

THE FINANCIAL CONDITION OF PBGC'S MULTIEMPLOYER INSURANCE PROGRAM

A Five-Year Report to Congress as required by
Section 4022A(f) of the Employee Retirement
Income Security Act of 1974, as amended



Pension Benefit Guaranty Corporation
1200 K Street, N.W.
Washington, DC 2005-4026
2001

INTRODUCTION

The Pension Benefit Guaranty Corporation is a federal corporation created under the Employee Retirement Income Security Act of 1974 to guarantee payment of pension benefits earned by almost 43 million American workers and retirees participating in over 39,000 private-sector defined benefit pension plans. The agency administers two insurance programs -- one for single-employer plans and a second for multiemployer plans.

The multiemployer program protects benefits of about nine million workers and retirees in approximately 1,800 plans. A multiemployer plan is a collectively bargained pension arrangement involving two or more unrelated employers, usually in a common industry such as construction or trucking, where workers often move from job to job. Each multiemployer plan pays PBGC an annual premium of \$2.60 per participant.

Under the multiemployer program, when a plan becomes insolvent, PBGC provides financial assistance to the plan sufficient to pay guaranteed benefits to participants and administrative expenses. A multiemployer plan is considered insolvent if the plan is unable to pay benefits (at least equal to the PBGC's guaranteed benefit limit) when due. The plan must repay this financial assistance in accordance with terms and conditions specified by PBGC. Repayment is unlikely in most cases because plans that become insolvent rarely recover.

There are several safeguards under the multiemployer program to assure the funding of multiemployer plans and to protect the pension insurance system from excessive claims. First, an employer that ceases to contribute to a multiemployer plan may be liable to the plan for its share of the plan's unfunded vested benefits ("withdrawal liability"). Second, if payments under the minimum funding rules of the Internal Revenue Code are not sufficient to pay down a plan's liabilities, the plan may be required to fund at a higher rate or to reduce benefits. Third, PBGC only provides financial assistance when a multiemployer plan actually becomes insolvent. This assures that PBGC funds are provided only in cases where there have been long term declines in employment across an entire industry, not just the financial distress of a single employer.

The law also places limits on the level of guaranteed benefits. Under the guarantee limit established in 1980, a participant's guaranteed benefit could not exceed the participant's years of service multiplied by the sum of (i) 100 percent of the first \$5 of the monthly accrual benefit rate and (ii) 75 percent of the next \$15 of the accrual rate. The limit was increased in the Consolidated Appropriations Act, 2001, signed into law on Dec. 21, 2000. The new limit is equal to the participant's years of service multiplied by the sum of (i) 100 percent of the first \$11 of the accrual rate, and (ii) 75 percent of the next \$33 of the accrual rate. Under the new guarantee limit, the highest guaranteed benefit for a retiree with 30 years of service is \$12,870 per year. The previous limit would have given a participant with 30 years of service only \$5,850 per year.

The increased guarantee limit applies to any multiemployer plan that has not received PBGC financial assistance within a 1-year period ending on December 21, 2000. The old guarantee

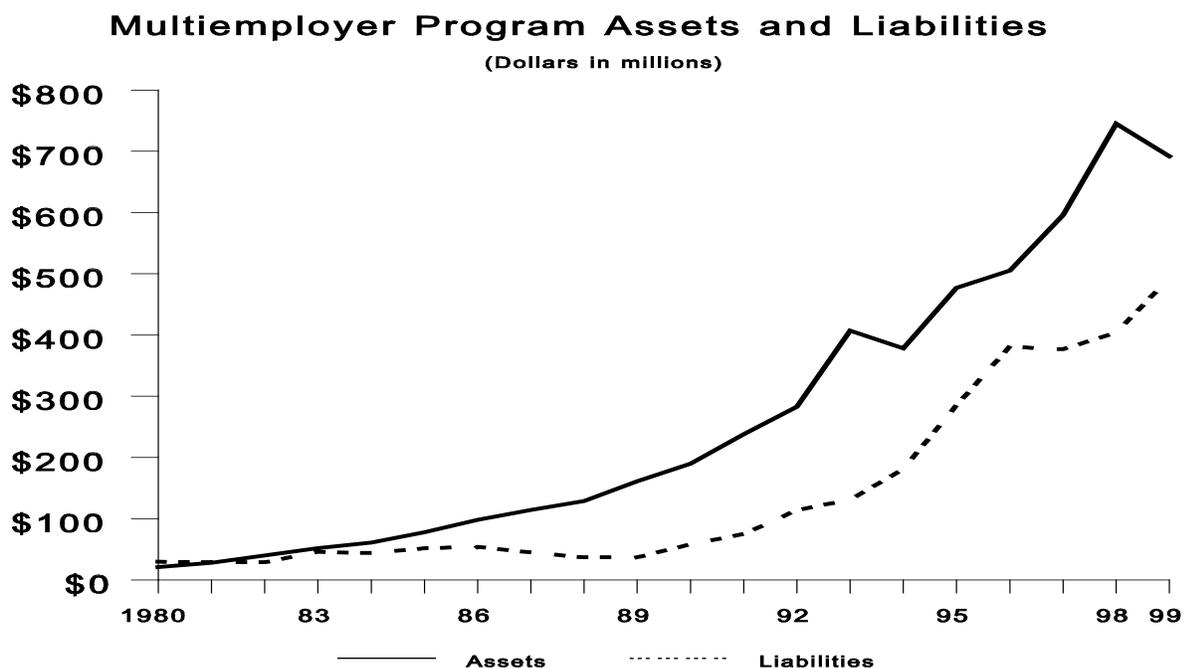
limit remains in place for participants in multiemployer plans that have received financial assistance in the last year.

