



Chairperson's Corner *A Good Time To Be In The Pension Business?*

by Bruce Cadenhead

A few years back, many of us were concerned that the defined benefit pension business was rapidly disappearing. Even though many of us have been very busy over the past few years, the trend away from defined benefit plans and toward defined contribution plans continues. But as the landscape continues to change, we may have some reason to be cautiously optimistic about the long-term future of defined benefit plans.

A number of trends are converging to enhance the prospect of defined benefit plans:

- As baby boomers approach retirement, retirement income and retirement security are getting more attention.
- Life expectancies are increasing. A much larger portion of our life will be spent in retirement.
- Plan terminations and the conversion of traditional defined benefit plans to cash balance plans have focused a lot of attention on defined benefit plans. This trend may enhance employee appreciation of the value of both traditional and hybrid defined benefit plans.
- Recent stock market performance points out the risk of relying too heavily on defined contribution (DC) plans for retirement security.

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Excerpts from the PBGC Actuarial Valuation Report — 2000 Fiscal Year

Editor's Note: The 2000 Annual Report of the PBGC and the complete 2000 Actuarial Valuation Report, including additional actuarial data tables, are available from Loretta Berg at the PBGC, (202) 326-4040, upon request.

The 2000 Annual Report of the Pension Benefit Guaranty Corporation (PBGC) contains a summary of the results of the September 30, 2000 actuarial valuation. The purpose of this separate Actuarial Valuation Report is to provide greater detail concerning the valuation of future benefits than is presented in PBGC's Annual Report.

Overview

The PBGC calculated and validated the present value of future benefits (PVFB) for both the single-employer and multi-employer programs and of non-recoverable financial assistance under the multi-employer program. For the single-employer program, the liability as of September 30, 2000, consisted of:

- \$10.02 billion for the 2,864 plans that have terminated
- \$2.75 billion for 10 probable terminations

Liabilities for "probable terminations" reflected reasonable estimates of the losses for plans that are likely to terminate in a future year. These estimated losses were based on conditions that existed as of PBGC's fiscal year-end. It is likely that one or more events subsequent to PBGC's fiscal year-end will occur, confirming the fact of the loss. In addition, the liability for reasonably possible terminations has been calculated and is discussed in Note 8 to the financial statements on page 38 of PBGC's 2000 Annual Report. A discussion of PBGC's potential claims and net financial condition over the next ten years is presented on pages 17-18 of that report.

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Your help and participation are needed and welcomed. All articles will include a byline to give you full credit for your effort. *News* is pleased to publish articles in a second language if a translation is provided by the author. For those of you interested in working on the *News*, several associate editors are needed to handle various specialty areas such as meetings, seminars, symposia, continuing education meetings, teleconferences, and cassettes (audio and video) for Enrolled Actuaries, new pension study notes, new research and studies by Society committees, and so on. If you would like to submit an article or be an associate editor, please call Dan Arnold, editor, at (860) 521-8400.

As in the past, full papers will be published in *The Pension Forum* format, but now only on an ad hoc basis.

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Mail both a diskette and a hard copy of your article. We are able to convert most PC-compatible software packages. Headlines are typed upper and lower case. Carriage returns are put in only at the end of paragraphs. The right-hand margin is not justified.

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Thank you for your help.

Chairperson's Column

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There has been a lot of research recently on the financial needs of retirees. As an example, see the January 2001 issue of the *North American Actuarial Journal*, which focuses on the Retirement 2000 Symposium. These research activities on the role of defined benefit plans (or on annuity-type benefits) in enhancing retirement security.

It is in our best interest to work to improve the public's understanding of the value of annuity benefits in general, and defined benefit plans in particular. We should continue to sponsor research in this area, as well as continue to develop effective communication tools for defined benefit plan participants and other retirees. Better understanding should lead to better policy (as well as better employment prospects for actuaries). As the cash balance debate illustrates, our voices need to be heard in order to present a balanced (and better-informed) view of the issues.

I'd like to take this opportunity to raise some relevant issues. Some of these are the topic of recent research. These are not necessarily new ideas within the actuarial community, but may not be widely appreciated among the general public—in particular, plan participants and employers.

Employers' decisions to move away from defined benefit (DB) plans have been driven by a number of concerns. Among these are:

- A perception that employee appreciation of defined benefit plans is not commensurate with the cost of maintaining these plans. Many employers believe that their employees do not understand the value of the pension promise because the plans are too complicated.
- The lack of portability offered by DB plans limits their appreciation among younger employees.
- The disproportionate reward provided by DB plans for service during the years immediately preceding retirement.

