent of the law was to prevent the occurrence of such events as the Studebaker case in 1963, when the underfunded pension plan terminated and more than 4,000 participants lost some or all of their vested pension benefits. In an effort to improve retirement security, ERISA established new participation, vesting, funding, reporting, fiduciary, and disclosure requirements and established PBGC to provide termination insurance.

Under ERISA, PBGC has three principal missions: to encourage the continuation and maintenance of voluntary private pension plans for the benefit of their participants,⁷ to provide for the timely and uninterrupted payment of pension benefits to participants and beneficiaries under covered plans, and to maintain premiums at the lowest level consistent with fulfilling

⁷While ERISA refers to "voluntary private pension plans," the House Committee on Education and Labor in its Single-Employer Pension Plan Amendments Act Committee Report cites the "original purpose" of the title as "to encourage the establishment and maintenance of defined benefit plans while providing for the security of promised pension benefits."

Table 1
PBGC Single-Employer Insurance Activity

Year	Benefits Paid (\$ millions)	Participants Receiving Benefits	Plans Trusteed and Pending Trusteeship
1991	\$ 514	140,000	1,644
1990	369	110,380	1,558
1989	353	106,770	1,501
1988	357	110,300	1,455
1987	300	109,700	1,376
1986	261	90,750	1,315
1985	170	74,800	1,191
1984	169	64,700	1,118
1983	137	55,400	1,021
1982	94	50,900	904

Source: Pension Benefit Guaranty Corporation, *Pension Benefit Guaranty Corporation Annual Report 1991: Strengthening the Pension Safety Net* (Washington, DC: Pension Benefit Guaranty Corporation, 1992).

its obligations. PBGC was created as an independent, wholly owned government corporation. Under current law, PBGC insures that vested participants in covered defined benefit plans receive some pension benefits in the event that plan sponsors are unable to meet these obligations due to financial distress, i.e., the sponsor liquidates or will be forced to liquidate if the plan is not terminated. (Originally, ERISA allowed sponsors to terminate underfunded plans at will and turn liabilities over to PBGC.) Tax-qualified defined benefit pension plans are required to participate in the program.⁸ PBGC insures only defined benefit pension plans. Defined contribution plans are not included in the program since they are always fully funded.⁹ The

⁸Plans that are exempt from ERISA include government plans; church plans for which no election has been made for coverage under the Internal Revenue Code; plans of fraternal or similar organizations that receive no contributions from the participants' employers; plans maintained solely to comply with workers' compensation, unemployment compensation, or disability insurance laws; plans maintained outside the United States primarily for nonresident aliens; and professional employer plans with fewer than 25 active participants.

⁹Also, the PBGC does not insure guaranteed investment contracts through insurance companies for defined contribution plans or insured annuities for defined contribution plans. Furthermore,

program is designed to be self-financing; PBGC revenue consists of premiums paid by plans sponsors, assets acquired from terminated plans, recoveries from sponsors of terminated plans, and earnings from invested assets.

PBGC operates two separate defined benefit insurance programs, one for single-employer plans and one for multiemployer plans. Multiemployer plans are maintained by employers pursuant to collectively bargained agreements and are jointly administered by a union and two or more employers. There are approximately 8.5 million participants in 2,100 multiemployer plans (Pension Benefit Guaranty Corporation, 1991). This discussion considers only the solvency of the single-employer program, as it is generally acknowledged that the multiemployer program is on sound financial footing as a result of major changes made to the original program by the Multiemployer Pension Plan Amendments Act (1980).

How Does the Program Work?

Pension plan terminations can be classified as either standard or underfunded; underfunded terminations can be further classified as distress, involuntary, or mandatory. PBGC insures benefits in the event of underfunded terminations. A standard termination occurs when a plan sponsor decides to terminate a defined benefit plan and buys annuities covering the participants' benefits. These include all accrued basic benefits, including those that were not vested at the time of termination, and could include other benefits as well. PBGC currently asserts that it is not authorized to insure the benefits once annuities are purchased.¹⁰ Plan participants and PBGC must be notified of the

PBGC asserts that it is not responsible for insuring annuities purchased to cover participant benefits in standard terminations.
¹⁰Interest in such coverage has been raised by the bankruptcy of the Executive Life Insurance Company. PBGC maintains that it is not currently authorized to guarantee annuity contracts, while others maintain that it is. PBGC's position is that this is a state responsibility. Every state now has a guaranty fund for annuity contracts, but the guarantee limit varies from state to state.

sponsor's desire to terminate. The plan administrator and actuary submit actuarial certification of fund sufficiency to cover benefits owed. If the plan holds assets in excess of the benefits owed, those assets may be recovered by the employer. Such recoveries are known as "asset reversions." **Total reversions peaked in 1985, when \$6.1 billion was recovered, and have declined since that time. This decline has occurred largely because Congress has imposed a continually increasing excise tax on asset reversions, with the current tax rate ranging from 20 percent to 50 percent.**¹¹ PBGC estimates only \$100 million in total reversions for 1991. Most terminations are standard; in 1991, PBGC allowed 7,500 standard terminations, whereas it agreed to the distress or involuntary termination of 86 underfunded plans (in many cases, the actual termination date was designated to an earlier year.)

An underfunded termination involves the closing out of a defined benefit plan with insufficient assets to buy annuities covering the participants' benefits. Such a termination can be triggered by either the sponsoring employer (distress) or PBGC (involuntary or mandatory.) The employer can initiate a distress termination only in instances of bankruptcy liquidation or when PBGC agrees termination is necessary for the employer's survival. An underfunded plan may be terminated involuntarily by PBGC to protect PBGC's interests. PBGC is required to terminate plans with no assets to pay current benefits. After an underfunded termination, PBGC becomes the plan's trustee. This means that PBGC takes over plan records, determines benefit eligibility and amounts, and then pays the benefits. (Table 1 presents historical information on

¹¹The excise tax on asset reversions was increased most recently from 15 percent to 20 percent by the 1991 federal budget if the employer (1) transfers a cushion equal to 25 percent of the excess assets to a qualified replacement plan, or (2) provides pro-rata benefit increases in the accrued benefits of qualified participants equal to at least 20 percent of the maximum reversion that could be received. The excise tax was increased to 50 percent if the employer does not maintain a qualified replacement plan or provide certain pro-rata increases.

the amount of benefits paid and the number of participants receiving these benefits, in addition to the number of plans trusteeed and pending trusteeship.) In addition, PBGC takes over any plan assets available and recovers amounts due from the employer or the employer's controlled group (the employer's parent corporation and any corporations of which the parent owns at least 80 percent). Actual trusteeship often occurs months after plan termination.

PBGC does not insure all pension benefits; rather, ERISA requires PBGC to insure basic vested benefits up to a specified maximum (benefits that vest because of plan termination are not covered). According to PBGC regulations (ERISA does not define basic) basic includes any vested benefits, including cost-of-living adjustments (COLAs) effective prior to plan termination and any death, survivor, or disability benefits owed or in payment status at termination. The maximum benefit was \$27,000 per year in 1991 and has risen to \$28,227 in 1992. Coverage for new benefit promises or plan amendments is currently phased in at the greater of \$20 or 20 percent per year over five years. Although it has not done so, PBGC also has the option of insuring nonbasic benefits such as retiree medical insurance, health, and disability benefits not owed at termination and COLAs becoming effective after termination.

Plan sponsors are required to pay an annual per participant premium for this coverage. Premium rates are not

Table 2
Single-Employer Premium Rates per Participant

Years	Flat Rate	Maximum Rate
1974–1978	\$ 1.00	
1978–1986	2.60	
1986–1988	8.50	
1988–1991	16.00	\$50.00
1991–	19.00	72.00

Source: Pension Benefit Guaranty Corporation, *Pension Benefit Guaranty Corporation Annual Report 1991: Strengthening the Pension Safety Net* (Washington, DC: Pension Benefit Guaranty Corporation, 1992).

set by PBGC but rather by Congress in the form of legislation that must be signed by the President. When the program was originally established in 1974, the premium was a flat rate of \$1 per participant per plan. Currently there is a flat premium of \$19 per participant and an additional variable premium of \$9 per \$1,000 of unfunded vested benefits, with an overall premium cap of \$72 per participant (table 2). Furthermore, there are IRS regulations governing plan contributions to which sponsors must adhere. These specify the minimum deductible contributions that employers must make and maximum deductible contributions that employers may make to their plans and set a time frame within which underfunding must be amortized, i.e., liquidated by installment payments. An amortization period may be extended by the Secretary of Labor for up to 10 years if the employer shows the extension would provide adequate protection for participants and their beneficiaries. Such potential extensions are advantageous for cases in which a substantial risk exists that without them a pension plan would be terminated or greatly reduced employee benefit levels or reduced employee compensation would result.

The Treasury Department can also allow some flexibility for employers in meeting the minimum funding

standards of the Internal Revenue Code (IRC). In circumstances in which an employer is experiencing temporary substantial business hardship and strict enforcement of the minimum funding standards would adversely affect plan participants, the Secretary of the Treasury may waive payment of all or part of a plan's required contributions for a particular year. The law provides that no more than three waivers may be granted a plan within a consecutive 15-year period; and the amount waived, plus interest, must be amortized within five years. Before granting such a waiver, the Secretary must notify PBGC and consider its view regarding the waiver. PBGC is allowed 30 days to comment. The Secretary must consider PBGC's view and the written view of any employee organization representing plan participants. Such employee organizations must be notified by the employer when a waiver is requested. In cases in which more than \$1 million is involved, the waiver can be conditioned on the tendering of security for the amount of the waiver.

◆ Status of the Defined Benefit System

How Well Funded Are Defined Benefit Pension Plans?

PBGC's ability to meet its future obligations is dependent on the health of the private defined benefit system as a whole. PBGC reports that, in the aggregate, single-employer defined benefit plans have \$1.3 trillion in assets to back \$900 billion in benefit liabilities. Available evidence suggests that approximately 85 percent of pension plans (including both single-employer and multiemployer plans) are currently fully funded on a termination basis (The Wyatt Company, 1991).¹² A pension plan's funding status can

¹²Throughout this discussion, termination basis refers to basing funding ratios on benefits and assets accrued at the end of the plan year—the assumptions plans would use to calculate liabilities for standard terminations. Termination basis funding does not refer to PBGC's calculation of liabilities for underfunded terminations, using termination mortality and retirement age assumptions.

Table 3
Funding Ratios of Single-Employer Defined Benefit Plans, 1977–1987

Year	Funding Ratio
1977	85.0%
1978	84.2
1979	91.0
1980	107.0
1981	106.9
1982	115.4
1983	124.7
1984	128.8
1985	136.3
1986	132.4
1987	128.6

Source: John A. Turner and Daniel J. Beller, eds., *Trends in Pensions* (Washington, DC: U.S. Department of Labor, 1989).

be measured by accrued benefit security ratios that are disclosed in plans' Form 5500 Schedule B, which are filed with the Department of Labor (DOL) and the IRS. The accrued benefit security ratio is the ratio of the market value of plan assets to the current liability for accrued benefits, assuming all plan participants are vested. Plans that are fully funded, as measured by an accrued benefit security ratio of 1 or greater, are likely to be eligible for a standard termination. Plans that are underfunded could represent possible future liabilities for PBGC should they terminate under distress circumstances.