The Employee Retirement Income Security Act, Section 4022A, requires the PBGC to review the insurance program covering multiemployer pension plans every five years to assess whether changes in the guaranteed benefit or premium levels are appropriate.

The multiemployer insurance program remains financially sound. The program had a surplus of \$199 million at the end of FY 1999, with assets of \$692 million and liabilities of \$493 million. Payments to insolvent plans in 1999 were \$19 million, while premium receipts came to more than \$23 million. PBGC's review shows that the insurance program surplus should continue with the current premium rate and the new guarantee limits passed by Congress in 2000.

DISCUSSION

The multiemployer insurance system is sound. In the period from the passage of Multiemployer Pension Plan Amendment Act of 1980 through the end of fiscal year 1999, only 24 plans have required assistance totaling \$60 million. Since enactment of the current financial assistance program, the program's financial condition has improved from a deficit of \$8.5 million in 1980 to the current surplus of \$199 million at the end of fiscal year 1999 (assets are \$692 million, liabilities are \$493 million). The program has had a surplus since 1982. Projections show that the surplus should continue to grow under a wide range of economic scenarios. The discussion below addresses the significant elements of our analysis. Technical details are more fully treated in the technical Appendix to this report.



In order to review the state of the multiemployer insurance program, PBGC tested 73 large multiemployer plans under a variety of economic and demographic scenarios. These plans represented more than 75 percent of the unfunded liability in all multiemployer plans. PBGC first examined the effects on the program assuming that each plan's recent experience would continue. PBGC then tested the multiemployer insurance program's ability to withstand the effects of less favorable future conditions for each plan.

The model determined PBGC's projected liabilities and surplus for 15 years, beginning with 1997 and ending with 2012. We used 1997 Form 5500 data, the most recent comprehensive data available when the analysis was done, in the projection model. We chose a 15-year projection period (a 15-year period is consistent with the period used in the 1995 Report but longer than in earlier PBGC studies) to give scenarios sufficient time to develop. The model projects such factors as the number of active participants, retirees, assets, contributions, investment income, benefit payments, accrued benefit liabilities, and funding standard account requirements. Among the issues driving results, the number of active participants in a multiemployer plan and the investment performance of the plan's assets are two key variables impacting the plan's financial health.

PBGC calculated the value of claims for the plans projected to become insolvent during the projection period, and the program's surplus at the end of the projection period. PBGC also calculated the level of PBGC premium required to maintain the current financial condition of the multiemployer program (as of 2000) for each scenario.

PBGC based its projections on plan rather than firm or industry factors because liabilities in the multiemployer program arise from the failure of individual plans. We did not include in the model macroeconomic factors such as productivity and inflation trends, or microeconomic factors such as the health of firms or the viability of industries. PBGC selected the scenarios used to test the ability of the multiemployer program to withstand adverse experience. The scenarios tested are not intended to be predictions of future economic or demographic conditions. While PBGC made no attempt to assign exact probabilities to any of the scenarios, some of these scenarios are extremely pessimistic and are unlikely to occur.

The starting point for the projections was a base scenario that assumed continuation of each plan's recent experience for the number of active participants, contributions, and benefits. For this base scenario, PBGC based investment earnings, retirement and termination rates on the plan actuary's assumptions. Projections were based on actual 1997 plan data. Under each alternate scenario PBGC modified key variables and plan experience and then projected for 15 years to test the stresses to the system and determine the increase, if any, in PBGC claims and

the impact on the multiemployer program.