The trend toward defined contribution and cash balance plans is largely a response to these concerns. In particular, there has been a perception that "value" is best expressed as a current lump sum, rather than as an annual retirement income equivalent. However, account-based plans also increase the risk of a mismatch between retirement savings and financial needs. Savings may fall short as a result of poor budgeting, inadequate returns on investments, or longevity (longevity should be a good thing, not a problem!). On the other hand, it is also possible that retire-

ment savings will be more than adequate. But, since you can't take it with you, the benefits of having too much (being able to leave an inheritance) probably don't outweigh the cost of having too little. The number of people living into their 90s and 100s is increasing rapidly. Our quality of life during these years will depend, in part, on our financial resources. Annuities are particularly advantageous to those enjoying a long retirement.

Cash balance plans offer a potential advantage over DC plans in this area in that they must offer an annuity option. There is nothing to prevent a retiree from purchasing an annuity with DC assets. However, a cash balance plan may facilitate payment in annuity form by offering a favorable conversion basis — this is particularly true for women, since the plan's conversion basis must be unisex. In addition, some defined benefit plans now accept transfers from DC plans, giving DC participants the same annuity options that cash balance participants enjoy.

Currently the majority of cash balance and DC participants do not take advantage of the annuity option. The major impediments are probably a misjudging of the risk of financial ruin, and, to a lesser extent, the limited availability of inflation-indexed annuities. We find it easier to focus on, and insure against, near-term risks — the potential for loss due to fire, for example, is easy to understand, and could happen at any time. Compared to the risk of fire, the risk of future financial insolvency may appear remote and hard to quantify.

I am optimistic that we can improve public understanding of this issue. As public awareness increases, financial security should improve for retirees with account-based benefits, as more will elect to annuitize at least some portion of their benefits. At the same time, this type of public debate will shift the measure of a plan's value away from the lump-sum present value of the benefit, and toward the annual retirement annuity offered. Such a shift would enhance the viability of the traditional DB plan.

Improving public awareness of the value of defined benefit plans addresses the first of the employer concerns noted above. However, the other concerns remain. These issues point out some of the limitations of the traditional defined benefit plan. While some employees — those who have a long period of service with a single employer immediately prior to retirement — win big, other employees don't fare as well. In particular, employees with frequent career changes lose significant value because benefits with prior employers are not adjusted to reflect post-termination salary increases. Older retirees also lose out as purchasing power erodes due to inflation

(unless benefits are indexed).

One way to address these concerns would be to index benefits for inflation. Of course, simply adding a cost of living adjustment to an existing formula would greatly increase the cost. The rate of benefit accrual would have to be reduced for the change to be cost-neutral. (Such a change for an existing plan would, of course, raise significant transition issues.) By keeping benefits constant in real terms throughout a retiree's lifetime, income immediately after retirement would be lower, while income later in retirement would increase. If the plan extends inflation protection to the period between termination and retirement, then concerns about portability and disproportionate rewards for later years of service diminish. The career changer would be compensated for at least a portion of post-termination pay increases.

The close cousin to the fully indexed defined benefit plan is the cash balance plan. Both plans tend to deliver value more evenly throughout a career. The main difference is that with a cash balance plan, the focus is on the account balance, which is expressed as a lump sum. If the cash balance plan offers an indexed annuity option, and if retiree appreciation of annuities increases, then the line between the two types of DB plans blurs even further.

I present these thoughts not to advocate a particular type of defined benefit design, but to encourage discussion. The various retirement plan design options, ranging from the traditional defined benefit plan at one end of the spectrum, to the 401(k) plan at the other end, comprise a continuum. Indexed defined benefit plans and a cash balance plan with well-communicated annuity options are points on this continuum that are often overlooked. Improving the understanding of the relative benefits of different pension options is in our best interest as actuaries.

Conditions are ripe for a meaningful discussion about the role of defined benefit plans in providing financial security throughout retirement. Let's take advantage of this opportunity.



*Bruce
Cadenhead*

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Excerpts from the PBGC Actuarial Valuation Report — 2000 Fiscal Year

continued from page 1

For the multi-employer program, the liability as of September 30, 2000 consisted of:

- \$4 million for 10 pension plans that terminated before passage of the Multi-Employer Pension Plan Amendments Act (MPPAA) of which the PBGC is trustee.
- \$414 million for probable and estimable post-MPPAA losses due to financial assistance to 47 multi-employer pension plans that were, or were expected to become, insolvent.

