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Group Variable Annuity Pension Plan

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Our basic pension concepts are being successfully challenged by Jeremy Gold and others. As a result, change will occur. These changes could relate to funding and/or plan design. I have two challenges for those reading this. The first is to critique my idea outlined below. The second is to come up with their own idea and talk to others about it.

Section 1: Basic Design and Concept:

This is a proposal to change the law on DB plan design in response to the challenges facing DB plans. The proposed design would tie benefits to funding levels. This design would be an option only and would not replace existing plan design options.

Many of the “financial economics” challenges to existing DB practices were well covered at the SOA symposium held in Vancouver on June 24 – 25, 2003 and are the motivation behind this proposal. Some of the problems I will try to address are:

1. Decline in DB plans.
2. Lack of transparency of expense.
3. Pressure to reduce (eliminate) investment in equities by DB plans.
4. Likelihood that taxpayers will fund PBGC deficit
5. Loss of pension actuarial jobs.

I do not intend to provide a solution to the current employer funding problems or the increasing cost of existing DB promises, but rather to reduce future problems. Current funding problems might best be thought of as legacy problems in separate plans (i.e., new accruals are provided by a separate plan).

My proposal starts with having future accruals include contingent indexing pre- and post-termination of employment. Liability values that include future indexing I have noted with the word “Indexed” as a subscript and values with no future indexation I have noted with the word “Basic.” I have not specified the exact nature of the index. It might cover the spread between our current valuation assumptions and those asked for by financial engineering models (e.g., 8 percent less 5 percent or part of the “equity risk premium”). However, a smaller index might be appropriate. The benefit formula and index might take the following forms:

Career Average Earnings or fixed-dollar plan with 1.5 percent annual index from date accrued.

However, the indexing would be tied to the funding level as described below. Participants would be at risk for future indexation but not base benefits or past indexing.

The value of accrued benefits assuming future full indexation I will call $ABO_{Indexed}$. There would be another measure of ABO without future indexing (ABO_{Basic}). The employer would be able to terminate the plan at any time if it just covered ABO_{Basic} . PBGC does not guarantee COLAs so its liability would be no more than ABO_{Basic} .

A given year's indexation would be based on the maximum assumed index (e.g. 1.5 percent) times $(Assets - ABO_{Basic}) / (ABO_{Indexed} - ABO_{Basic})$ (Note: the ratio should be no less than 0 and no more than 1). For example, if the funding level were halfway between ABO_{Basic} and $ABO_{Indexed}$ the increase would be half the maximum. The increase would be applied to all participants (actives and inactives).

Funding of current accruals (normal cost) would assume that all future indexation would occur (i.e. there is no NC_{Basic}). Any past indexing on prior accruals that did not occur due to funding levels below $ABO_{Indexed}$ would be lost.

We assume that the employer's expense will become based on changes during the year in unfunded ABO_{FAS} plus contributions. For expense purposes the unfunded ABO_{FAS} would be:

$$\begin{aligned} &ABO_{Basic} - Assets, && \text{if: } ABO_{Basic} > Assets \\ &\$0, && \text{if: } ABO_{Basic} < Assets < ABO_{Indexed} \\ &ABO_{Indexed} - Assets, && \text{if: } ABO_{Indexed} < Assets \end{aligned}$$

If unfunded $ABO_{FAS} = 0$ at the beginning and end of the year then the expense equals the contribution and great transparency is achieved. The difference between ABO_{Basic} and $ABO_{Indexed}$ is that the ABO_{Basic} is based on a FAS discount rate (e.g., 5.75 percent) and the $ABO_{Indexed}$ is based on a rate that is less by the amount of the indexation rate (e.g., 5.75 percent - 1.5 percent).

Our intent is to design a plan for an employer who would want to keep market value above the level of ABO_{Basic} and possibly at or above $ABO_{Indexed}$. This would put all assets to use (except those above $ABO_{Indexed}$). It also makes the expense equal the contribution, allows a margin for losses from equity investments and minimizes PBGC exposure.

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From a funding perspective we would propose the following:

1. There would be no credit balance.
2. The NC_{Indexed} would always be required to be contributed unless Assets > ABO_{Indexed}.
3. An amortization payment would also be required if Assets < ABO_{Basic}.
4. Past Service benefit improvements could not be made unless (1) the funded ratio does not change (i.e. improvements immediately funded to existing funding level) or (2) Assets > ABO_{Indexed}. This is an important feature to protect existing participants and is critical to the design.
5. Employers could always fund (deduct) up to ABO_{Indexed} (even if the contribution were more than the Normal Cost) since 100 percent goes immediately toward a real benefit promise.

Benefits could be frozen but indexation would continue unless assets fell below ABO_{Basic} or the plan was terminated.

Lump sums should be avoided but if paid would not include any future indexing unless at or near plan termination when all Assets < ABO_{Indexed} would belong to the participants.

I could tie many features of this design to comments made by most of the speakers at the Vancouver symposium since their thoughts were my motivation.