PBGC limited the plans it tested to large plans that together form a large portion of the multiemployer plans covered by the program. To account for liabilities from smaller plan insolvencies, PBGC used its experience from small plans since 1980 to adjust the total claims for the plans in the projections. These adjustments start from a base reflecting PBGC experience with small plan insolvencies, extrapolated for other scenarios in the model. This extrapolation mimics differences from the base scenario in the model for plans similar to those comprising the small plans from PBGC's experience.

Annual declines in the number of active participants in the plans studied average 4 percent. PBGC tested even greater declines of active participants with assumptions of 2 to 20 percentage points above each plan's recent experience. For example, if a plan had experienced an 8 percent annual participant decline, we assumed annual declines ranging from 10 percent to 28 percent.

PBGC also tested the effect of sustained reductions in asset returns by reducing the plans' asset return to 1 percent and 2 percent less than the asset return assumed by the plan actuary, which average 7-1/2 to 8 percent. For example, 8 percent was reduced to 7 percent and to 6 percent. PBGC also tested scenarios that assumed fixed asset returns for all plans, ranging from 4 percent to 10 percent.

To test the effect of a sharp decline in the market value of assets (like the 1987 stock market crash, but without the later recovery), three scenarios assumed a 10, 20, or 30 percent asset decline at the beginning of 2000. In addition, some combination scenarios included a 10 or 20 percent asset decline among other negative assumptions.

Most plans in the study never became insolvent during the projection period and, therefore, never required PBGC financial assistance, even under the most pessimistic scenarios tested. Only three plans required PBGC assistance under all scenarios. Depending on the scenario, up to five others required assistance during the projection period; two of these require assistance only under the most pessimistic scenarios tested. For the plans that required assistance only under the more pessimistic scenarios, most scenarios show insolvencies occurring after the year 2008. Many do not occur until 2010 or 2011.

Under all but very pessimistic scenarios, the program remains financially strong. In these pessimistic scenarios the program has a deficit by the year 2012. These scenarios either assume combinations of conditions that usually do not occur together or assume severe changes, to levels that are highly unlikely, in the variables tested. For example, when a decline to 6 percent in the plan's asset returns is combined with a one-time 20 percent decrease in plan assets, the multiemployer program is projected to have a deficit by the year 2012. This combination is unlikely, however, because fixed-income investments are a large portion of these plans' portfolios and, therefore, a decrease in asset returns usually results in asset value increases.

The Technical Appendix to the report provides detail on the study methodology used and on the

scenarios tested.

CONCLUSION

Our projections indicate that the insurance system should remain financially strong. Projections under the base scenario, which assumes a continuation of recent trends, show the surplus growing from the current \$199 million to more than \$600 million in 2012. The program is projected to maintain a surplus under a variety of sustained adverse conditions. Except under the unlikely conditions assumed in the most pessimistic scenarios, the program remains solvent. Under the most likely scenarios tested, the surplus should steadily rise at the existing premium levels and the new guarantee limits.

TECHNICAL APPENDIX

Appendix to the Five-Year Report to Congress
required by Section 4022A of the
Employee Retirement Income Security Act of 1974,
as amended

Methodology

PBGC's projection model estimated the claims against PBGC's multiemployer plan insurance program for 73 large plans under a variety of economic and demographic scenarios. These plans represented more than 75 percent of the unfunded liability in all multiemployer plans¹. Net liabilities for smaller plans were estimated by using the relationship between small and large plans' claims, extrapolating from PBGC experience.

PBGC's multiemployer program liabilities and surplus were projected to 2012. The projection of each plan began in 1996 or 1997 (the most recent date as of which comprehensive plan data was available). A 15-year projection period was chosen to permit scenarios to develop fully.

PBGC projected such factors as the number of active and retired participants, assets, contributions, investment income, benefit payments, accrued benefit liabilities, funding standard account requirements, and mass withdrawal liability payments. For plans the model projected to become insolvent during the projection period, PBGC calculated the present value of nonrecoverable future financial assistance projected to be provided by the agency.

Actuarial Model. PBGC used a deterministic (as opposed to stochastic) actuarial projection model. This model is designed to evaluate claims against the multiemployer program under steady-state assumptions such as constant investment returns and employment declines, using fixed interest rate assumptions that vary by scenario. The base case scenario assumed a continuation of each plan's recent experience. Alternate scenarios then tested the insurance system's response to a variety of economic and demographic changes. In this "what if" modeling approach, PBGC does not consider the scenarios chosen to be predictions of future economic or demographic conditions. They were chosen to test the ability of the multiemployer program to withstand adverse experience.