Accrued benefit security ratios calculated by plans are not perfectly comparable to funding ratios calculated by PBGC, and as such do not reflect the total liability PBGC is likely to face in the event that an underfunded plan terminates. PBGC typically uses lower interest rate assumptions, called interest factors, that are based on current market prices for group annuities at representative ages and PBGC's mortality rates. PBGC uses lower retirement age assumptions than pension plans because participants of plans that experience underfunded terminations are likely to retire earlier and collect pensions over longer time periods if they are near retirement age. Accrued benefit security ratios assume that both the plan and the sponsor are

on-going entities. Therefore, PBGC calculates higher liabilities and lower funding ratios than pension plans report in their annual reports. Furthermore, PBGC has found that the funding ratios of plans sponsored by financially distressed companies deteriorate rapidly prior to plan termination. Companies experiencing financial difficulties often attempt to reduce their pension plan costs by discontinuing contributions or selecting interest rate, retirement age, and mortality assumptions that, while falling within legal guidelines, result in lower minimum contributions. Plan sponsors also may reduce their operating costs by encouraging early retirement or closing plants, which often increases pension obligations through higher early retirement benefits or shutdown benefits. Such benefits are rarely funded in advance, and employees typically elect to receive early retirement benefits as soon as they are eligible if the benefits are available for a window of time.

From 1977 to 1987, the funding status of single-employer defined benefit plans based on form 5500 tabulations significantly improved, rising from an average of 85 percent funded to 129 percent funded on a termination basis (table 3) (Turner and Beller, 1989). Since 1980, defined benefit plans on average have been overfunded. The increase in funding ratios

Table 4
Surveyed Firms' Funded Ratios, by Percentage of All Surveyed Pension Plans

Ratio of Accrued Benefits over Assets	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
0.00–0.49	17%	8%	6%	4%	3%	2%	3%	2%	3%	2%	1%
0.50–0.74	17	13	13	8	6	5	3	4	4	2	4
0.75–0.99	21	24	17	15	13	14	10	11	11	11	10
1.00–1.24	23	26	25	20	21	17	16	16	18	20	25
1.25–1.49	11	12	18	21	19	21	20	20	19	20	22
1.50 or more	11	17	21	32	38	41	48	47	45	45	38
Number of Plans	575	813	700	919	846	799	720	786	787	781	801

Source: The Wyatt Company, *Survey of Actuarial Assumptions and Funding: Detailed Survey Results Pension Plans with 1,000 or More Active Participants*, 1989, 1990 and 1991 (Washington, DC: The Wyatt Company, 1989, 1990, and 1991).

Note: Data are based on a survey of pension plans covering 1,000 or more active employees. The 1990 survey contained single-employer plans (90 percent) and multiemployer plans (10 percent).

most likely reflects a combination of factors, including higher contribution rates needed to meet minimum funding standards, favorable investment returns on equity, and the use of higher interest rate assumptions to discount future benefits.

Funding ratios calculated directly from 5500 forms are not available beyond 1987. However, national surveys examining accrued benefit security ratios of pension plans with 1,000 or more active participants indicated that 85 percent of plans had assets equal to or exceeding 100 percent of liabilities in 1991, up from 45 percent in 1981, and 38 percent had assets in excess of 150 percent of liability for accrued benefits in 1991, up from 11 percent in 1981 (table 4) (The Wyatt Company, 1989, 1990, and 1991). The percentage of plans that were fully funded on a termination basis increased every year between 1981 and 1987 and leveled off between 1987 and 1991. Survey findings also show that the percentage of plans funded at less than one-half of the level required for termination-basis sufficiency declined from 17 percent in 1981 to 1 percent in 1991.

The survey compares funding ratios of defined benefit plans using three formulas to determine benefit levels: final average pay, career average pay, and flat benefit pay.¹³ Final average pay formula based benefits are a percentage of the participant's final average earnings multiplied by the number of years of service. Career average pay formula based benefits are a percentage of the participant's average pay over the entire period of plan participation multiplied by the number of years of service. Flat benefit pay formula based benefits are the participant's years of service to the firm multiplied by a fixed dollar amount. In 1991 plans with benefits determined by final average pay were adequately funded to meet liabilities on a termination basis more often than other plan types. Ninety-one percent of these plans have accrued benefit security ratios greater than 1, compared with 86 percent of career average pay plans

¹³The benefit formulas of the plans surveyed were final average pay plans (61 percent), career average pay plans (15 percent), and flat dollar pay plans (24 percent).

and 66 percent of flat benefit plans. Furthermore, 13 percent of flat benefit plans were less than 75 percent funded, compared with only 3 percent of final average pay plans and 4 percent of career average pay plans. **Flat benefit plans are typically negotiated plans in which the benefit levels are adjusted for inflation periodically through negotiation with unions as part of a new contract. These plans are underfunded more often than career average or final pay plans because the plans are not allowed to project increases in the fixed dollar amount when calculating their deductible contributions.** The increases in the fixed dollar amount may be funded only after the benefit improvements have been negotiated. Plans with benefits determined by career average and final average formulas must account for projected salary increases.



PBGC estimates that companies experiencing financial troubles accounted for \$13 billion of pension plan underfunding in 1991.



Despite the sound aggregate funding status of the defined benefit system, the net deficit of the single-employer insurance system can be significantly increased by single occurrences of distress terminations of large pension plans. PBGC publishes an annual list of the top 50 underfunded pension plans. Underfunding by plans on this list increased from \$14.2 billion in 1989 to \$21.5 billion in 1990.¹⁴ Three firms, General Motors, Chrysler, and LTV, were

¹⁴PBGC derived its top 50 list using a computerized data base created by Standard & Poor's Compustat Service Inc., which contains corporate annual reports for fiscal years ending in 1990. PBGC supplemented the data base with data from corporate annual reports for fiscal years ending in 1989 and earlier fiscal years and 1987 and 1988 5500 forms where available. PBGC also sent letters to plan sponsors containing their plans' funding information for comment prior to publication.

responsible for 64 percent of the top 50 companies' unfunded guaranteed liabilities in 1990. Funding ratios of plan sponsors listed ranged from 6 percent for LTV to 94 percent for National Steel, with an aggregate overall funding ratio of 75.5 percent. The underfunding of plans on the top 50 list is defined as unfunded guaranteed benefit liabilities (liabilities for nonguaranteed benefits are not included). Being on the top 50 list does not mean the plan is in danger of a distress termination. PBGC estimates that companies experiencing financial troubles accounted for \$13 billion of pension plan underfunding in 1991, increasing from \$8 billion in 1990.

Seventy-five percent of the listed plans' underfunding is attributable to plan sponsors in the airline, steel, auto, and tire industries, most of which sponsor flat benefit plans. Pension plan underfunding for an individual plan sponsor on the top 50 list ranged from \$47 million to \$7.1 billion. Some plan sponsors listed have pension plans that are overfunded, but because PBGC does not have legal recourse to the excess assets of overfunded plans, these assets are not included on the list.

The reliability and accuracy of these underfunding estimates must be considered when evaluating the potential exposure companies on the top 50 list represent to PBGC. PBGC currently does not have sufficient detailed information about plans' participants and benefit provisions to enable it to use more refined valuation methods.¹⁵ Moreover, the information is acquired on an annual basis, and funding may deteriorate or improve before the next reporting period. In August 1991, after obtaining additional information and performing refined valuations, PBGC found that TWA's pension plans were underfunded for PBGC-insured benefits by \$440 million rather than the \$190 million in underfunding published on the top 50 list. PBGC's latest estimate of TWA's pension plan underfunding for benefit liabilities is \$1.1 billion. The list also does not necessarily reflect all the pension plan

underfunding that appears when a plan terminates. A study of 44 plans that terminated between 1986 and 1988 with unfunded liabilities of at least \$1 million found that 42 of these plans had a hidden liability that accounted for 37 percent of the total claims (U.S. General Accounting Office, 1991). Hidden liabilities may result from unforeseen increases in liabilities and decreases in assets. Unforeseen liabilities may be caused by PBGC's use of actuarial assumptions that differ from those used by the plan or a higher than anticipated incidence of subsidized early retirement benefits. Plans' assets may be lower than expected on plan termination because plan sponsors in Chapter 7 or Chapter 11 bankruptcy may pay nonguaranteed benefits to retirees without making contributions to the plan, or the return on plan assets may be negative.

Underfunded plans sponsored by companies that are having financial difficulties represent the greatest risk to PBGC. The stock market's assessment of plan sponsors' financial health can be measured by examining the sponsors' equity rates of return. An analysis of rates of return on common stock of New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) firms with underfunded plans reveals that companies having the largest underfunding relative to the market value of their common stock also experienced the lowest rates of return on equity (VanDerhei, 1992). Equity rates of return are shown over three holding periods for common stocks purchased in the beginning of 1986, 1981, and 1976 and held through the end of 1990. Plan sponsors were ranked into quintiles by their standardized underfunding on a termination basis. The common stock of the quintile of plans with the smallest underfunding ratio experienced a rate of return of 16.2 percent over a holding period from 1976 to 1990, while the return on equity of the most underfunded plans was 0.6 percent. The value weighted index for stocks traded on the NYSE and AMEX was 14.3 percent over the same period (table 5).

The market's relative perception of the financial health of firms traded on AMEX and NYSE that had

¹⁵See footnote 24 on page 16.

Table 5
Rates of Return on Common Stock for New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) Firms Sponsoring Underfunded Plans in 1990

	Holding Period		
	1986–1990	1981–1990	1976–1990
Standardized Underfunding Quintile Ranking ^a			
Least Underfunded	8.55%	12.29%	16.16%
2	8.83	13.41	14.57
3	7.06	10.81	14.98
4	-0.91	4.34	10.63
Most Underfunded	-13.85	-4.24	0.59
Value Weighted Index for NYSE, AMEX	11.75%	13.01%	14.25%
	Excess Rate of Return Relative to NYSE, AMEX Index		
Least Underfunded	-3.20%	-0.72%	1.91%
2	-2.92	0.40	0.32
3	-4.69	-2.20	0.73
4	-12.66	-8.67	-3.62
Most Underfunded	-25.60	-17.25	-13.66

Source: VanDerhei, Jack L., "Estimating the Magnitude of PBGC's Exposure for Single-Employer Pension Plans," Working Paper (Philadelphia, PA: Temple University, 1992).

^aUnderfunding measured by FASB '87 disclosures for underfunded plans in 1990. Standardized underfunding is equal to the accumulated benefit obligation minus the market value of assets divided by the market value of the sponsor's common stock in 1990.

underfunded plans in 1990 is declining over time.¹⁶ The common stock of each quintile of underfunded plans experienced a lower rate of return net of the value weighted index for NYSE and AMEX if the stock was purchased later. The common stock of the three quintiles of plans with the smallest underfunding ratios experienced positive net rates of return for the holding period from 1976 to 1990. However, the net rate of return on equity experienced by these three quintiles of plan sponsors decreased to negative values for the holding period from 1986 to 1990. The net rate of return on equity for the two quintiles of plans with the largest underfunding ratios was negative in each

holding period. The net rate of return on common stock of plan sponsors in the fourth quintile reached a low of -12.7 percent, and the rate of return on equity of plan sponsors in the fifth quintile reached a low of -25.6 percent for the holding period from 1986 to 1990.

The Nature of Defined Benefit Plans

Defined benefit plans, by their very nature, have unfunded liabilities at plan establishment and additional unfunded liabilities with subsequent benefit increases. A newly established defined benefit plan allows benefits to be paid immediately to older workers who retire based on past service credits to be funded over time by future contributions. Furthermore, improvement in plan provisions that improve participants' retirement security also increase plan liabilities, thereby reducing a plan's funding status.

¹⁶The net rate of return experienced by the common stock of the quintile of firms with the second smallest underfunding ratios was higher for stocks purchased in 1981 than in 1976, but was lowest for stocks purchased in 1986.

COLAs, for example, increase the benefit liabilities of pension plans. During periods of inflation, retired persons living on fixed pensions have been affected by the dollar's declining value. Employers are able to offer ad-hoc cost-of-living adjustments under their plans or provide periodic benefit increases. Similarly, each time the benefits of Social Security beneficiaries, military retirees, or other government retirees are adjusted with inflation increases, the programs' unfunded liabilities increase significantly.