Section 2: Investment Discussion:

The employer has two objectives:

- (1) keep assets above ABO_{Indexed} in order to reduce or eliminate contributions, maximize benefits offered to employees and provide a source of funds for benefit improvements that might meet employer goals.
- (2) keep assets from dropping below the level of ABO_{Basic} to avoid extra cost/expense associated with unfunded liabilities.

Participants have an interest in keeping the funding at the level of ABO_{Indexed} to maximize indexing. When funding is at the level of ABO_{Indexed} employees might prefer all assets be fixed-income securities, which immunize the indexed liabilities. This might be difficult with long liability durations.

PBGC might always prefer fixed-income investing, especially when assets are near or below ABO_{Basic}. I suggest the following guidelines:

- A minimum amount of investment-grade fixed-income securities be set, which slides with the level of

funding. The scale would range from 80 percent when assets are at or below ABO_{Basic} to 30 percent when assets are at ABO_{Indexed}. Thirty percent of ABO_{Indexed} would be the limit if assets are above ABO_{Indexed}.

- Assets not required to be in fixed-income securities can be in any investment allowed for defined benefit plans (e.g. equities, real estate, etc.).
- The minimum fixed-income allocation would be reset (be effective) three months into the plan year based on year-end assets and projection of current liabilities from the prior year's valuation. Liabilities would be adjusted for interest rates as of the date assets are valued.

When assets are above ABO_{Basic} (particularly as they near ABO_{Indexed}), participants might view the investment in equities as the sponsor gambling with their money. However, this would be part of the initial contract.

Section 3:

Other Key Issues Discussion:

1. Those who have reviewed earlier drafts of this proposal said that their main concern was that part of the participant's benefit was at risk and possibility not within the meaning of "definitely determinable." The part of the benefit they are referring to is *future* indexation. This is indeed true. However, I would like to point out that while the COLA/indexation is at risk, almost no ERISA plan contains an automatic COLA. Therefore, what we suggest be put at risk does not currently exist as a promise to most participants.
2. Another concern is that the action of plan sponsors will negatively impact funding for the benefit of the plan sponsor at the expense of current participants. We have tried to eliminate such problems. However, the biggest remaining risk is related to investment decisions. This leads to an old discussion about what role employees should have with a plan's investment allocation. This new design does change some of the traditional arguments about who bears the risk. I have not suggested what role (if any) employees should have. However, I would ask those concerned to also consider this issue in a multiemployer setting. Regardless of whoever sets the investment policy, I would expect there to be discussion about the ratio of fixed-income investments to ABO_{Basic}, which we have tried to address above.
3. I have not prescribed a level of indexation. I think that the level should fall within the range of 1.5 percent to 5 percent per year. The lower end gives PBGC

some protection and creates some funding target above the level of ABO_{Basic} . The high end of 5 percent prevents too much of the benefit from being a promise that might not be fulfilled. However, I invite others to argue about limits. Plan amendments that lower the level of the index can also be a problem.

4. The range of indexation for funding assumptions would also be 1.5 percent to 5 percent. If the benefit were designed with fixed indexes, they would match the funding assumption. I would allow the plan provision to be tied to the CPI with a cap of no more than 5 percent. I would require the CPI-based index to be funded assuming the cap is reached in the future for $ABO_{Indexed}$. The only case where I would let the indexation of benefits be less than 100 percent of the funding assumption when assets are greater than $ABO_{Indexed}$ is when the actual CPI increase is less than the cap.
5. What might a participant think? It is likely that the initial benefit will be less due to (1) lower gross interest assumptions used to determine Normal Cost and (2) reducing net interest rates further to anticipate indexing. Therefore, a traditional plan might offer 50 percent to 100 percent more in terms of an initial benefit. This would not look as favorable to employees but must be balanced with the fact that employers are currently "voting with their feet" by walking away from DB plans.

6. Data Quality: From a participant's perspective, error in the data provided to the valuation actuary is not material under existing DB plans. However, if an employee's contribution to a DC plan is not credited to the participant's account and is allocated as earnings to other accounts, the participant does care. Because the funding level in this proposed DB plan impacts the indexing of benefits, data matters. I don't think we can cover all the data quality issues and responsibilities of the actuary. However, we would suggest that the increases be fixed once the equivalent of the Schedule B is filed.

7. Turnover and Retirement Rate assumptions: To the extent that these assumptions are the actuary's best estimate, it should be acceptable to continue to anticipate forfeitures and to assume not everyone will retire at the age that maximizes value. However, if actuaries use these as levers to minimize cost they will be counterproductive.
8. Split indexes—Pre- vs. Post-Retirement: If simplicity were all that mattered we would not suggest separate indexes be used pre- vs. post-employment. However, employers often like the fact that final average pay plans reward employees that perform better (i.e., are given the largest pay raises). For this reason, we suggest allowing an alternative to a single index. Those interested in more details on this can contact me and I will send them a longer version of my proposal. ♦

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