PBGC based its projections on plan rather than firm or industry factors because liabilities in the multiemployer program arise from the failure of individual plans. We did not include in the model macroeconomic factors such as productivity and inflation trends, or microeconomic factors such as the health of firms or the viability of industries. PBGC selected the scenarios used to test the ability of the multiemployer program to withstand adverse experience. The

¹ PBGC separately estimated liabilities for two large plans based on calculations previously performed for purposes of the agency's annual financial statements. These estimates were based on data that was more recent or more complete than that used for the projection model, and the results were then projected from 1997.

scenarios tested are not intended to be predictions of future economic or demographic conditions. While PBGC made no attempt to assign exact probabilities to any of the scenarios, some of these scenarios are extremely pessimistic and are unlikely to occur.

Probable Insolvencies. PBGC normally recognizes the present value of nonrecoverable future assistance payments to a plan at the time that the plan's insolvency becomes "probable," often several years before the actual insolvency. Projected nonrecoverable future financial assistance payments to these plans are included as liabilities in PBGC's financial statements. PBGC's screening for "probables" uses a cash-flow model which is separate from the study that informs this report, and extends decades into the future. For each year's financial statement, "probable" plans are those that meet certain standards at that time, there is no sense in which a plan is deemed to be a "future probable". There is a separate category of "possible" plans; PBGC's liabilities for these plans are calculated using the same cash flow model as that used for the "probables".

This study selects plans that are not among those found to be "probables" or "possibles" and is designed to evaluate possible additional claims against the multiemployer program. Thus, this study recognizes liabilities only for plans that are predicted to become insolvent during the projection period. While this model is not designed to identify plans that might be in the "probable" category at the end of the projection period, we have examined asset and liability trends for plans as the projection period ends, to determine if some plans appear to be heading towards an insolvency that would occur after the projection period. Precise estimates of liabilities for insolvencies beyond the projection period are not possible, but generally are insignificant in relation to the claims from plans that become insolvent in the projection period.

Assumptions. The starting point for the projections was actual 1997/1998 plan data. Base scenario assumptions regarding the rate of growth or decline in active participants, contributions, and benefits were based on each plan's recent experience; investment earnings, retirement and termination rates were based on the plan actuary's assumptions. Specific assumptions and methods are described below:

Contribution increases: The amount of employer contributions is determined by the number of active employees (working in covered employment), and by the contribution *rate* in a plan. Different scenarios in the model test levels of decrease in active employment; these decreases will cause employer contributions to decrease in turn. We assumed employer contribution *rates*, in contrast, to increase as necessary to provide the minimum funding required by law in the plan's funding standard account. PBGC limited the rate of increase to the greater of twice the historical rate of contribution increase or 10 percent. The purpose of the limitation was to avoid masking potential insolvencies by projecting unrealistically high contribution rates.

Benefit increases: PBGC assumed benefits to increase at historic rates, with the restriction that the percentage rate of benefit increase was never greater than the assumed percentage rate of employer contribution increases. If the 1997 contributions level was insufficient to provide for 1997 minimum funding, we further limited benefit increases to permit

contributions to “catch up” to the rate required for minimum funding. We graded the adjustment depending on the extent of the 1997 shortfall. For example, if contributions were less than half the required rate, we projected no benefit increases. If contributions were 90 percent or more of the required rate, we did not adjust projected benefit increases.

Mass withdrawal: PBGC assumed that a plan had a mass withdrawal when all three of the following conditions were met:

- a) at least 6 years (2 bargaining cycles) had passed, and
- b) at the end of a bargaining cycle, the employer’s contribution rate required for minimum funding was greater than the limitations described above, and
- c) the ratio of plan assets to liabilities was less than 60 percent.

Collectibility of withdrawal liability payments: Unless PBGC had specific knowledge of the financial strength of the contributing employers, PBGC assumed that 40 percent of the annual amount of withdrawal liability would be collected in the first year after mass withdrawal, and that the annual collected amount after that would decline at the same rate as the assumed decline in active participants pre-termination. The 40-percent collected assumption for initial withdrawal liability is based on the actual collection experience of terminated multiemployer plans.

Other employer withdrawals: PBGC assumed no additional employer withdrawals other than mass withdrawals. PBGC assumed that annual declines in the number of active participants resulted from employment declines among contributing employers. This may understate the amount of withdrawal liability payments, thereby understating PBGC surplus.