Actuarial Assumptions, Methods, and Procedures

The PBGC continues to review the actuarial assumptions used in the valuation to ensure that they remain consistent with current market conditions in the insurance industry and with PBGC's experience. The actuarial assumptions that are used in both the single-employer and multi-employer valuations are presented in the table (on page 5). Assumptions concerning data that were not available are discussed in the data section of this report.

As in previous valuations, the select and ultimate interest rates used to value PBGC liabilities were derived by using an assumed underlying mortality basis and current annuity purchase prices. The interest rates so determined for the 2000 valuation were 7.00% for the first 25 years after the valuation date and 6.75% thereafter. For the 1999 valuation, the interest rates were 7.00% for the first 25 years and 6.50% thereafter. These interest rates are dependent upon PBGC's mortality assumption which changed from FY 1999 to FY 2000 (see below).

Beginning with the FY 1997 valuation, the mortality assumptions were updated by adopting the recommendations from a study by an independent consulting firm. This study recommended that, when conducting valuations for its financial

statements, the PBGC use the male and female 1994 Group Annuity Mortality Static Tables (with margins), set forward two years, for healthy males and females. The study also recommended that continuing mortality improvements be taken into account by using Projection Scale AA, also set forward two years, to project these tables a fixed number of years. At each valuation date, the fixed number of years will be determined as the sum of the elapsed time from the date of the table (1994) to the valuation date, plus the period of time from the valuation date to the average date of payment of future benefits (the duration). This is an approximation to a fully projected table. Thus, the mortality table used for healthy lives in the 2000 valuation is the 1994 Group Annuity Mortality Static Table (with margins), set forward two years, projected 14 years to 2008 using Scale AA. The 14 years recognizes the six years from 1994 to 2000 plus the eight-year duration of the 9/30/99 liabilities. The 1999 assumption incorporated a 14-year projection, determined as the sum of the five years from 1994 to 1999, and the nine-year duration of the 9/30/98 liabilities.

The model used to determine the reserve for future administrative expenses was changed in FY 2000 based on a study by an independent consultant.

There was no change in the assumptions for retirement ages.

The Small Plan Average Recovery Ratio (SPARR) assumptions as shown in the table on page 5 were updated to reflect the actual SPARRs calculated for FY 1998 (6.84%). The SPARRs for subsequent years are assumed to equal the FY 1998 SPARR.

The change in the method of obtaining seriatim data was the principal improvement in valuation processing for 2000. We now obtain data directly from the official Genesis database, rather than through a transitional system that mimicked the structure of the prior

PAY3000 database. This change enables us to capture a more complete data set and to utilize more fully the unique features of Genesis. Among the associated improvements in calculation are better error detection and analysis, explicit valuation of payments to be recouped by PBGC, and more accurate valuation of future lump sums.

We continued our ongoing efforts to improve the quality of the seriatim data and, as in other years, made various changes to improve the accuracy, speed, and auditability of the calculations and to integrate with the evolving PBGC computer environment.

Statement of Actuarial Opinion

This valuation has been prepared in accordance with generally accepted actuarial principles and practices and, to the best of my knowledge, fairly reflects the actuarial present value of the corporation's liabilities for the single-employer and multi-employer plan insurance programs as of September 30, 2000.

In preparing this valuation, I have relied upon information provided to me regarding plan provisions, plan participants, plan assets, and other matters.

In my opinion: (1) the techniques and methodology used for valuing these liabilities are generally accepted within the actuarial profession; (2) the assumptions used are appropriate for the purposes of this statement and are individually my best estimate of expected future experience discounted using current settlement rates from insurance companies; and (3) the resulting total liability represents my best estimate of anticipated experience under these programs.

Joan M. Weiss, FSA, is chief valuation actuary at Pension Benefit Guaranty Corporation in Washington, D.C.