Prior to ERISA, private pension plans were permitted to operate on a pay-as-you-go basis. Public pension plans can still operate in this manner under federal law. Under such an arrangement, retirement benefits are paid directly from current operating revenues, as are wages and salaries. As companies offering pension plans matured, and the number of retirees increased relative to the number of active employees, retirement payments represented an increasingly large share of companies' total operating costs, making it more difficult for these companies to maintain their pension promises. When ERISA was drafted, the creators were concerned that pay-as-you-go pension plans jeopardized participants' retirement income security and required that defined benefit pension plans operate on a funded basis. Plans are therefore required to set aside funds for the purpose of paying benefits as they become due. However, in recognition of the nature of defined benefit plans, the legislators of ERISA did not require that plans be fully funded on an ongoing basis, only that minimum funding standards be met.

ERISA's minimum funding standards divide pension costs into two parts: normal costs and supplemental costs. Normal costs are contributions equal to the benefit liability accrued during the plan year arising from normal plan operation, calculated using that year's actuarial assumptions and administrative expenses charged to the plan for the year. Supplemental costs are costs associated with supplemental liabilities, which include liabilities associated with changes in actuarial assumptions, experience varying from actuarial expectations, retroactive benefit increases, and granting of

service credit prior to plan establishment (if such credit is given). ERISA originally allowed plan sponsors to amortize some supplemental costs over long time periods, regardless of their funding status.¹⁷ OBRA '87 required plans that are underfunded on a termination basis to make an additional annual contribution for liabilities incurred after 1988, based on the plan's underfunding. For those liabilities already incurred at the beginning of the 1988 plan year, the amortization period was decreased from 30 years to 18 years. The additional contribution and decreased amortization period was expected to lead to the improved funding status of plans relative to ERISA requirements.

Public plans are not subject to ERISA's minimum funding standards, and consequently have a significantly lower funding status than private pension plans. However, the Federal Employees Retirement System (FERS) and the Military Retirement System (MRS) are required to contribute (through employee and/or employer contributions) an amount equal to the actuarially determined cost of retirement annuities. MRS has an unfunded accrued liability of \$533 billion, and FERS has an unfunded accrued liability of \$6 billion. The unfunded accrued liability is defined as the actuarial present value of future benefits and administrative expenses less the assets currently in the fund and the present value of future normal cost contributions.¹⁸ Therefore, the unfunded accrued liability is a net, not gross, liability because it is net of future normal cost contributions. The Civil Service Retirement System (CSRS) has an unfunded accrued liability of \$660 billion. CSRS has looser funding standards than FERS and MRS. Employer and employee contributions to CSRS fund cover only about 50 percent of the pension plan's accruing costs. The Treasury pays approximately \$19 billion annually to the Civil Service Retirement and Disability Trust Fund in an effort to limit the growth of CSRS' unfunded

¹⁷See page 29 for details on the amortization periods required under ERISA.

¹⁸In the case of the CSRS and FERS, future military service deposits are also deducted.

liability. Smaller federal retirement programs that operate on a pay-as-you-go basis include the Coast Guard, the National Oceanic and Atmospheric Administration, and the Public Health Service Commissioned Officers. These programs have a combined unfunded accrued liability of \$21 billion (Executive Office of the President, 1992).



Both private and public defined benefit pension plans play a significant role in providing retirement security to U.S. workers. While there is underfunding within both systems, the federal pension system has a significantly larger unfunded liability.



The major federal government pension plans have a total unfunded accrued liability, net of future net contributions, of \$1.22 trillion. Private defined benefit plans, according to PBGC, are overfunded in the aggregate by as much as \$400 billion. This overfunding does not account for future contributions individual plans will contribute in the future. However, PBGC still acts as a “transfer” agency as the funding of private plans varies by industry, with single-employer pension plans of steel, automobile, tire, and airline industries having an aggregate underfunding of about \$31 billion, and plans sponsored by financially troubled companies having \$13 billion in underfunding.

Both private and public defined benefit pension plans play a significant role in providing retirement security to U.S. workers. While there is underfunding within both systems, the federal pension system has a significantly larger unfunded liability. As noted above, the unfunded liability of federal government pension programs is growing nearly as much each year as the total aggregate underfunding of PBGC guaranteed plans. When considering the possibility of a general

taxpayer bailout of these federal pension systems, it must be realized that they are sponsored by the U.S. government. The primary means the government has to reduce public plan underfunding is through the use of tax revenue. In contrast, PBGC must utilize the assets in the private defined benefit system by charging plan sponsors premiums. PBGC has authority to borrow up to \$100 million from the Treasury,¹⁹ but ERISA explicitly does not provide for the full faith and credit of the government to stand behind PBGC: “The United States is not liable for any obligation or liability incurred by the corporation.”²⁰

◆ Status of PBGC

Distress Terminations

Two of the largest underfunded plan terminations in PBGC’s history occurred in fiscal year 1991, heightening concern over PBGC’s financial solvency. In October 1990, seven Eastern Air Lines’ pension plans, which were underfunded by \$700 million, were terminated. PBGC terminated three of Pan American World Airways’ plans with about \$900 million underfunding in July and December of 1991 to prevent further losses to PBGC.

PBGC negotiated with Eastern Air Lines’ parent company, Continental Air Holdings Inc., to provide full funding to its subsidiary’s seven terminated pension plans. After this settlement was agreed upon, Continental filed for bankruptcy in December 1990, nullifying the agreement. PBGC still expects to recover a portion of Eastern’s pension liability. It has filed \$752 million in claims against Continental for liability connected with Eastern’s plans and \$183 million for Continental’s own underfunded plans. PBGC filed claims totaling \$1.3 billion for all three plans’ underfunding and missed contributions but expects recoveries will account for a very small portion of the underfunding.

¹⁹ERISA Sec. 4005(c).

²⁰ERISA Sec. 4002(g)(2).

Table 6
Loss Experience from Single-Employer Plans

Year of Termination	Number of Plans	Benefit Liabilities (\$ millions)	Trust Plan Assets (\$ millions)	Recoveries from Employers (\$ millions)	Net Losses (\$ millions)
1975–1980	686	\$ 570	\$ 227	\$ 65	\$ 277
1981–1985	606	1,358	479	161	719
1986–1991	352	4,839	2,033	361	2,445
Total	1,644	6,768	2,739	587	3,442
Probable	15	1,552	595	181	776

Source: Pension Benefit Guaranty Corporation, *Pension Benefit Guaranty Corporation Annual Report 1991: Strengthening the Pension Safety Net* (Washington, DC: Pension Benefit Guaranty Corporation, 1992).

PBGC's loss from completed terminations totaled \$1.4 billion in 1991. PBGC reported an additional probable loss of \$776 million. The Blaw Knox pension plan, which was underfunded by \$81.6 million, terminated on February 29, 1992. On March 19, 1992, PBGC terminated CF&I's pension plans with \$270 million in unfunded liabilities. An additional \$1.8 billion of underfunded pensions are sponsored by companies in Chapter 11, including Trans World Airlines, Continental Airlines, Jesup Group, and Western Union/New Valley Corporation, which are currently in negotiation with PBGC.

PBGC reached a tentative agreement with LTV Steel for LTV to contribute an initial payment of approximately \$1.5 billion to its three plans that are underfunded by an estimated \$3 billion and to fund the remaining liabilities over the next 30 years. LTV Corporation filed for Chapter 11 protection in 1986 and stopped payments to three of its plans. PBGC assumed responsibility for these plans plus an additional LTV plan that is still terminated. While in bankruptcy, LTV negotiated with its employees to provide follow-on plans offering potentially the same level of benefits offered under the old plans.²¹ In September 1987, PBGC returned the responsibility of funding the plans to LTV on the grounds that LTV's establishment of follow-on plans was an abuse of the pension guaranty system. LTV opposed the restoration of the pension

plans and won the case in lower level courts. In June 1990, PBGC won the case in the Supreme Court, requiring LTV to fund its plans.

While the frequency of underfunded single-employer plan terminations has declined in recent years, PBGC's net losses resulting from these plans have increased. **From 1986 to 1991, 352 plans terminated with insufficient assets to cover their liabilities, compared with 606 plans terminating between 1981 and 1985 (table 6). Net losses incurred by PBGC increased by a factor of three and one-half over the same period, with net losses of \$2.4 billion from 1986 to 1991, increasing from \$719 million during the prior four-year period.** As of year end 1991, PBGC had trusteeed 1,644 single-employer funds with total net losses of \$3.4 billion. Benefit liabilities for these plans were close to \$7 billion, with nearly one-half of these liabilities, or

Table 7
Trends in Losses from Single-Employer Plans

Year of Termination	Percentage of Funding Level	Recoveries as a Percentage of Net Underfunding	Average Loss per Terminated Plan (\$ millions)
1975–1980	40%	19%	\$0.4
1981–1985	35	18	1.2
1986–1991	42	13	6.9

Source: Pension Benefit Guaranty Corporation, *Pension Benefit Guaranty Corporation Annual Report 1991: Strengthening the Pension Safety Net* (Washington, DC: Pension Benefit Guaranty Corporation, 1992).

²¹The plans were replaced with defined contribution plans.

\$3.3 billion, covered by plans' assets and employers' liabilities. The remaining \$3.4 billion represents claims paid by or pending against PBGC. Twenty-eight plans terminated in 1991, accounting for 25 percent of losses incurred to date, yet representing only 2 percent of plan terminations.

While the funding status of plans has increased in recent years, PBGC's recoveries as a percentage of net underfunding has declined, resulting in higher net losses. Between 1986 and 1991, the average funding level of terminated plans was 42 percent, increasing from an average funding level of 35 percent between 1981 and 1985 (table 7). PBGC's recoveries as a percentage of net underfunding declined from 18 percent between 1981 and 1985 to 13 percent between 1986 and 1991. The average net losses per terminated plan subsequently increased from \$1.2 million between 1981 and 1985 to \$6.9 million between 1986 and 1991. The trends in underfunded plan terminations have resulted in PBGC's increasing net deficit over time. The deficit stood at \$2.5 billion by the end of fiscal year-end 1991 (table 8).²²

What is PBGC's Current Financial Status?

Some concern has been voiced regarding PBGC's financial viability. Such concern arises from PBGC's net worth deficit of \$2.5 billion in the single-employer fund and the estimated \$31 billion in underfunding within individual pension plans, \$13 billion of which is considered by PBGC to pose a serious risk because of sponsors' financial trouble. This section examines what these figures imply for PBGC solvency.

PBGC's single-employer fund's total assets of \$5.7 billion are outweighed by \$8.2 billion in total liabilities, resulting in a net deficit.²³ The present value

of future benefits owed,²⁴ at \$7.8 billion, accounts for more than 95 percent of total liabilities. The remainder is the present value of nonrecoverable future financial assistance, unearned premiums, and accounts payable. Future benefits are made up of trustee plans and plans pending trusteeship (\$7.1 billion) plus net claims for probable terminations (\$0.8 billion).²⁵

The \$2.5 billion deficit does not imply that PBGC has inadequate assets to cover payment obligations due in the immediate future. When a plan terminates,

been able to complete an audit of PBGC's financial statements mainly because of difficulty in estimating PBGC's liabilities for future benefits. PBGC plans on having this difficulty resolved so that financial statements will be auditable by the end of fiscal year 1992.

²⁴To estimate future liabilities, PBGC uses one of three different techniques, depending on the stage of the termination process in which a plan is located. For terminated plans for which the PBGC has complete individual participant as well as plan data, the present value of future benefit liabilities is calculated for each participant using special software, the Individual Participant Valuation (IPV) system. Two alternative techniques are used when the detailed data required by IPV are not yet automated (a process that can take from three to five years); these techniques are considered less precise because liabilities are estimated at the plan level rather than at the individual participant level. The second technique takes a plan-level liability as of the actual termination date and brings it forward to the date of the financial statement (this method is used when the IPV data are accumulated but not yet entered in the data base.) The third, and least precise technique is used for terminated plans for which the detailed data are not yet accumulated and for plans that PBGC thinks will terminate underfunded in the future. This technique uses pretermination, plan-level data provided by the plan itself to estimate liability as of the (projected) termination date. For terminated plans, this liability is then brought forward to the date of the financial statements.