Effect of insolvency: The present value as of 2000 of PBGC’s nonrecoverable future financial assistance payments (i.e., the present value of net claims) was calculated as the present value of projected guaranteed benefit payments from PBGC to insolvent plans, minus the present value of withdrawal liability payments made to the plan by employers. All financial assistance payments were assumed to be nonrecoverable. The present values were calculated using the PBGC valuation² rate in effect on Sept 30, 1999 for the base case, and mortality assumptions used by PBGC for financial statement purposes. The PBGC valuation rate on September 30, 1999, was 6.3 percent for the first 20 years and 5.25 percent after that. The mortality assumption was the 1983 Group Annuity Mortality Table (83GAM with margins projected to 1993 using Scale H). [N.b.: the GAM83 mortality table is the “applicable

² PBGC’s valuation rate is the rate used to discount liabilities for its annual financial statement. This rate is developed from a survey of annuity prices, net of administrative expenses obtained through a confidential survey of life insurance companies. The survey shows prices for both immediate and deferred annuities at various ages. Using averaged prices for various ages, PBGC tests interest factors in conjunction with the regulatory mortality table to find factors which come closest to reproducing average market prices over all ages.

mortality table” cited in IRC 417(e) among other sections.] PBGC also accumulated the value of net claims with interest to 2012 to calculate the PBGC surplus as of that date.

Results

For each scenario, PBGC calculated the present value of PBGC net claims in 2000, the PBGC surplus in 2012, and the PBGC annual premium per participant required to maintain the current surplus. PBGC calculated these values under the current guarantee level (100 percent of the first \$11 of monthly benefit plus 75 percent of the next \$33 of monthly benefit, for each year of service).

Tables 1 through 4 show results by scenario type. Each table also shows the results of the Base Case Scenario for comparison.

Projection of PBGC surplus (deficit): PBGC’s 2012 surplus was calculated as:

- a) the existing surplus with interest to 2012, plus
- b) the accumulated value of future multiemployer premiums, minus
- c) the accumulated value of net claims for large plans not already recognized in calculating the existing surplus, minus
- d) an estimated amount for net claims in small multiemployer plans.

Projections of future premiums: The projections of future premiums assume continuation of the \$2.60 annual per-participant premium rate. The premium base reflects the historic average rate of decline for participants in the plans studied, plus an additional decline, if any, corresponding to the decline in active participants under some scenarios.

Net claims for small multiemployer plans were estimated based on PBGC historical experience since 1980.

Scenarios Studied

PBGC used a range of scenarios with varying demographic and economic assumptions for its projections. (See the listing describing the scenarios on pages a-6 and a-7.) Scenario 1, termed the “base case,” assumes that recent trends in benefits, contributions, and changes in the number of active employees will continue and that fund assets will grow at the rate assumed by the plan actuary. Other scenarios vary one or more of the assumptions to test the sensitivity of claims to more conservative or pessimistic scenarios.

Asset Return Scenarios: A variable critical to the financial health of any pension plan is the rate of investment return on plan assets. The base case assumes that assets will earn the actuary’s assumption for asset return.

PBGC studied three types of alternatives. First, all plans were assumed to earn either one

or two percentage points less than assumed by the plan actuary. PBGC then studied scenarios in which all plans earned the same rate of return. Rates of return from 10 percent to 4 percent were assumed. Finally, PBGC did projections under scenarios in which the asset return for all plans was set at 9 percent, 7 percent, or 5 percent, and PBGC's valuation rate was changed to match the rate of asset return.

Tables 1A through 1C show the results of the asset return testing.

Asset Decline Scenarios: PBGC also studied the effect of a large drop in the market value of plan assets, similar to the 1987 stock market fall but without that fall's subsequent rise in market value. Under these alternatives, PBGC assumed one-time 10 percent, 20 percent, and 30 percent declines in the marked value of plan assets in 2000. Both before and after the one-time drop, the model projects that asset returns will mimic each plan's historical experience.

Tables 2A through 2C show the results of the asset decline testing.

Participant Decline Scenarios: Another critical variable is the assumed rate of growth in the number of active participants, which provides a measure of the ability of the plan to fund its liabilities and tends to be correlated with the health of the industry covered by the plan. We tested five alternative assumptions on the rate of growth in active participants. These assumptions were that the number of active participants would decline at 2, 4, 10, 15, and 20 percentage points more than the rate assumed in the base scenario (the average decrease in the base scenario was 4 percent). For example, if the number of active participants had been declining at a rate of 4 percent per year, under the "additional 20 percent decline" scenario the number of active participants is assumed to decline at 24 percent per year.