ACTUARIAL ASSUMPTIONS

	Previous Valuation as of 9/30/99	Current Valuation as of 9/30/00
Interest Rate	Select and Ultimate <ul style="list-style-type: none"> • 7.00% for 25 years • 6.50% thereafter 	Select and Ultimate <ul style="list-style-type: none"> • 7.00% for 25 years • 6.75% thereafter
Mortality <ul style="list-style-type: none"> • Healthy Lives 	<ul style="list-style-type: none"> • 1994 Group Annuity Mortality Static Table (with margins), set forward two years, projected 14 years to 2008 using Scale AA 	Same
<ul style="list-style-type: none"> • Disabled Lives Not Receiving Social Security • Disabled Lives Receiving Social Security 	<ul style="list-style-type: none"> • Healthy Lives Table set forward three years • Social Security disability table as described in subpart B of PBGC Regulations on Allocation of Assets in Single-Employer Plans for persons up to age 64, adjusted to parallel the table for disabled lives not receiving Social Security benefits for ages above 64. 	Same Same
SPARR	Calculated SPARR for fiscal years for which it has been calculated. The most recent calculated SPARR is assumed for years for which the calculation is not yet completed (most recent SPARR: FY 1997 = 5.98%).	Calculated SPARR for fiscal years for which it has been calculated. The most recent calculated SPARR is assumed for years for which the calculation is not yet completed (most recent SPARR: FY 1998 = 6.84%).
Retirement Ages	<ul style="list-style-type: none"> (a) Earliest possible for shutdown companies (b) Expected retirement age (XRA) tables from 29 CFR 4044 for ongoing companies (c) Participants past XRA are assumed to be in pay status. (d) Unlocated participants past normal retirement age (NRA) are phased out over three years to reflect lower likelihood of payment 	Same
Expenses	All terminated plans and single-employer probable terminations: 1.30% of the liability for benefits plus additional reserves for cases where plan asset determinations, participant database audits, and actuarial valuations were not complete.	All terminated plans and single-employer probable terminations: 1.18% of the liability for benefits plus additional reserves for cases where plan asset determinations, participant database audits, and actuarial valuations were not complete.

QDROs with Fewer Hassles

by Mitchell I. Serota

Although qualified domestic relations orders (QDROs) have existed since the passage of the Retirement Equity Act (REA) of 1984, their usage today still generates problems in execution. Lawyers are concerned with proper documentation, actuaries are encumbered by restraints on calculations, and human resource (HR) professionals have difficulty with administration. These problems are insignificant, by contrast, to the total lack of understanding of qualified plans on the part of the divorcing couple. Actuaries can play a crucial role in assisting the couple, the attorneys and human resource professionals in alleviating the headaches spawned by splitting benefits from qualified retirement plans. In particular, there are simple steps a plan sponsor's actuary can follow to minimize complexity, thereby saving legal and consulting fees for the divorcing couple and easing their stress.

Calculating Lump Sum Equivalents

Before a QDRO is issued, actuaries are routinely asked to calculate lump sum equivalents for marital settlements, even for benefits of plans that do not offer lump sums (exceeding \$5,000) as an optional form of benefit payment. The reasoning behind this request is that all property in a marital settlement must be valued. After that is done, the parties can begin the process of dividing the property. A fair market value must be assigned to the house, RV, boat, sound system, and retirement plan. In some cases, after determining a lump sum, a QDRO is not even

prepared. In these instances, the actuary makes a computation, the participant keeps his entire pension benefit, and the spouse receives compensation from other assets.

Often a divorce attorney will seek out an independent consultant for the computation. This, however, should be the second step in the process. The first step along the discovery process should be the request of the participant's human resource director for the benefit calculation, complete with any available options, especially lump sums. Each plan participant has a right, upon annual request, to a calculation of his or her accrued benefit. However, complying with the request to compute a lump sum equivalent, *even though it is not offered by the plan*, will save time and consulting fees for the divorcing couple. Telling the attorney that the plan will not pay out the alternate payee is helpful when the QDRO is being drafted, but the marital asset nevertheless must be valued. The plan's actuary can save many phone calls by kindly revealing the plan's assumptions for actuarial equivalence.

When performing the benefit calculation for the divorcing participant, the actuary must make certain that the lawyer, human resource director and actuary all agree on the assumptions involved: dates of birth of both spouses, dates of marriage and dissolution (or proposed dissolution), date of payout (if applicable). Explicit listing of relevant salary history will assist the independent actuary called upon to review the calculation. When the



defined-benefit plan does offer lump-sum payouts in excess of \$5,000, the review will be aided by disclosing not only the interest rate used, but also the mode of change (i.e., annual, quarterly, or monthly).