²⁵A probable termination is one that the PBGC considers highly likely to occur; this judgment is based on criteria given in Financial Accounting Standards Board (FASB) Statement No. 5—Accounting for Contingencies. The plans involved have not begun the termination process, but rather the sponsor is in such dire financial straits that PBGC considers the termination likely, although not necessarily imminent. PBGC books the net liability for these probable terminations on today's financial statements since these are obligations for which it is likely to be responsible in the future, and thus it wants to recognize them now. Some actually move off the probable list and others remain on it for years. The reported claims figure is net because it is the present value of future benefits for which PBGC is liable less estimated plan assets available and recoveries from employers.

²²The 1986 net deficit of \$3.8 billion represents the historic high.

This was due to the termination of LTV's pension plans.

²³PBGC's financial statements have "limited reliability" according to the U.S. General Accounting Office (GAO). GAO has not

Table 8
**Single-Employer Fund Assets, Benefit Liabilities,
 and Net Deficits**

Year	Total Assets	Present Value of Future Benefits	Accumulated Deficit
		(\$ millions)	
1991	\$ 5,664	\$ 7,845	\$ 2,510
1990	3,111	4,790	1,913
1989	3,059	3,984	1,124
1988	2,422	3,806	1,543
1987	2,163	3,629	1,549
1986	1,740	5,492	3,826
1985	1,155	2,447	1,325
1984	1,063	1,497	462
1983	1,085	1,570	523
1982	773	1,076	333

Source: Pension Benefit Guaranty Corporation, *Pension Benefit Guaranty Corporation Annual Report 1991: Strengthening the Pension Safety Net* (Washington, DC: Pension Benefit Guaranty Corporation, 1992).

PBGC inherits an obligation to make a stream of payments to plan retirees over a period of years into the future (20 years, 40 years, even more than 60 years) as opposed to one large lump-sum payment on termination. The present value of these future payments, currently \$7.8 billion, is booked today as a liability. However, it is not necessary for PBGC to have assets adequate to cover these liabilities now because payments are not currently due. A deficit does not necessarily indicate danger of imminent insolvency, but it does indicate that assets must eventually be increased to meet future obligations that are known today.

In addition, PBGC is likely to incur liabilities not shown on current financial statements resulting from future distress terminations. PBGC keeps track of underfunded plans where it considers distress terminations to be a reasonable possibility, but it does not include the net underfunding in these plans on current financial statements as it does with probable terminations. In such plans, a distress termination is not as likely as with probable terminations, but PBGC considers such an occurrence a reasonable possibility in the

future due to the sponsor's financial problems.²⁶ PBGC currently estimates that there exists \$13 billion of underfunding in the single-employer defined benefit system that poses a reasonably possible risk to the corporation. This is not a liability from past terminations or probable terminations but rather a potential liability for terminations PBGC believes may happen in the future.

On the other side of the ledger, PBGC will be receiving revenue in future periods from premiums and investment earnings. While such receipts may not result in adequate assets to cover all PBGC liabilities for unfunded pension benefits, they are nonetheless likely to be significant and should be included in any discussion of PBGC solvency. According to PBGC, current premium receipts²⁷ total \$790 million per year, while interest and dividend receipts currently approximate \$305 million per year. Future income is difficult to predict; premium income depends on the size of the defined benefit system as well as the regulations governing premium rates, while investment earnings depend on the net flow of assets each period as well as the rate of return earned. To get some idea of the funds involved, however, consider that the present value of receiving \$790 million each year for the next 20 years (valued with a discount rate of 6.25 percent²⁸) is \$8.9 billion. Such receipts are likely to be available to help cover future pension liability payments from today's terminated plans and also to cover payments for obligations that may arise in the future (the potential \$13 billion in unfunded benefits discussed above and/or other future liabilities that may arise). Consideration of

²⁶Criteria are set by FASB 5.

²⁷PBGC's premiums were raised most recently in 1991. (The flat rate was increased from \$16 to \$19 per plan participant, and the overall cap on premiums for underfunded plans was increased to \$72 from \$50). It can be argued that this latest increase has not been in effect long enough to have had a noticeable effect on the deficit.

²⁸In the 1991 PBGC annual report, the present value of future benefits is valued at 6.75 percent for immediate annuities, and with lower rates for deferred annuities, giving a composite rate of 6.25 percent that was also used for projected investment results.

future income receipts in addition to future liabilities provides additional insight into PBGC's solvency.

On a pure cash flow basis, PBGC actually ran a surplus in 1991, as receipts from operating activities exceeded disbursements from operating activities. Premium receipts of \$786 million in addition to interest and dividends of \$305 million resulted in \$1.1 billion in total receipts. Operating activity disbursements totaled \$660 million and were composed primarily of benefit payments at \$514 million, administrative expenses at \$63 million, and interest purchased at \$81 million. This resulted in a net cash flow surplus from operating activities of \$431 million in 1991. PBGC anticipates positive cash flows again in 1992 and does not foresee any near term problems in meeting its obligations. According to PBGC, "Although cash-flow could turn negative as early as three years in the pessimistic forecast,²⁹ the fund has ample assets to pay its liabilities (benefit payments) for a considerable period of time" (Pension Benefit Guaranty Corporation, 1991).

◆ Is It Valid to Compare PBGC and Savings and Loan Problems?

Given the manner in which the federal government's guarantees to pension participants have been implemented, it is not surprising that PBGC is inevitably compared with other incentive-incompatible guarantee funds, including the now defunct Federal Savings and Loan Insurance Corporation (FSLIC). The latter agency had insured deposits in savings and loans' (S&L) accounts up to a limit of \$100,000. In September 1990, the final cost of the S&L bailout was estimated at \$600 billion.

²⁹PBGC developed three 10-year forecasts of its expected status under different loss scenarios. The pessimistic scenario assumes that termination of the plans with the \$13 billion of underfunding that pose a reasonably possible risk occurs over the next 10 years in addition to a modest number of lesser terminations each year.

The academic literature (for example, Kane, 1989) is replete with examples of how defective systems encourage voluntary risk taking by clients and by managers and politicians responsible for administering their funds. Recently, similar allegations have been directed toward PBGC (Bodie, 1992).

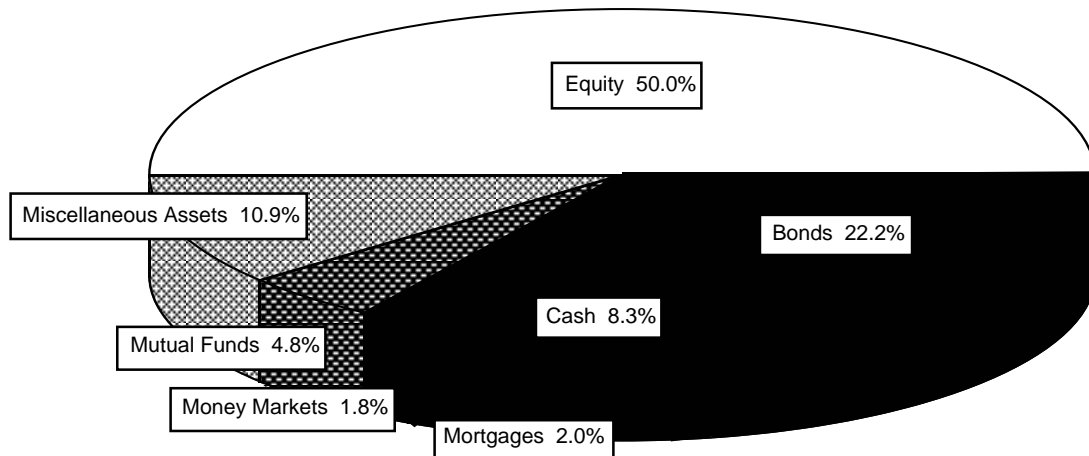
Before analyzing the propriety of these comparisons, it is useful to briefly review the history of the S&L insurance scheme to see whether the problems of an industry-specific guarantee scheme are likely to be applicable to PBGC.

History

According to M. Danny Wall, former chairman of the Federal Home Loan Bank Board (the predecessor to the Resolution Trust Company), the major problems with the S&L guarantees started in 1980, when the interest rate legislation was passed deregulating the liabilities (i.e., deposits) but not the assets (Wall, 1991). This was soon followed by federal tax incentives that were put into place in 1981 and 1982 that allegedly caused real estate projects to be undertaken that were not economically viable. During this time, the federal government had tightened the money supply, causing government bond interest rates to rise, which forced S&Ls to find higher short term rates through junk bonds. In 1986, oil plunged to \$10 a barrel, and the income tax incentives were taken away with no grandfather provisions. A year later the stock market plummeted, and then in 1989 the Financial Institution's Reform Recovery and Enforcement Act (FIRREA) imposed higher capital standards on the thrift industry, thereby automatically causing a situation in which more institutions had to be seized by the government than could have been projected.

A detailed analysis of the impact of each of these events on the guarantee scheme is beyond the scope of this discussion. However, with the exception of the 1987 stock market decline, these events would not have a major impact on an insurer with exposures diversified across all industries.

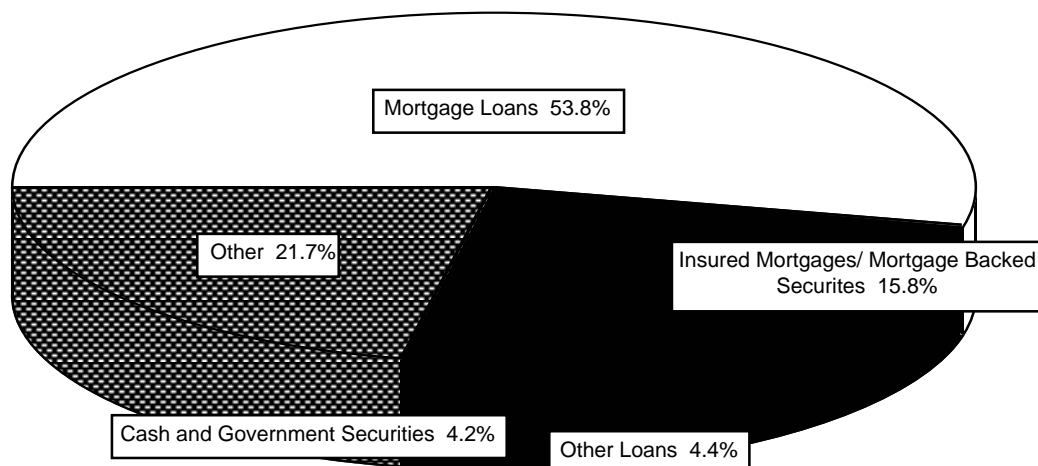
Chart 1
Asset Distribution in Private Trusteed Pension Plans, 1991



Source: EBRI compilation from Board of Governors of the Federal Reserve System, *Flow of Funds Accounts, Financial Assets and Liabilities, Fourth Quarter 1991* (Washington, DC: Board of Governors of the Federal Reserve System, 1992).

Note: The Department of Labor published asset allocation of single-employer defined benefit plans with 100 or more participants based on 1987 5500 forms. Asset allocation in 1987 was equity, 22.9 percent; bonds, 16.7 percent; cash, 11.3 percent, real estate, 0.8 percent; unallocated insurance contracts, 22.4 percent; pooled funds, 20.4 percent; and other, 5.5 percent (John A. Turner and Daniel J. Beller, eds., *Trends in Pensions*, Washington, DC: U.S. Department of Labor, 1992).

Chart 2
**Asset Distribution of FSLIC Insured Savings Institutions
 (as of December 31, 1988)**



Source: EBRI compilation from United States League of Savings Institutions, *Savings Institutions Sourcebook* (Washington, DC: United States League of Savings Institutions, 1989).