Tables 3A through 3C show the results of the participant decline testing.

Combination Scenarios: After testing the effect of changes in individual variables, PBGC tested a variety of combination scenarios under which two or three assumptions were varied.

The first combination scenario combines a favorable deviation from the base case (1% asset return increase) with unfavorable deviations.

Tables 4A through 4C show the results of the combination scenario testing.

Description of Scenarios Tested

Base Case Scenario

1. Assumes continuation of each plan's recent experience. Asset return = plan actuary's assumption. Benefit increases, contribution increases, active participant decline = recent plan experience.

Asset Return Scenarios -- Vary the annual return on plan assets. Other assumptions same as base Case.

2. Asset return = Plan actuary's assumption minus 1 percentage point
3. Asset return = Plan actuary's assumption minus 2 percentage point
4. Asset return = 10%
5. Asset return = 9%
6. Asset return = 8%
7. Asset return = 7%
8. Asset return = 6%
9. Asset return = 5%
10. Asset return = 4%
11. Asset return = 9%, PBGC valuation basis = 9%
12. Asset return = 7%, PBGC valuation basis = 7%
13. Asset return = 5%, PBGC valuation basis = 5%

One-Time Asset Decline Scenarios -- Assumes a one-time decline in plan assets in the third year of the projection period, without subsequent recovery of asset values. Other assumptions same as Base Case.

14. One-time asset decline = 10%
15. One-time asset decline = 20%
16. One-time asset decline = 30%

Annual Active Participant Decline Scenarios -- Assumes an increase in the annual rate of change in the number of active plan participants. Other assumptions same as Base Case.

17. Annual participant decline = 2 percentage points more than recent plan experience
18. Annual participant decline = 4 percentage points more than recent plan experience
19. Annual participant decline = 10 percentage points more than recent plan experience
20. Annual participant decline = 15 percentage points more than recent plan experience
21. Annual participant decline = 20 percentage points more than recent plan experience

Combination Scenarios -- Vary several assumptions as described. Other assumptions same as Base Case.

22. Annual participant decline = 4 percentage points more than recent plan experience. Asset return = Plan actuary's assumption plus 1 percentage point. One time asset decline = 10%.
23. Asset return = 6%. One-time asset decline = 20%.

24. Annual participant decline = 4 percentage points more than recent plan experience. One-time asset decline = 20%.
25. Asset return = 6%. PBGC valuation rate = 5%. One-time asset decline = 10%.
26. Annual participant decline = 4 percentage points more than recent plan experience. Asset return = 5%; PBGC valuation rate = 5%.
27. Annual participant decline = 10 percentage points more than recent plan experience. PBGC valuation rate = 5%. One-time asset decline = 20%.
28. Annual participant decline = 4 percentage points more than recent plan experience. Asset return = Plan actuary's assumption minus 2 percentage points. One-time asset decline = 20%.
29. Annual participant decline = 10 percentage points more than recent plan experience. Asset return = 5%; PBGC valuation rate = 5%. One-time asset decline = 20%.

Tables

Asset Return Scenarios

- 1A Present Value in 2000 of PBGC Claims
- 1B Multiemployer Fund Surplus (Deficit) in 2012
- 1C Multiemployer Premium Required to Maintain Current Surplus

One-Time Asset Decline Scenarios

- 2A Present Value in 2000 of PBGC Claims
- 2B Multiemployer Fund Surplus (Deficit) in 2012
- 2C Multiemployer Premium Required to Maintain Current Surplus

Annual Active Participant Decline Scenarios

- 3A Present Value in 2000 of PBGC Claims
- 3B Multiemployer Fund Surplus (Deficit) in 2012
- 3C Multiemployer Premium Required to Maintain Current Surplus

Combination Scenarios

- 4A Present Value in 2000 of PBGC Claims
- 4B Multiemployer Fund Surplus (Deficit) in 2012
- 4C Multiemployer Premium Required to Maintain Current Surplus