Human resource directors sometimes provide a recent benefit statement to respond to the attorney's request for information because distributing statements fulfills the requirement to disclose a participant's accrued benefit. Benefit statements, however, do not always provide adequate information for a QDRO. Whereas an accrued benefit may be displayed as of a certain date, there may be inherent or even intentional underestimation in the calculation. Using such a calculation would be unfair to the alternate payee unless there are caveats attached to the statement itself.

The general idea here is to assist the reviewers of the calculation rather than to erect walls of bureaucratic procedure. The information requested by the independent actuary via the divorce attorney will ultimately be obtained, but there is no professional reason for the plan's actuary not to disclose all assumptions and inputs used in making the determination of present value.

Drafting Clear Plan Documents and Administrative Procedures

Pension actuaries can further assist in the process by using their influence to keep the QDRO provisions in plan documents easy to administer. There are enough hoops to jump through in a divorce settlement without spending massive time and fees to figure out what a plan document provides and prohibits.

Regarding the timing of distributions, §414(p) of the Code allows a

50. This provision does not often make much sense, nor is it in the spirit of REA.

If a lump-sum benefit is payable as an optional form, pension actuaries can advise plan sponsors to allow the payment to the alternate payee to be made promptly, instead of waiting for the participant to turn 50-years old. The most common practical reason for promptly paying out in a lump sum is that the weaker partner in the broken up marriage, typically the female, needs the cash and needs it now. Retirement, or planning for years down the road, is not a consideration when she has mouths to feed and perhaps has to find employment for the first time in years. When possible, however, the actuary can offer a few minutes of time to explain the ramifications of taking a lump sum now rather than deferring receipt of an annuity in the future. The mindset of the alternate payee is almost

director would be a huge help. Similarly, when revising the Summary Plan Description, assist the communications consultant to include explicit instructions for the participant to follow in the event of divorce.

Finally, once a QDRO is accepted by the plan administrator, make certain that the HR director asks for a change in the beneficiary form. Language in the plan document may be added to specify that the acceptance of a QDRO automatically nullifies the beneficiary of record. It has happened that a participant forfeited a portion of his retirement plan in a QDRO, married another person, and upon death, left the new widow to find out that the first spouse was the beneficiary.

Pension actuaries are positioned to take on an important and effective role in the divorce arena. Since the process of divorce is complicated and unnerving, actuaries should be the professional of choice in assisting HR directors and attorneys, as well as the divorcing couple, in the matter of properly dividing qualified retirement benefits and advising between lump sums and annuities. The role of the pension actuary needs to become commonly accepted practice in the area of QDROs for all concerned parties, but it is our responsibility to educate our publics of what we can do.

“If a lump sum benefit is payable as an optional form, pension actuaries can advise plan sponsors to allow the payment to the alternate payee to be made promptly, instead of waiting for the participant to turn 50 years old.”

plan sponsor to postpone a distribution to the alternate payee until the participant turns 50. Volume submitter plans, written for ease of obtaining favorable letters of determination, often complicate administrative functions. For instance, many defined contribution plans obstruct the plan from paying a lump sum to a spouse out of the participant's account balance, simply because the participant has not yet reached age

always geared to taking the money now, whether or not it is prudent. Five minutes of volunteered time could at least alert the alternate payee to some options.

Pension actuaries can also help the plan administrator anticipate divorce problems by preparing a checklist for divorcing plan participants. Translating §414(p) and Notice 97-11 into simple administrative procedures for the HR

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The Continuing Search for the “Ideal” Pension Funding

Now More than Ever, a Case for Communication Between the Actuary and the Financial Executive

by Thomas R. Benzmiller, Jeffrey A. Rees, and Frank G. Burianek

Financial executives in companies that sponsor pension plans sometimes leave the development of plan funding strategies to the actuaries, who return the “answers” (the size and timing of contributions) without full knowledge of corporate objectives. As a result, financial executives may fail to understand the range of options available for contributing to the plan, as well as the long- and short-term effects of different funding strategies. Even more complications can arise when funding for post-retirement medical benefits is combined with pension funding.

While a complex patchwork of laws and regulations governs pension funding, plan sponsors often have available a variety of contribution strategies to meet both plan funding and corporate financial objectives. A little analysis will enable the plan sponsor to capitalize on these contribution options and coordinate both short- and long-term funding strategies.

The Evolution of Pension Plan Funding Rules

The rules that govern the appropriate level of pension contributions have evolved since ERISA first mandated federal requirements in 1974. The Internal Revenue Service, through regulations and other pronouncements, expanded on the initial set of ERISA funding rules during the 1970’s and early 1980’s.