Are Comparisons Valid?

In addition to the marked differences in the historical evolution between the problems of the S&L guarantees described above and those of PBGC described earlier, there are several additional important distinctions that need to be drawn.

Investments—Whereas the people involved with the S&L crisis are alleged to have taken excessive investment risks (Lockhart, 1990), that has not happened with pension plans. Whether the risks were indeed excessive, it is true that as of the end of 1988, FSLIC-insured savings institutions were much more concentrated in securities sensitive to downturns in the real estate market than defined benefit pension plans are today (charts 1 and 2). In fact, defined benefit pension plan assets are invested in a variety of investments, which means that even if PBGC cash flow problems deteriorated to the point where there was a need to sell off a large percentage of the trustee assets, there would be less need for realizing depressed asset values through liquidation than in the case of S&L insurance.

Growth of Benefit Guarantees—As indicated earlier, S&Ls were given new investment powers in 1980, and many marginally capitalized institutions believed they could grow their way out of their problems. The rapid growth of agency-guaranteed liabilities does not appear to be the case with PBGC. In fact, OBRA '87 introduced a potentially chilling effect on the future growth of uninsured benefits by requiring that if a plan adopts an amendment that increases current liability and the funded current liability percentage of the plan is less than 60 percent in the year in which the amendment takes effect, the contributing sponsor and members of the controlled group must provide security (e.g., a bond) to the plan. The amount of the security required is the excess over \$10 million of the lesser of:

- the amount of additional plan assets that would be necessary to increase the funded current liability percentage under the plan to 60 percent, including the amount of the unfunded current liability under the plan attributable to the plan amendment, or

- the amount of the increase in current liability under the plan attributable to the plan amendment.

It is important to note that the grandfathering of the unamortized portion of the pre-1987 plan liability substantially decreased the short-run impact of this provision.

Alleged Fraud—According to Wall, the best judgments are that fraud and mismanagement existed in about 60 percent of the S&L failures and that they contributed to the failure or the insolvency of the S&L in perhaps about 25 percent of the cases. Evidence of such activity among single-employer pension plans is almost nonexistent.

Loan Participation—Another problem that arose in the S&L sector that has no equivalent situation in the PBGC exposure base is that of loan participation. As S&Ls found themselves constrained by limits on the amount they could lend to a single borrower, they began to sell off pieces of the loan to other institutions. Unfortunately, many of these secondary lenders relied on the underwriting capacities of the originating S&L. Although a large proportion of defined benefit plan assets are placed in bank pooled funds and similar investments where investment results are shared, this strategy is fundamentally different from loan participations that have been characterized as “a transfer of risk from a party who lacks courage to one who lacks knowledge” (Koeppel, 1991).

Accounting Issues—From 1981 to 1987 S&Ls insured by FSLIC were permitted to use accounting options that were not in agreement with generally accepted accounting principles (GAAP) and have been described as “self-deceptive accounting procedures” by the executive director of PBGC (Lockhart, 1990). In contrast, **pension plans must adhere to very conservative accounting measures under FAS 35 (Allen et al., 1988) while the vast majority of the large plan sponsors follow GAAP procedures, at least for those events defining their solvency and net worth determinations.**

Regulation—As mentioned earlier, after deregulation S&Ls turned to areas in which they had little expertise (commercial real estate). It has been alleged that auditors did not properly supervise the industry. Although similar types of allegations have surfaced regarding pension plans, it is important to note that this only concerns the exposure of a potential claim and does not deal with the more important issue of whether a claim will arise in the first place (i.e., will the plan sponsor enter into bankruptcy).

Even if attention is focused on the exposure issue, there are two significant differences. First, the thrift industry regulation was decentralized; pensions are not. Second, the matter of regulatory forbearance has often been cited as adding to the eventual cost of the S&L bailout. In comparison, the recent action of shutting down the pension plan for Pan Am reveals no such hesitation on the part of the current PBGC decision makers.

Cash Flow—Perhaps the most important distinction between the two programs is that funds are not generally available to the customer on demand in a defined benefit pension plan prior to a termination. Although there is some potential for lump-sum distributions to negatively impact a pension's cash flow, this could be controlled at least theoretically by ERISA section 4045, which allows PBGC to recapture part of any distributions that start within the three-year period immediately preceding the plan's failure. Certainly, there is only limited evidence of catastrophic "runs on the bank" from the standpoint of defined benefit plan sponsors or PBGC.

Moreover, after a termination, the cash flow position of S&Ls is also markedly different. Depositors in S&Ls were typically paid immediately, while PBGC spreads out payments over a long period of time.

Propriety of the FSLIC Analogy for PBGC

Although most of the discussion above dealt with the similarities (or lack thereof) between the *exposures* of

FSLIC and PBGC, the most important difference between the two guarantee funds is that the *likelihood that a plan insured by PBGC will fail is diversified across several key industries*, whereas S&L guarantee funds were exposed exclusively to the risks of a single industry that was extremely vulnerable to fraud and events beyond its control.

◆ Social Insurance Perspective versus Casualty Insurance Perspective

The urgency surrounding PBGC's current financial condition and what, if any, changes are necessary depends on whether the corporation is viewed from a social insurance or a casualty insurance perspective (or from some point along the continuum between the two). Fuchs, in reference to national health insurance describes these two views as follows: "Casualty insurance, which usually refers to automobile collision, residential fire, and similar risks, is premised on the idea that premiums should (to the extent feasible) be set according to expected loss. Other things being equal, policy holders with better driving records or with smoke detectors in their homes pay lower premiums; poorer risks pay higher premiums. Social insurance, which is the basis for national health insurance, provides for extensive cross-subsidization among different risk groups; it ignores expected loss in allocating cost."

The social insurance perspective views PBGC as a transfer agency in a social insurance arrangement, while the casualty insurance perspective maintains that PBGC should function like a traditional commercial insurer (some have advocated privatization of PBGC, based on the notion that it would be better to have no defined benefit plans than have plans that could not meet commercial insurance underwriting standards.)

The social insurance perspective, not the casualty insurance perspective, is the foundation of Title IV of ERISA. This perspective relies on appeals to justice and collective responsibility. The existence of pension plans was held to serve a legitimate public interest, and

therefore this perspective argues for the insurance of all reasonable benefits that a sponsor is willing to provide for its employees and for honoring the nature of defined benefit plans, i.e., realizing that benefit increases create unfunded liabilities to be funded in the future. Social insurers maintain that the system was designed to involve cross-subsidization of plans when necessary to protect participants.

On the other hand, the casualty insurance perspective would argue that there is no overriding public interest in having defined benefit pensions. Therefore, insurance should not be provided for benefits that increase PBGC's exposure, such as benefit increases in already underfunded plans and benefits contingent on unpredictable events, such as plant shutdowns, that are typically not prefunded unless a fair premium can be charged for such coverage. Casualty insurance proponents also argue that premiums should be structured so that plans posing the greatest risk pay correspondingly higher premiums, without limit.

The Social Insurance Perspective

This view maintains that PBGC should continue to encourage the maintenance of defined benefit pension plans and to function as a transfer agency in a social insurance system containing limited casualty insurance aspects. A social insurance scheme is one in which the insured cross-subsidize one another in the event that a definable loss occurs. Pension plan sponsors were represented in the lengthy negotiations that led to the creation of PBGC's program in its social insurance form. As originally established, every pension plan contributed a premium of \$1 per participant in exchange for coverage of its pension plan benefits in the event the sponsor firm is unable to fulfill its pension obligations. PBGC's responsibility in this scheme was to administer the transfer of funds and act as trustee for those plans that fail. Under this perspective, PBGC is not a private insurance company and should not charge premiums adjusted for risk, nor should it limit its safety net to those benefits representing the least exposure to PBGC. Congress explicitly rejected

the traditional casualty insurance model when writing Title IV of ERISA.

Inherent in the social insurance scheme is the assumption that all parties behave in an appropriate manner that will benefit the defined benefit pension system. It is assumed that plan sponsors will not take advantage of the social contract by continually underfunding plans and purposefully causing underfunded plans to terminate in order to escape pension obligations at the expense of other plan sponsors. While this assumption may be reasonable in the case of a small number of participants that have a common connection, it becomes less reasonable with a large group of anonymous participants. However, the social insurance perspective also holds that some level of such abuse is preferable to a regulatory structure that leads all employers to decide they do not want to sponsor defined benefit plans. They believe that strict casualty standards would lead to this result. Some use an analogy of federal pension plans: if all public pensions had to be fully funded at all times, benefit levels would have to be significantly reduced.

Some argue that the social insurance aspects of PBGC's insurance system are responsible for its net deficit. However, PBGC's net deficit is not a measure of its performance or ability to meet obligations as a social insurance program. Rather, it is an indication of whether the premiums are sufficient or claims are unusually high. Because PBGC is a government agency, its net deficit is inconsequential to its ability to meet its obligations when due. A more relevant measure is its cash flow, which is positive. Furthermore, the creators of ERISA recognized the possibility of systematic abuse, and therefore required that pension plans meet minimum contribution requirements or minimum funding standards. However, as mentioned above, even with tightened minimum funding standards, it is still possible to minimize contributions within legal guidelines, causing further plan underfunding.

While proponents of social insurance support the existence of minimum funding standards, they believe

plans should be able, or required, to contribute more during profitable periods and less during economic downturns. Instead, the reverse occurs because of the relationship between the funding of defined benefit plans and returns on plan assets. When returns are high, plan sponsors are able to make lower contributions to cover their normal cost, and when returns are low, they must make higher contributions. Furthermore, maximum funding standards limit the amount of assets plan sponsors may contribute on a tax-deductible basis.

Another solution for improving PBGC's financial situation that follows naturally from the idea of cross-subsidization would be increasing premiums. If PBGC needs more assets to effectively cross-subsidize pension plans, one solution is for each plan to contribute more in terms of premiums. Per plan participant premiums, which started at \$1, are currently a minimum of \$19 for well-funded plans and a maximum of \$72 for underfunded plans. However, some argue that further significant increases in the minimum per participant premium that all plans must pay could lead well-funded plans to terminate their plans in exchange for a defined contribution plan or other possible employee benefits. There are no data to prove or disprove the hypothesis that the PBGC premium is close to the level at which it would cause plans to terminate. However, examining the fees pension funds pay investment managers provides a reference point for the amount pension plans are willing to pay for outside services. A recent survey shows the average annual fee paid by corporate plans to investment managers, relative to assets managed, was 44.0 basis points in 1990 (Greenwich Associates, 1991). According to Employee Benefit Research Institute calculations, pension plans paying the minimum premium to PBGC pay a premium rate in the range of 1 basis point to 9 basis points for benefits at the annual guaranty maximum of \$28,227 per participant (table 9). These calculations assume that a plan terminates in 1992, with participants retiring at age 65 over a period ranging from the year of plan termination to 40 years after termination. The basis points range from the cost of purchasing annuities for participants retiring at age 65 during the year of plan termination to the cost of

Table 9
Comparison of PBGC Premium and Investment Management Fee Basis Points

	Annual Premium Paid for PBGC Guarantee for Plans Terminating in 1992 (expressed in basis points) ^a	
	Participant retires in 1992 at age 65	Participant retires in 2032 at age 65 ^b
Maximum Premium	2.7	33.9
Minimum Premium	0.7	8.9
	Average Annual Fees Paid in 1990 to Outside Managers (expressed in basis points)	
All Corporate Funds	44.0	
Over \$1 Billion	40.7	
\$501–\$1,000 Million	40.6	
\$251–\$500 Million	52.5	
\$101–\$250 Million	43.2	
\$50–\$100 Million	44.9	
Under \$50 Million	43.7	

Source: Employee Benefit Research Institute tabulations; and Greenwich Associates, *Going Global, Good Going, Investment Management, 1991* (Greenwich, CT: Greenwich Associates, 1991).