**Table 1A: Present Value in 2000 of PBGC Claims (\$ in thousands)
by Asset Return Scenario**

| <u>Scenario</u> | <u>Claims</u> |
|---------------------------------------|---------------|
| 1 Base | \$42,087 |
| 2 1% Less Than Actuary's Assumption | \$45,972 |
| 3 2% Less Than Actuary's Assumption | \$48,454 |
| 4 10% Asset Return | \$38,056 |
| 5 9% Asset Return | \$40,751 |
| 6 8% Asset Return | \$45,743 |
| 7 7% Asset Return | \$46,381 |
| 8 6% Asset Return | \$53,682 |
| 9 5% Asset Return | \$49,193 |
| 10 4% Asset Return | \$379,845 |
| 11 9% Asset Return, 9% PBGC Valuation | \$30,429 |
| 12 7% Asset Return, 7% PBGC Valuation | \$48,874 |
| 13 5% Asset Return, 5% PBGC Valuation | \$72,455 |

**Table 1B: Multiemployer Fund Surplus (Deficit) in 2012 (\$ in thousands)
by Asset Return Scenario**

| <u>Scenario</u> | <u>Surplus</u> |
|---------------------------------------|----------------|
| 1 Base | \$673,995 |
| 2 Asset Return Assumption minus 1% pt | \$665,399 |
| 3 Asset Return Assumption minus 2% pt | \$659,906 |
| 4 10% Asset Return | \$682,914 |
| 5 9% Asset Return | \$676,952 |
| 6 8% Asset Return | \$665,906 |
| 7 7% Asset Return | \$664,494 |
| 8 6% Asset Return | \$648,338 |
| 9 5% Asset Return | \$658,271 |
| 10 4% Asset Return | (\$73,380) |
| 11 9% Asset Return, 9% PBGC Valuation | \$910,316 |
| 12 7% Asset Return, 7% PBGC Valuation | \$704,594 |
| 13 5% Asset Return, 5% PBGC Valuation | \$537,779 |

**Table 1C: Multiemployer Premium Required to Maintain Current Surplus
by Asset Return Scenario**

| <u>Scenario</u> | <u>Required Premium</u> |
|---|-----------------------------|
| 1 Base | (\$0.44) |
| 2 Asset Return Assumption plus 1% point | (\$0.39) |
| 3 Asset Return Assumption plus 2% point | (\$0.36) |
| 4 10% Asset Return | (\$0.49) |
| 5 9% Asset Return | (\$0.46) |
| 6 8% Asset Return | (\$0.39) |
| 7 7% Asset Return | (\$0.38) |
| 8 6% Asset Return | (\$0.29) |
| 9 5% Asset Return | (\$0.35) |
| 10 4% Asset Return | \$3.83 |
| 11 9% Asset Return, 9% PBGC Valuation | (\$1.12) |
| 12 7% Asset Return, 7% PBGC Valuation | (\$0.49) |
| 13 5% Asset Return, 5% PBGC Valuation | \$0.19 |

**Table 2A: Present Value in 2000 of PBGC Claims (\$ in thousands)
by Asset Decline Scenario**

| <u>Scenario</u> | <u>Claims</u> |
|-------------------------------|---------------|
| 1 Base | \$42,087 |
| 14 One time 10% Asset Decline | \$59,300 |
| 15 One time 20% Asset Decline | \$60,089 |
| 16 One time 30% Asset Decline | \$186,275 |

**Table 2B: Multiemployer Fund Surplus (Deficit) in 2012 (\$ in thousands)
by Asset Decline Scenario**

| <u>Scenario</u> | <u>Surplus</u> |
|-------------------------------|----------------|
| 1 Base | \$673,995 |
| 14 One time 10% Asset Decline | \$636,305 |
| 15 One time 20% Asset Decline | \$634,161 |
| 16 One time 30% Asset Decline | \$354,944 |

**Table 2C: Multiemployer Premium Required to Maintain Current Surplus
by Asset Decline Scenario**

| <u>Scenario</u> | <u>Required Premium</u> |
|-------------------------------|-----------------------------|
| 1 Base | (\$0.44) |
| 14 One time 10% Asset Decline | (\$0.22) |
| 15 One time 20% Asset Decline | (\$0.21) |
| 16 One time 30% Asset Decline | \$1.38 |

**Table 3A: Present Value in 2000 of PBGC Claims (\$ in thousands)
by Participant Decline Scenario**

| <u>Scenario</u> | <u>Claims</u> |
|----------------------------------|---------------|
| 1 Base | \$42,087 |
| 17 Plan Experience Minus 2% pts | \$58,050 |
| 18 Plan Experience Minus 4% pts | \$59,798 |
| 19 Plan Experience Minus 10% pts | \$169,425 |
| 20 Plan Experience Minus 15% pts | \$201,705 |
| 21 Plan Experience Minus 20% pts | \$234,467 |