In 1987, the funding rules were significantly modified by the Omnibus Budget Reconciliation Act (OBRA), primarily to protect and improve the solvency of the Pension Benefit Guaranty Corporation (PBGC).

Further changes in the funding rules were brought about in 1994 with the passage of the Retirement Protection Act

(RPA). This law was intended to further improve the funding of single-employer defined-benefit pension plans and again reduce the financial exposure of the PBGC.

While the primary intent of all these rules was to improve the funding of underfunded plans, the cross currents of these different funding requirements have often produced unintended results for well-funded plans or plans that are in a surplus position.

Additional complications arise for plan sponsors that have elected to fund post-retirement medical benefits through a 401(h) account in their pension plan. The complexities that arise from the interrelationship between the funding rules for pension and post-retirement medical benefits further cloud the issue.

A Typical “Ideal” Funding Strategy

Before developing the “ideal” funding strategy, the plan sponsor should consider the corporate objectives that will guide the process. The following list might represent one company’s goals (its “ideal” funding strategy):

- Create a stable progression of future pension contributions, with each contribution fully deductible in the year for which it is made.
- Avoid large unexpected increases in required contribution levels from one year to the next.
- Cover the cost of the benefits earned in a year by that year’s contribution.
- Maximize flexibility with respect to the timing of actual deposits to the pension trust during a year (i.e., no quarterly contribution requirement).
- Minimize the PBGC variable premium.
- Maximize flexibility for funding



retiree medical benefits in the 401(h) account, currently and in the future.

- Ensure that benefit promises made to plan participants are in no way compromised by the contribution strategy the company adopts. This is the overriding objective at all times. However, given the financial status of many corporate plans today—very well funded due to the performance of the stock market over the past few years—this is often not a constraint.

Overview of the Process

Of necessity, any rational process for achieving contribution flexibility must begin with a basic understanding of the funded status of the plan’s benefits. As previously mentioned, the security of the benefit promises made to plan participants should be foremost in the plan sponsor’s mind.

The first step in the development of any contribution strategy always involves a determination of the value of the future benefit promises made under the plan. The key step in this process is the selection of the assumptions about future events—investment return, salary increases (if appropriate), future mortality, termination rates, disability rates, etc.

For ERISA plans, the selection of assumptions is the responsibility of the Enrolled Actuary for the plan. However, the plan sponsor is usually able to provide valuable input about future expectations that will help the actuary in the selection of these assumptions. This is a key area for dialogue between the financial executive and the actuary.

Once the assumptions are selected—in conjunction with the plan participation data and plan provisions—the present value of all future benefits is determined. It is then a simple matter to apply one of the actuarial cost methods, sanctioned by ERISA, to determine the range of contribution requirements. In this regard, the plan sponsor should realize that just as different depreciation schedules will recognize expense over various periods of time, different actuarial cost methods will also recognize the emerging cost of the plan over different time horizons. With the help of the Enrolled Actuary, the plan sponsor should be aware of the characteristics of

Legal and Regulatory Background

ERISA sets the minimum funding requirements for pension plans.

The PBGC will impose a variable premium on a plan if it fails a solvency test.

The Internal Revenue Code:

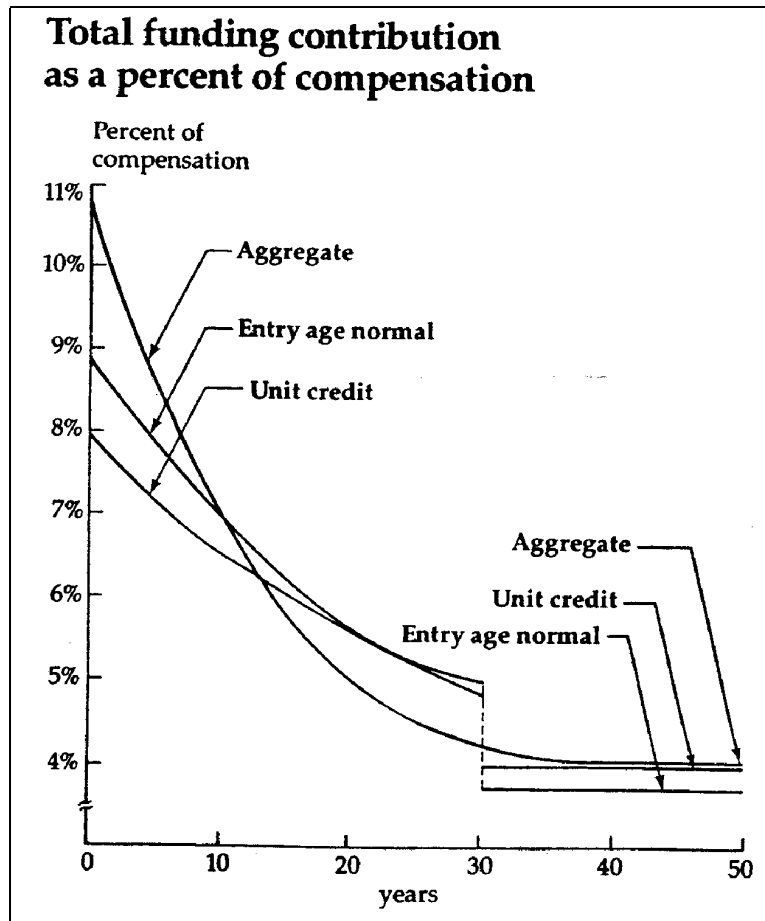
- Dictates the maximum deductible pension and 401 (h) contributions;
- Determines possible range of interest rates used in actuarial calculations required by OBRA '87 and RPA '94.

the various methods before selecting the one to follow.

The graph shows how different actuarial cost methods spread the same pension obligation for a new plan in which the number of active employees remains constant through the years. The abrupt drop at 30 years shows the point at which the unfunded actuarial accrual liability has been totally amortized. From that point on, only the annual (normal) cost

has to be paid. Note that the aggregate method never has an unfunded actuarial accrual liability.

The graph shows the most typical relationship between the costs generated by three of the most commonly used methods—unit credit starts out costing the least, aggregate the most. After the unfunded actuarial accrual liability is paid off, unit credit costs more than entry age normal.



(continued on page 10)

The Continuing Search for the “Ideal” Pension Funding Strategy continued from page 9

Year	Minimum	Maximum (RPA '94)	Spread
1995	6.55	7.93	1.38
1996	6.35	7.62	1.27
1997	6.19	7.35	1.16
1998	6.09	7.17	1.08
1999	5.62	6.55	.93
2000	5.41	6.31	.90
2001	5.32	6.21	.89

Before making a final decision, it is usually helpful to study the future implications of selecting one method over the others. The enrolled actuary can provide projections that often reveal trends and patterns that examining a single year's results would never uncover.

The development of a contribution or funding strategy involves the determination of the unfunded liabilities of a plan – which brings into play the determination of the value of the assets set aside for the payment of future benefits. Here, again, there is a wide range of options available—ranging from using full market value to spreading asset gains and/or losses over future years.

Once selected, the funding methods must generally be followed on a consistent basis from year to year. It is possible to change methods, but the IRS has established rules to prevent manipulation

of funding results. Certain method changes are automatically approved, but may occur no more frequently than once every five years. Other changes cannot be made without first obtaining explicit IRS approval, and even then frequent changes are generally not permitted.

Most financial executives are familiar with this process and have a general understanding of how the calculations unfold. These steps are the ones mandated by ERISA since 1974. The intricacies in the funding calculations brought about by the 1987 and 1994 legislation are frequently not as well-known. Both of these laws essentially incorporate a solvency test into the determination of the ongoing funding requirements of a plan to protect the interests of the PBGC. The assumptions and methods used for these calculations are markedly different from those in ERISA. They focus on the relationship of plan assets to the value of benefits accrued to date. These rules also specify a range of interest rates from which the rate to be used to value accrued benefits must be selected. This rate (based on a four-year weighted average of 30-year Treasury bond rates) has, in recent years,

tended to fall well below rates commonly used for the regular ERISA funding calculations. Any rate within this range is acceptable, but different rates create different results for a plan. This is a relatively new area in which flexibility can be achieved through judicious selection of the interest rate without any communication with or approval from the government.