^aBased on the annuity purchase price of \$9.36 per dollar of annual income starting at age 65 and the 1992 maximum monthly per participant benefit of \$2,352.27.

^bAnnuity prices for participants retiring at age 65 in 2032 are discounted at 6.50 percent, the immediate annuity interest rate for January 1992. Annuity price is expressed in 1992 dollars.

purchasing annuities for participants retiring 40 years after plan termination. Underfunded pension plans paying the maximum premium pay from 3 basis points to 34 basis points for the same level of guarantee. Pension plans currently pay significantly less for their benefit guarantee than they pay to outside managers for pension fund investment services (from 40 basis points to 53 basis points). Only underfunded pension plans pay premiums close to average investment management fees for participants retiring at age 65, 40 years after plan termination.

Charging each plan sponsor a one time, lump-sum per participant payment to eliminate the deficit is another option. This is similar to the system used in Germany,

where each year plan sponsors pay a current-cost premium related to the insurance system's liability. This option would eliminate any current PBGC deficit. Some might argue that charging a lump-sum payment to plan sponsors may drive well-funded pension plans to terminate, exiting the defined benefit system; however, the German insurance system has not led to an exodus of plans. PBGC insures approximately 32 million participants in 82,000 single-employer defined benefit plans. The current deficit of \$2.5 billion could be eliminated if each plan sponsor contributed a one-time lump-sum payment of \$78 per participant, compared with the current maximum annual premium of \$72. Using the same benefit assumptions as above, the \$78 lump-sum per participant charge would range from approximately 3 basis points to 37 basis points. If PBGC's estimated \$13 billion in unfunded liabilities that pose a serious risk were included, the resulting net deficit would be \$15.5 billion. The lump-sum charge would increase to \$486 per participant, or approximately 18 basis points to 229 basis points in this case. If instead sponsors were to pay a surcharge over 10 years³⁰ to cover the \$15.5 billion, the charge would be \$66 per participant,³¹ or approximately 3 basis points to 31 basis points (assuming the number of participants remains constant at 32 million) per year.

Within a social insurance framework, PBGC is financially solvent as long as there are sufficient funds to allow cross-subsidization. Although a lump-sum, per participant charge may seem prohibitive to some employers, there are more than sufficient funds in the defined benefit system to cover PBGC's current and expected liabilities. The \$400 billion aggregate overfunding in the defined benefit system is ample to cover PBGC's net worth deficit of \$2.5 billion, the

\$13 billion liability for probable distress terminations, and even the \$31 billion of estimated underfunding within the single-employer system.

The Casualty Insurance Perspective

The casualty insurance perspective argues that the PBGC insurance scheme is flawed in its design, and that these flaws are the cause of any existing deficit problems. The system is not designed on sound insurance principles although it is supposed to be an insurance system protecting participants' pension benefits. The design creates financial incentives for undesirable sponsor behavior and allows the opportunity for underfunding of defined benefit pension plans. Unless these flaws are corrected, PBGC may very well continue running deficits into the foreseeable future, while pure casualty insurance advocates believe that the program should ideally have assets at least equal to liabilities.

To illustrate the problems with the system when viewed from this perspective, we first give a brief description of the classic insurance scheme and then evaluate how well PBGC compares with a textbook insurer. First, there must be an insurable event involving a loss. The insurance then covers all or part of the loss if the insured event occurs. Insurance does not cover instances where the event is the intended direct result of the insured's actions, e.g., arson and suicide. For such coverage, the insured pays a premium that is related to risk and exposure. Risk involves the probability of the event occurring, and exposure involves the level of the loss should the insured event occur.

Two classic problems arise in any insurance arrangement: adverse selection and moral hazard. Adverse selection is the term used for the phenomenon that, all else being equal, individuals who are at higher risk are more likely to seek insurance, while those whose risk is low may simply opt to go without coverage and bear any risk themselves. Moral hazard is the phenomenon whereby the insured is less careful because of the insurance coverage, and thus the probability of the insured event occurring increases with coverage.

³⁰PBGC's annual report gives three 10 year forecasts of the corporation's financial status under different loss scenarios. The pessimistic forecast assumes that termination of the plans with \$13 billion of underfunding that represents reasonably possible losses occurs over the next 10 years, along with a modest number of lesser terminations.

³¹The present value of \$2.1 billion each year for 10 years (discounted at 6.25 percent) is \$15.5 billion.

In PBGC's case, the insurable event is the distress termination of a pension plan in which assets are insufficient to cover participant benefits and the employer demonstrates financial distress. From the casualty insurance perspective, the premium structure for such coverage is the source of the flaws in the system—premiums are only tenuously related to risk and exposure. Originally, there was one flat rate per participant in each plan, regardless of the plan's funding status. Now there are additional charges on top of the existing flat rate for underfunded plans. The additional charge varies with the level of underfunding but is capped, resulting in a maximum possible premium. The result of this premium structure is the cross-subsidization of high-risk, poorly funded plans by well-funded plans; there is no pure risk sharing as in a classic insurance scheme.

Adverse selection is not an issue in the normal sense because participation by all plan sponsors is mandatory. However, if the cross-subsidization discussed above is significant, it could possibly lead the sponsors of well-funded plans to shut them down and establish defined contribution plans (or offer other benefits) instead, although there is no evidence of this occurring so far. However, were this eventually to occur, PBGC could be left with a pool of plans to insure consisting solely of high-risk, underfunded plans.

Moral hazard incentives—this is the ultimate source of any PBGC financial trouble—do exist and are exacerbated by the premium structure and funding regulations. Sponsors have the financial incentive to underfund their plans because they do not bear the full cost of the resulting increase in risk. (However, this was more the case before PBGC was established in 1974.) This incentive is especially strong for companies experiencing financial difficulties and thus having a hard time covering their expenses. Minimum funding regulations allow this type of behavior. A sponsor can follow the regulations and still remain underfunded for long periods of time. An underfunded plan can amortize past liabilities over 18 years, and, in addition, plans can

pay back any waived amounts of funding over 5 years. Furthermore, defunding of plans when the sponsor hits hard financial times is possible, and currently little can be done to prevent it. Since sponsors are given some limited degree of latitude in setting interest rate, retirement age, and mortality rate assumptions used to determine minimum contribution requirements, a sponsor can adjust these to minimize plan contributions. Furthermore, the costs associated with early retirements and plant shutdowns, which are common in financially distressed companies, are typically underfunded. Strict casualty insurance would allow the insurer to dictate all of these calculations while having an effective veto over adverse actions by virtue of its ability to cancel the insurance.

One course of action suggested by a casualty insurance approach is to adjust premiums to more fully reflect risk and exposure. Such a move would force sponsors to bear the full burden of their underfunding and thus lessen the financial incentives to underfund plans. It is possible that a premium structure with unlimited risk premiums could push financially troubled sponsors into bankruptcy and thus drive their plans into distress terminations, but it is also possible that some of these plans may experience a distress termination eventually even if nothing changes. Such a change should serve to keep other plans out of distress termination danger in the future by leading to better funding practices in the defined benefit system. However, a risk based premium structure may lead even strong companies with flat dollar plans to freeze benefit levels because any increases will at least initially be unfunded. Furthermore, such premiums could effectively freeze the number of defined benefit plans with past service credits, as occurred following the passage of the Multiemployer Pension Plan Amendments Act. New defined benefit plans by design of awarding past service benefit credits at the time of plan set-up are almost always initially underfunded, and a high premium might pose a significant entry barrier. Thus, in considering a move to a risk-based premium structure, short-term costs and benefits must be weighed against long-term costs and benefits.

Another casualty insurance possibility is to reduce or freeze benefit coverage; this would at least limit PBGC's exposure by reducing the level of insured benefits. This could lead to better funded pension plans; if PBGC's guarantee is minimal, workers have the incentive to exert more pressure for additional funding. However, such an increase in risk exposure to employees may not be acceptable to plan sponsors and participants and could lead to the establishment of defined contribution plans as a substitute for defined benefit plans.

◆ PBGC Legislative Proposals

Four proposals have been introduced to change PBGC's current operation. The proposals maintain PBGC's social insurance program while representing a further movement toward casualty insurance concepts. The proposals fall far short of what a full casualty insurance model would require. The proposals approach the benefit guarantee and plan termination issues of the defined benefit insurance system from more of a casualty insurance program perspective by aiming to minimize PBGC's exposure through increasing recoveries and minimizing claims. However, the proposals maintain a social insurance program's objectives by attempting to alter the behavior of the participating plans and plan sponsors while maintaining cross-subsidies and the present premium structure. Overall, the goals of these proposals are to increase bankruptcy recoveries, increase incentives for better funding and funding requirements, restrict future growth in guarantees, and convert PBGC's budget accounting to provide a more realistic financial picture. However, some of these revisions could increase the possibility that plan sponsors with well-funded plans will leave the defined benefit system. The proposals were included in President Bush's 1993 budget. The proposals (with the exception of the accounting proposal) were introduced as legislation (S.2485, H.R.4545) in March 1992 by Sen. Robert Dole (R-KS) and Rep. Robert Michel (R-IL), respectively. The termination in bankruptcy proposal (S.2014, H.R.3843) was introduced in November 1991 by Sen. Charles Grassley (R-IA) and Rep. Rod Chandler (R-WA), respectively.

Termination in Bankruptcy Proposal

The provisions of the bankruptcy proposal are intended to give PBGC the ability to clarify and increase its recoveries in bankruptcy from both terminated plans and plans that are not terminating but are being taken over by an affiliate. This proposal is close to the casualty insurance perspective because it places a higher priority on preserving payment to PBGC than on the preservation of the defined benefit system. Recent court rulings, particularly the LTV ruling, have challenged PBGC's claims. Both the bankruptcy court and district court ruled against PBGC on its assertion of priority claims for both unpaid contributions and employer liability and denied that PBGC has the authority to determine the amount of its claims in bankruptcy.

The objective of the bankruptcy proposal is to clarify PBGC's major bankruptcy claims for unpaid contributions and employer liability. These claims are generally unsecured, although some have priority status. ERISA and the tax code give PBGC priority on claims for contributions and employer liability in bankruptcy; however, this is not stated in the Bankruptcy Code. The revisions to the Bankruptcy Code are intended to minimize dispute over PBGC's claims for contributions and employer liability, thereby increasing recoveries and reducing incentives to stop contributions during and prior to bankruptcy. PBGC's bankruptcy proposal would alter the Bankruptcy Code to recognize pension contributions as administrative expenses, similar to salary, that are paid during bankruptcy; increase PBGC's claim for all contributions missed more than 180 days prior to bankruptcy filing; and affirm that a portion of PBGC's claim for employer liability has tax priority. Additionally, PBGC would be allowed to assert a claim for underfunding against a liquidating sponsor even if the plan is not terminating but is being taken over by an affiliate.

The proposal could decrease plan sponsors' incentives to seek termination of underfunded plans because plan sponsors and affiliates would be held directly respon-

sible for contributions before and during bankruptcy, and PBGC would have greater enforcement capabilities because its claims would be clarified in the Bankruptcy Code. The revisions might also lead creditors to pressure plan sponsors to keep plans well funded; if creditors know that PBGC has priority status in bankruptcy, they will be less willing to lend money to companies that sponsor underfunded pension plans. However, the inability to secure loans from creditors could result in the ultimate failure of companies in dire financial condition. Plan sponsors might drop defined benefit plans and start defined contribution plans, realizing that their ability to secure loans would be limited should they incur plan underfunding in the future.