**Table 3B: Multiemployer Fund Surplus (Deficit) in 2012 (\$ in thousands)
by Participant Decline Scenario**

| <u>Scenario</u> | <u>Surplus</u> |
|----------------------------------|----------------|
| 1 Base | \$673,995 |
| 17 Plan Experience Minus 2% pts | \$598,224 |
| 18 Plan Experience Minus 4% pts | \$558,975 |
| 19 Plan Experience Minus 10% pts | \$234,290 |
| 20 Plan Experience Minus 15% pts | \$114,716 |
| 21 Plan Experience Minus 20% pts | (\$33,145) |

**Table 3C: Multiemployer Premium Required to Maintain Current Surplus
by Participant Decline Scenario**

| <u>Scenario</u> | <u>Required Premium</u> |
|----------------------------------|-----------------------------|
| 1 Base | (\$0.44) |
| 17 Plan Experience Minus 2% pts | (\$0.26) |
| 18 Plan Experience Minus 4% pts | (\$0.26) |
| 19 Plan Experience Minus 10% pts | \$1.85 |
| 20 Plan Experience Minus 15% pts | \$3.04 |
| 21 Plan Experience Minus 20% pts | \$5.09 |

**Table 4A: Present Value in 2000 of PBGC Claims (\$ in thousands)
by Combination scenario**

| <u>Scenario</u> | <u>Claims</u> |
|--|---------------|
| 1 Base | \$42,087 |
| 22 4 % Active Participant decline; 1% Asset Returns Rate Increase; 10% Asset Decline | \$60,345 |
| 23 6% Asset Return; and 20% Asset Decline | \$419,247 |
| 24 4% Active Participant Decline and 20% Asset Decline | \$190,766 |
| 25 5% Valuation Rate; 6% Asset Return Rate; 10% Asset Decline | \$72,558 |
| 26 4% Active Participant Decline, and 5% Valuation and Asset Return Rate | \$238,846 |
| 27 10% Active Participant Decline, 5% Valuation Rate, and 20% Asset Decline | \$308,076 |
| 28 4% Active Participant Decline, 2% Asset Return Rate Decrease, and 20% Asset Decline | \$476,724 |
| 29 10% Active Participant Decline, 5% Valuation and Asset Return Rate, and 20% Asset Decline | \$1,412,972 |

**Table 4B: Multiemployer Fund Surplus (Deficit) in 2012 (\$ in thousands)
by Combination Scenario**

| <u>Scenario</u> | <u>Surplus</u> |
|--|----------------|
| 1 Base | \$673,995 |
| 22 4 % Active Participant decline; 1% Asset Returns Rate Increase; 10% Asset Decline | \$557,762 |
| 23 6% Asset Return; and 20% Asset Decline | (\$160,567) |
| 24 4% Active Participant Decline and 20% Asset Decline | \$269,175 |
| 25 5% Valuation Rate; 6% Asset Return Rate; 10% Asset Decline | \$537,584 |
| 26 4% Active Participant Decline, and 5% Valuation and Asset Return Rate | \$152,683 |
| 27 10% Active Participant Decline, 5% Valuation Rate, and 20% Asset Decline | (\$102,339) |
| 28 4% Active Participant Decline, 2% Asset Return Rate Decrease, and 20% Asset Decline | (\$363,581) |
| 29 10% Active Participant Decline, 5% Valuation and Asset Return Rate, and 20% Asset Decline | (\$2,138,074) |

**Table 4C: Multiemployer Premium Required to Maintain Current Surplus
by Asset Return Scenario**

| <u>Scenario</u> | <u>Required Premium</u> |
|---|-----------------------------|
| 1 Base | (\$0.44) |
| 22 4 % Active Participant decline; 1% Asset Returns Rate Increase; 10% Asset Decline | (\$0.25) |
| 23 6% Asset Return; and 20% Asset Decline | \$4.33 |
| 24 4% Active Participant Decline and 20% Asset Decline | \$1.75 |
| 25 5% Valuation Rate; 6% Asset Return Rate; 10% Asset Decline | \$0.19 |
| 26 4% Active Participant Decline, and 5% Valuation and Asset Return Rate | \$2.67 |
| 27 10% Active Participant Decline, 5% Valuation Rate, and 20% Asset Decline | \$5.33 |
| 28 4% Active Participant Decline, 2% Asset Return Rate Decrease, and 20% Asset Decline | \$6.14 |
| 29 10% Active Participant Decline, 5% Valuation and Asset Return Rate, and 20% Asset Decline | \$26.09 |