

Commentary

BUFFIN PARTNERS INC.

ECONOMIC INVESTMENT AND ACTUARIAL RESEARCH

PBGC at Risk

The 2004 report of the Pension Benefit Guaranty Corporation (PBGC) discloses liabilities of \$63.604 billion, assets of \$40.063 billion and a deficit of \$23.541 billion. The deficit increased by \$12.042 billion in 2004. PBGC manages 3479 terminated pension plans and provides guaranteed benefits to 1.061 million participants under these plans. PBGC provides pension guarantees to 29,600 active single-employer plans covering 34.6 million participants and to 1600 multi-employer plans covering 9.8 million participants. PBGC receives no funds from general tax revenues. Operations are financed by insurance premiums paid by companies that sponsor defined benefit pension plans and by investment income and assets from terminated plans. The PBGC report refers to single-employer plans that are sponsored by companies whose credit quality is below investment grade and that pose a greater risk of being terminated. The aggregate unfunded exposure for single-employer plans is \$95.673 billion.

The deficit of \$23.541 billion and the exposure of \$95.673 billion represent a potential risk of default by PBGC on its long-term obligations. As operational difficulties impact the airline industry, many airline pension plans may be terminated, resulting in significant increases in the PBGC deficit. Companies in other industries anticipate that they will bear the burden of higher insurance premiums and stringent funding requirements.

A current proposal is to increase the basic annual PBGC insurance premium from \$19 for each active worker to \$30, adjusted in future in line with a wage index. It is also proposed to charge higher premiums to companies with credit ratings below investment grade that would also have to meet a higher funding standard. Current funding rules would be

modified under the proposal to use a corporate bond yield curve rate structure to value pension liabilities, effectively applying corporate bond rates that correspond to the incidence of the schedule of expected benefit payments.

In a paper by Zvi Bodie, professor of finance and economics at Boston University, that appears in the Milken Institute Review, a problem is identified concerning a mismatch between the assets and liabilities of the pension plans that the PBGC guarantees. For a pension plan to be certain of having adequate assets available to provide future expected benefit payments, the perfect matching asset would be a portfolio of risk-free zero-coupon bonds with maturity dates and amounts corresponding to the projected benefit payments. In practice however, companies discount future benefit payments at higher rates than the zero-coupon bond rates, in the belief that equities will provide a higher rate of return than bonds. But equity returns are volatile and not guaranteed. Essentially, plan sponsors that invest in risky assets are transferring the downside risk to the PBGC while retaining the prospective benefit of upside risk. Bodie illustrates the point by explaining that a pension plan may hold \$377 of assets at the present time, assuming a 5% annual rate of return, to meet an obligation of \$1000 due after twenty years. If the pension plan invests the \$377 in a 20-year zero-coupon bond yielding 5%, it will exactly match the \$1000 liability after 20 years. If however, the pension plan invests in equities, there is risk of a shortfall since equities may return less than 5%. To mitigate the shortfall risk, the company could purchase a put option to sell the stock at \$1000 at the end of the 20-year period. In effect, the PBGC is providing the value of this put option.

Attempts to allocate costs to surviving healthy pension plans, have encountered the rule of unintended consequences, whereby companies decide to opt out of the program and substitute defined contribution (DC) plans for their defined benefit (DB) plans. Indeed, the number of defined benefit plans has fallen from 110,000 in the mid-1980's to a current level of 30,000.

Increasing the PBGC insurance premiums on a per capita basis and assessing a surcharge based on a commercial credit rating is not likely to mitigate the PBGC deficit. It may instead accelerate the trend of conversions from DB to DC and result in an unsustainable position for remaining plans to provide the taxable base for assessing premiums to support the terminating plans and the emerging deficits of the PBGC. New approaches are needed for PBGC to relate premiums to the exposures and risks of insured plans. A two-part risk-related premium structure could be based on the economic value of liabilities determined on the basis of the zero-coupon treasury yield curve. The first element of the exposure would be the difference between the market value of the plan's assets and this value of the liabilities. The second part of the exposure would be based on the value of the implicit put option for the actual asset allocation of the funds and the deviation from a zero-risk position that is fully matched to liabilities by zero-coupon treasury securities.

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