The proposal also seeks to clarify PBGC's right to determine the amount of its claim and would allow PBGC to increase the amount of the priority claim above the 30 percent of net worth calculation.³² The priority claim would not be able to exceed the sum of: (1) the amount of benefits attributable to the occurrence of events, such as plant shutdowns, that cannot be predicted and occur within the three years prior to plan termination, and (2) the greater of 30 percent of the sponsor's and affiliate's net worth or a percentage of unfunded benefit liabilities, starting with 10 percent and increasing 2 percent each year until it reaches 50 percent. PBGC would be given the option to disregard the 30 percent of net worth calculation when it results in lower recoveries than the alternative or when the calculation is too contentious to be cost effective. PBGC argues that the 30 percent of net worth calculation for PBGC's priority claim is often inadequate when pension plan underfunding is high in relation to the net worth of a company, which is often the case in bankruptcy. The proposal is intended to provide PBGC with an option for a higher priority claim because, unlike most other creditors, PBGC is not able to establish the amount of credit it extends to plan sponsors. The priority claim for shutdown benefits

³²Currently, PBGC's priority claim is equal to the full amount of unfunded benefit liabilities up to 30 percent of the plan sponsor's and its affiliate's net worth.

within is intended to decrease the underfunding, or PBGC's liability for underfunding, that often occurs shortly before plan termination. As mentioned above, plant shutdowns often occur shortly before plan terminations and are most often not prefunded.

Finally, PBGC would have the right to be a member of a creditors' committee, and bankruptcy courts would be required to notify PBGC of proceedings and all other notices given to creditors in any case where a debtor or a debtor's affiliate maintains a PBGC-covered plan. This provision is intended to facilitate PBGC's membership on creditors' committees, increase the information PBGC has available for purposes of maximizing recoveries, and encourage creditors to pressure plan sponsors not to seek termination of their pension plans.



Consistent with ERISA's social orientation, a pension plan's funding status is currently not considered in extending PBGC's coverage of pension plan benefits.



Benefit Guaranty Proposal

Limiting PBGC's guaranty of benefit increases and benefits that are associated with unpredictable events is intended to reduce PBGC's exposure in the event of distress terminations and prevent the growth of unfunded liabilities. The change would eliminate PBGC's guarantee for new benefits or benefit increases made after December 31, 1991 until a plan is fully funded. Once a plan is fully funded, all previous increases would be guaranteed, subject to monthly limits. The proposal also would eliminate PBGC's guarantee of pension benefits adopted and effective after December 31, 1991 that are contingent on an unpredictable event such as a plant shutdown. **These changes are most closely related to casualty insurance concepts, as they**

essentially take the position that guarantees should only be provided where no unfunded risk exists.

Under ERISA, PBGC generally fully guarantees new benefits or benefit increases included in plan amendments, within a five year phase-in period. Consistent with ERISA's social orientation, a pension plan's funding status is not considered in extending PBGC's coverage of pension plan benefits. Chronically underfunded plans may increase their benefit promises, which subsequently increases their underfunding. The current minimum funding rules allow plan sponsors to amortize the cost of benefit increases over a longer period than the time in which the benefits become fully guaranteed. Negotiated pension plans, which typically increase benefits every three to five years, become underfunded or increase their underfunding because the increases cannot be prefunded before they are negotiated. The proposal would replace the five-year phase-in period for the guarantee of new pension benefits with a requirement that plans be fully funded for vested benefits in order to receive the guarantee for new benefits. In this manner, **the proposal attempts to eliminate pension plan underfunding that occurs when benefits are increased while plans are underfunded. This change utilizes casualty insurance concepts by guaranteeing only those benefits that do not have unfunded risk but thereby potentially makes flat benefit negotiated plans unworkable.** An alternative change, driven by social insurance objectives, would be to allow, or encourage, flat benefit negotiated plans to prefund benefits on a tax-deferred basis before they are negotiated. This change would encourage increased funding while maintaining the guarantee of benefits without regard to unfunded risk.

PBGC has found that benefits associated with unpredictable contingent events, such as plant shutdowns, often are not prefunded and introduce substantial costs to PBGC when the benefits are triggered shortly before a pension plan terminates. Shutdowns often occur shortly before plan termination, as companies attempt to downsize. During PBGC's 17 years of operation, shutdown benefits have cost it approximately half a

billion dollars, as of year-end 1991. **By eliminating guarantees of increased or additional shutdown benefits, PBGC may reduce its exposure, encourage prefunding of these benefits, and limit further provision of these benefits where they are unlikely to be funded.** Again, this proposal is a movement away from a more social orientation that led to initial guarantees for shutdown benefits.



During PBGC's 17 years of operation, shutdown benefits have cost it approximately half a billion dollars, as of year-end 1991.



The most direct effect of both parts of this proposal would be to limit PBGC's guarantees for the most common sources of underfunding. The proposal is intended to prevent plan sponsors from offering new benefits before they are fully funded for their previous benefits or offering shutdown benefits without prefunding. Participants in underfunded plans would not receive their increased pension benefits should their plans terminate except through their share of PBGC's recoveries. Therefore, participants in plans that negotiate updated benefits with each new agreement may pressure employers to better fund their pension plans or replace their defined benefit plan with a defined contribution plan. This argument assumes that participants are aware and concerned that their benefits would not be guaranteed. Some might argue that participants are not likely to be aware of the changes in pension plan guarantees. Under ERISA, new pension benefits are often not fully guaranteed until five years after the benefits are increased. Participants historically have not pressured plan sponsors to provide alternate benefits because they fear that they would not receive negotiated benefits if the plan fails within the five-year period. This may be evidence that plan participants do not behave on the assumption that the plan sponsor might fail.

Funding Requirement Proposal

This proposal revises the additional funding requirements for underfunded single-employer plans by replacing the deficit reduction contribution that is based on plans' unfunded liabilities with two new rules, an underfunding reduction requirement, and a solvency maintenance requirement. Plans that are not underfunded are not subject to the deficit reduction contribution and would not be required to pay the additional contribution defined in the proposal. The two new rules would apply only to underfunded plans with more than 100 participants.³³ The required additional contribution for underfunded plans would be the greater of: (1) a stronger version of the 1987 deficit reduction contribution and (2) the new solvency maintenance requirement. PBGC estimates that the

³³There is only a limited effect on plans with between 100 participants and 150 participants.

Table 10
Example of Minimum Required Contribution for Plans That Are Not Underfunded

Normal Cost at January 1, 1990	\$ 500,000
Amortization Charges at January 1, 1990	
Initial unfunded liability	75,000
Plan changes	325,000
Actuarial losses	100,000
Total	500,000
Interest to Year-End on Normal Cost and Amortization Charges at 9%	90,000
Total Charges	1,090,000
Credit Balance at January 1, 1990	0
Amortization Credits at January 1, 1990	
Plan changes	150,000
Actuarial gains	250,000
Total	400,000
Interest to Year-End on Credit Balance and Amortization Credits at 9%	36,000
Total Credits	436,000
Minimum Required Contribution	654,000

Source: Michael A. Archer, "Minimum Funding Requirements," in Martin Wald and David E. Kenty, eds., *ERISA: A Comprehensive Guide* (New York: John Wiley & Sons, Inc., 1991).

funding proposal would lead underfunded plans to reach full funding within 10 years to 20 years.

Minimum Funding Requirements for Plans That Are Not Underfunded—Since 1974, the basic minimum funding standard under the IRC requires that a pension plan having supplemental liabilities must amortize such liabilities over a specified period of time in addition to the funding of normal cost. For plans in existence on January 1, 1974, the maximum amortization period for supplemental liability is 40 years; for single-employer plans established after January 1, 1974, the maximum amortization period is 30 years. Moreover, experience gains and losses for single-employer plans must be amortized over a five-year period. Changes in supplemental liabilities associated with changes in actuarial assumptions must be amortized over a period not longer than 10 years.

All pension plans subject to the minimum funding requirements must establish a funding standard account that provides a comparison between actual contributions and those required under the minimum funding requirements. The main purpose served by the funding standard account is to provide some flexibility in funding by allowing contributions greater than the required minimum, accumulated with interest, to reduce the minimum contributions required in future years. (See table 10 for an example of a funding standard account.)

A determination of experience gains and losses and a valuation of a plan's liability must be conducted at least once every year. For each plan year, the funding standard account is charged with the normal cost for the year and with the minimum amortization payment required for the initial unfunded liabilities,³⁴ increases in plan liabilities, experience losses, the net loss resulting from changes in actuarial assumptions, and waived contributions for each year. These amortized charges

³⁴The initial unfunded accrued liability is the liability incurred when a plan is started. The initial underfunding is primarily due to credit given toward service prior to plan establishment.

are listed in the example on table 10 as initial unfunded liabilities, plan changes, and actuarial losses. Adjustments are made for interest on the amortized charges and normal cost charges to the end of the plan year. The account is credited in each plan year for employer contributions made for that year, with amortized portions of decreases in plan liabilities, experience gains, the net gain resulting from changes in actuarial assumptions, amounts of any waived contributions, and adjustments for interest on the preceding items to the end of the plan year.³⁵ If the contributions to the plan,

adjusted as indicated above, meet the minimum funding standards, the funding standard account will show a zero balance, as is the case in the example. If the funding standard account has a positive balance at the end of the year, such balance will be credited with interest in future years (at the rate used to determine plan costs). Therefore, the need for future contributions to meet the minimum funding standards will be reduced to the extent of the positive balance plus the interest credited.

OBRA '87 Minimum Funding Requirements for Underfunded Plans—Partly as a result of PBGC's exposure to the increasing incidence of bankruptcies

³⁵In certain situations, the account will also be credited with a full funding limitation credit. See Prop. Reg. Sec. 1.412(c)(6)-1(g).

Table 11
Example of Development of Deficit Reduction Contribution

Calculation of Unfunded Old Liability Amount		
(1)	Current liability as of January 1, 1989 based on October 16, 1987 plan provisions	10,000,000
(2)	Actuarial value of assets as of January 1, 1989 (less credit balance)	8,000,000
(3)	Unfunded old liability ^a	2,000,000
(4)	Unfunded old liability amount ^b	209,564
Calculation of Unfunded New Liability Amount		
(5)	Current liability as of January 1, 1990	12,000,000
(6)	Actuarial value of assets as of January 1, 1990 (less credit balance)	9,500,000
(7)	Unfunded current liability ^c	2,500,000
(8)	Unamortized unfunded old liability ^d	1,951,575
(9)	Unfunded new liability ^e	548,425
(10)	Current liability funded percentage ^f	79.2%
(11)	Percentage of unfunded new liability recognized ^g	19.0%
(12)	Unfunded new liability amount ^h	104,201
Calculation of Deficit Reduction Contribution		
(13)	Sum of unfunded old liability amount and unfunded liability amount ⁱ	313,765
(14)	Amortization charges and credits for initial unfunded and plan changes ^j	250,000
(15)	Deficit reduction contribution ^k	63,765

Source: Michael A. Archer, "Minimum Funding Requirements," in Martin Wald and David E. Kenty, eds., *ERISA: A Comprehensive Guide* (New York: John Wiley & Sons, Inc., 1991).

^a(1)–(2)

^b18-year amortization of unfunded old liability at the current liability rate of 9%

^c(5)–(6)

^d(3)–(4)*1.09

^e(7)–(8)

^f(6)/(5)

^g30%–.25((10)–35%)

^h(11)*(9)

ⁱ(4)+(12)

^jThe sum of the initial unfunded liability and charges for plan changes less the credits for plan changes (75,000+325,000–150,000) shown in table 10.

^kMinimum((13)–(14);(7))

and persistent underfunding by some plans in the 1980s, OBRA '87 established additional minimum funding requirements for plans covering more than 100 participants that are not at least 100 percent funded for current liabilities.³⁶ In general, the current liability is the plan's liability determined on a plan termination basis. Specifically, it is the present value of accrued benefits projected to the end of the current plan year, excluding the value of unpredictable contingent events that have not occurred.³⁷ A plan's unfunded current liability is calculated by subtracting the actuarial value of assets, minus the credit balance in the funding standard account, from the current liability. **Plans that have an unfunded current liability based on this calculation must pay an additional minimum funding contribution.**

The additional contribution is based on the deficit reduction contribution, which is the sum of the unfunded old liability amount and the unfunded new liability amount net of the amortization charges and credits for initial plan supplemental liabilities and those arising from plan changes. (See table 11 for an example of the calculation of the deficit reduction contribution.) The unfunded old liability is the unfunded liability that existed at the beginning of the 1988 plan year, based on the plan provisions in effect on October 16, 1987. The unfunded old liability amount is a portion of the unfunded old liability equal to an 18-year amortization, beginning in 1989, of the unfunded old liability. The unfunded new liability equals the excess, if any, of the unfunded current liability after subtracting the portion of the unfunded old liability that has not

yet been paid (called the unamortized portion of the unfunded old liability).³⁸ The unfunded new liability amount is a percentage of the unfunded new liability, determined by a formula with higher payments required for more seriously underfunded plans. The degree of underfunding is measured by the funded current liability percentage, defined as the ratio of the plan's actuarial value of assets, net of the funding standard account's credit balance, to its current liability. If this ratio is 35 percent or less, the percentage of the unfunded new liability recognized is 30 percent. For every percentage point by which the funded current liability percentage exceeds 35 percent, the percentage of unfunded new liability recognized declines by 25 percent.

Plans with an unfunded current liability pay the excess, if any, of the deficit reduction contribution over the net total of the following funding standard account amortization charges and credits—charge for the initial unfunded accrued liability, charges for plan changes, and credits for plan changes.

Proposed Minimum Funding Requirements—Although the OBRA '87 modifications undoubtedly increased the minimum funding requirements for a substantial percentage of underfunded plans, there were several anomalies that allowed some underfunded plans to (legally) circumvent the law's intended objective. In an attempt to correct these provisions, additional funding requirements for plans that are not multiemployer plans have been proposed by the Bush administration to assure that pension plans make a sufficient contribution in each year that they are underfunded.

If enacted, the Bush administration proposal would eliminate the deficit reduction contribution introduced by OBRA '87 and replace it with a new underfunding reduction requirement. In essence, this change would apply the formula for the unfunded new liability amount from the 1987 law to the entire

³⁶The additional contributions are phased in for plans with between 100 participants and 150 participants. All defined benefit plans must be aggregated to determine the number of participants in applying this exception.

³⁷The present value of this liability is calculated using the plan's valuation interest rate, provided that it is between 90 percent and 110 percent of the weighted average of rates of interest on 30-year Treasury securities during the four-year period ending on the last day of the prior plan year. Furthermore, the interest rate should be consistent with current insurance company annuity rates. The IRS may, by regulation, extend this range downward if 90 percent of the weighted average is unreasonably high, but to no lower than 80 percent of the weighted average.

³⁸The unfunded new liability does not include liability for unpredictable contingent events that have occurred.

underfunding, eliminating the grandfather clause in OBRA '87 that allows the unfunded old liability to be amortized over 18 years. When viewed in isolation, this change could drastically impact the minimum funding requirement for severely underfunded plans. For example, plans with the lowest funding ratios (i.e., those whose plan assets are less than 35 percent of their termination liability), would find their marginal funding requirement on the amount OBRA '87 defines as the unfunded old liabilities almost tripled. The proposal would increase the current annual payment of approximately 10.5 percent of the unfunded old liability (assuming a 9 percent discount rate) under the 18-year amortization schedule to a formula amount requiring an initial annual payment of 30 percent of the unfunded old liability.

However, it is possible that the underfunding reduction requirement would not be relevant to a group of underfunded plans with a very mature population of plan participants. Since the implementation of the OBRA '87 modifications, it has been observed that, even with the additional funding required by the deficit reduction contribution, plans with a heavy concentration of retirees relative to the number of participants may find that benefit payments exceed the minimum required contributions to the plan.

Therefore, the proposal provides for a larger minimum required contribution for plans that fall into parameters established by a newly defined solvency maintenance rule. In general, underfunded plans will be subject to the solvency maintenance rule provisions if the rule provides for a larger minimum contribution than the underfunding reduction requirement. The solvency maintenance rule would (eventually) introduce two new components into the calculation of the minimum required contribution: disbursements from the plan and interest (as determined by the plan interest rate) on the plan's *initial*³⁹ unfunded liability. Disbursements from the plan are specifically defined to

include benefit payments, including purchases of annuities or payment of lump sums in satisfaction of liabilities, administrative expenses, and any other disbursements from the plan or its trust. However, a special rule exists for determining the applicable amounts attributable to purchases of annuities or the payment of lump sums for this rule. Specifically, the applicable amount will be equal to the actual amount paid by the plan (or trust) multiplied by the excess of 1 over the initial funding ratio of the plan.

Since a sudden shift to either of the two new minimum funding rules may be expected to have serious cash flow consequences for sponsors already encountering serious financial difficulties, it was decided to provide a gradual transition to the new rules. With respect to both requirements, any net positive credit balances in the funding standard account for plan years beginning on or before December 31, 1993 would be available as an offset to the new requirements.⁴⁰ The solvency maintenance rule would be phased in gradually over a five-year period, further lessening its impact.

Another aspect of the OBRA '87 minimum funding requirements that in many cases minimized the impact of the deficit reduction contribution concerned the existence of funding standard account credits (typically from experience gains or changes in plan assumptions). Under the OBRA '87 calculations, it is quite possible that the deficit reduction contribution could be entirely eliminated if these credits are sufficient. The proposal attempts to correct this problem for underfunded plans by continuing to allow credit for experience gains, gains from changes in actuarial assumptions, and greater than required minimum contributions, but only to the extent of the charges for experience losses and losses from changes in actuarial assumptions.

The final modification in this proposal simultaneously treats two issues introduced by the current liability

³⁹Under the proposal, the word *initial* refers to the first day of the plan year, not the effective date of the new provisions.

⁴⁰Even though underfunded, plans may have a net positive credit balance. For many plans, this may be due to greater-than-anticipated investment returns in recent years.

concept in OBRA '87 by replacing the current liability computation with the initial termination liability. Although the details are beyond the scope of this discussion, **in many situations the assumptions mandated for the current liability calculation limited the value assigned to this liability component of the deficit reduction contribution. With fewer plans qualifying as underfunded, the impact of the additional funding requirement would be minimized.** Secondly, the additional regulatory burden of this additional valuation would cease to exist if the proposal were enacted.

A corollary to the removal of the current liability computation may be troubling to some observers in that it would provide a greater degree of flexibility to the choice of actuarial assumptions for the additional funding requirement. In calculating current liability, plans were required to use the plan's valuation interest rate which must fall within specific guidelines.⁴¹ The proposal does not introduce requirements for interest rate assumptions for calculating the initial termination liability. Professional standards and the additional discipline introduced from the limitation of credit for experience gains and gains from changes in actual assumptions and from greater-than-required minimum contributions in past years will undoubtedly minimize the use of assumptions resulting in extraordinarily low liability values. However, it appears that the substitution of the initial termination liability concept for the OBRA current liability may decrease the number of plans that are considered to be underfunded in the short run. Plans that do not have an initial unfunded liability would not be subject to either of the two new additional contribution requirements.

Accounting Proposal

The accounting proposal would change the budgetary treatment of PBGC's accounting from a cash to an accrual basis in order to reflect anticipated costs and

⁴¹See footnote 35 on page 30 for details on setting plan's valuation interest rates.

provide budgetary incentives for the adoption of other proposals. PBGC asserts that cash accounting is misleading because it does not recognize potential long-term losses and emphasizes that accrual accounting is the standard insurance accounting methodology. The proposal would allow PBGC to accrue its losses and expected losses and reflect savings that will be incurred by the adoption of legislative changes. President Bush's budget projected that the cumulative effect of the adoption of the pension proposals would be to lower PBGC's accrued cost by \$8.7 billion in the year the savings are first counted and reduce the growth of costs substantially thereafter. However, some have criticized this aspect of the proposal as "a gigantic accounting gimmick" because the savings from reforms that would occur over decades would be used as a pretext to cut taxes in the 1993 federal budget (Samuelson, 1992).

While PBGC already calculates its liabilities and net deficits on an accrual basis in reporting its financial status, these numbers are not recognized in the federal budget. The revision is intended to facilitate PBGC's ability to convince Congress to pass legislation that would reduce underfunding and facilitate increases in premiums to cover deficiencies if necessary. Because pension contributions are tax deferred, increasing funding standards reduces tax income, thereby increasing the federal deficit. However, by including the savings gained from funding reforms in PBGC's budget statement, its accrued deficit will decline, softening the impact of the decrease in tax income on the federal budget. On the other hand, the inclusion of expected losses in PBGC's accrued deficit may make it more difficult to pass legislation to increase benefit guarantees should this be desirable in the future.

◆ Conclusion

Does a general taxpayer bailout reminiscent of the FSLIC episode loom on PBGC's horizon? **There are currently sufficient liquid assets within the aggregate defined benefit system itself to cover the existing pockets of underfunding within individual plans. Therefore, unless legislative changes are made that**

cause employers to terminate well-funded defined benefit plans en masse, thus denying PBGC a base of premium payers, a general taxpayer bailout would be unnecessary.

The overall defined benefit pension system currently has \$1.3 trillion in assets to cover \$900 billion in liabilities. From the social insurance perspective, this means that, while there is underfunding within some individual plans, there are also sufficient resources available within the defined benefit system itself to cover this underfunding. The \$15.5 billion liability for trustee plans and probable distress terminations represents 3.9 percent of the \$400 billion dollar surplus in the defined benefit system. The needed funds can be accessed through increased premiums or by imposing an annual lump-sum premium charge on sponsors that is sufficient to eliminate any PBGC year-end deficit. The bulk of defined benefit assets are in liquid bond and equity investments and are thus easy to access; this was not the case with the assets of S&L institutions, which were concentrated heavily in mortgages. Furthermore, whereas S&Ls and banks face the prospect of depositors demanding immediate withdrawals, pension plans pay out funds only when an individual separates from service or retires. In addition, consideration of the present value of income (premiums and investment earnings) that is likely to be received during future periods when benefits are being paid substantially improves PBGC's deficit picture.

Does this mean that there are no problems with PBGC insurance system and therefore no changes are needed? No, **both social insurance and casualty insurance proponents acknowledge that the system needs to change in order to reduce abuse and maintain participants' retirement security.**

As currently structured, the pension insurance system creates a financial incentive for employers to underfund their defined benefit plans. The vast majority of sponsors maintain well-funded plans despite this incentive, but some do not. Without changes, underfunding within the defined benefit system is likely to improve

only slowly, if historical trends continue. Were more firms to begin to take advantage of the system, the financial picture could deteriorate.

A balance between social insurance and casualty insurance principles is most likely to sustain an overall strong and continuing defined benefit pension system. Too great a movement toward either extreme could ultimately lead many businesses to abandon the defined benefit approach. Should that be deemed desirable, it should come from explicit targeted actions, not as the indirect effect of well intentioned reforms.

Finally, the private defined benefit system and PBGC's financial status should be considered in context. Private defined benefit plans are approximately \$400 billion overfunded in the aggregate. Actuarial deficiencies of federal retirement annuity programs consist of Social Security-OASDI at \$1.1 trillion, the CSRS at \$660 billion, the FERS at \$6 billion, the MRS at \$533 billion, the Railroad Retirement Board at \$33 billion, and other retirement programs at \$21 billion. In addition, actuarial deficiencies in federal health programs consist of Medicare-HI at \$402 billion, the Federal Employees Health Benefits Program at \$115 billion, and Military Treatment Facilities and Civilian Health and Medical Program for the Uniformed Services (CHAMPUS) at \$295 billion. Concern for PBGC premium payer may well merit changes in the laws governing private pensions and PBGC, but, in terms of underfunded liabilities, larger general taxpayer interests lie in policy makers giving attention to the long-term tax consequences of public pension and retiree medical benefit promises that have not been advance funded.

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