Relationship of Pension and Postretirement Benefit Funding Rules

When a plan sponsor has decided to prefund post-retirement medical benefits through a 401(h) account, the interplay of the funding requirements associated with those benefits and basic pension benefits adds complexity to the calculation. Regulations subordinate 401(h) contributions to pension plan contributions: the rule states that cumulative contributions to a 401(h) account over the life of the retirement program cannot exceed 25% of the total contributions made under the plan for current service benefits (the normal cost) plus 401(h) contributions. For example, assume the following table displays the contributions and pension normal cost for a plan containing a 401(h) account (note: all amounts are in millions):

Year	401 (h)	Pension		Minimum of (1) and (2)
	Contribution	Normal Cost (1)	Contribution (2)	
1996	\$2.7	\$19	\$6	\$6
1997	\$4.2	\$26	\$33	\$26
1998	\$5.7	\$26	\$52	\$26
1999	\$5.2	\$27	\$23	\$23
2000	X	\$30	\$30	\$30
Total	\$17.8 + X			\$111

If X represents the deductible 401(h) contribution for 2000, then solving the following relationships determines the size of X:

$$17.8 + X < .25 (111 + 17.8 + X)$$

$$17.8 + X < 27.75 + 4.45 + .25 X$$

$$.75 X < 27.75 + 4.45 - 17.8$$

$$.75 X < 14.4$$

$$X < 19.2$$

Thus, a 401(h) contribution of up to \$19.2 million would be under this limit for 2000. Note that there are two other limits based on medical liabilities that may reduce this limit further.

In order to maintain maximum flexibility for contributing to the 401(h) account, pension contributions must continue at a level at least equal to the normal cost. If contributions to the pension plan drop below the normal cost, the amount that the plan sponsor can contribute to the 401(h) account will be reduced in the future.

Corporate Financial Goals Related to the Pension and 401(h) Plan

- Maintain the largest possible 401(h) contribution now and in the future in order to deduct SFAS No. 106 expenses.
- Ensure that desired contribution to pension plan is currently deductible.
- No PBGC variable minimum for the next year.
- No quarterly contribution requirement for the next year.

still has to pay a PBGC variable premium and is subject to a quarterly contribution requirement—requirements typically imposed on underfunded plans. Even though the plan is well-funded according to regular ERISA rules, the special OBRA and RPA rules make the plan subject to these requirements. The current low levels of interest rates inflate the liabilities under the solvency test giving the appearance the plan is under-

the company wants to avoid quarterly contribution requirements and minimize its PBGC variable premium.

As noted earlier, cumulative contributions to the 401(h) plan cannot exceed 25% of the total contributions to the plan. This limit and the goal of deducting the SFAS No. 106 expense dictate the range of possible contributions: the 401(h) deductible limit has to be greater than or equal to the SFAS No. 106 expense, and the pension contribution has to be greater than or equal to the normal cost in order to maximize future deductions for the post-retirement medical plan. Given these variables, the company must contribute at least \$30 million to the pension plan—the normal cost—in order to maintain funding flexibility for future 401(h) contributions.

To eliminate a PBGC variable premium and avoid paying quarterly contributions, two other tests must be met:

- The contribution to the pension plan must be enough to bring the value of assets equal to the actuarial accrued liabilities at year end under the regular ERISA rules (i.e., the plan must be “fully funded”), and
- Under the solvency test, assets must be at least equal to the accrued benefit liabilities using an interest rate from within the IRS range of permissible rates.

Pension Plan Funded Status (Regular ERISA Rules)

Assets	\$420
Actuarial Accrued Liability	<u>\$413</u>
Surplus	(7)
 Normal Cost	 \$30

(note: all figures in millions)

Case Study

The relationship between these different sets of funding rules—the basic ERISA ongoing funding measurement, the OBRA/RPA solvency test calculations, and 401(h) funding calculations—sometimes creates problems for a plan sponsor. Consider a company that funds both pension and post-retirement medical benefits in its pension plan. Although the pension plan is well-funded, the company

funded when under the regular ERISA rules there is a \$7 million surplus.

Assume the plan sponsor has adopted the “ideal” funding strategy previously mentioned with one additional goal: full deductibility of its SFAS No. 106 expense. Thus, it wants to ensure the desired contribution to the pension plan is fully deductible. It also wants the future 401(h) deduction limits to be as high as possible so that it can contribute and deduct the SFAS No. 106 expense each year. Finally,

The Continuing Search for the “Ideal” Pension Funding Strategy continued from page 11

Pension and 401(h) Contribution Options (note: all amounts in millions)			
	Scenario 1	Scenario 2	Scenario 3
Solvency Test Interest Rate	6.31%	5.41%	6.26%
Maximum Deductible Pension Contribution	\$ 25	\$ 133	\$ 30
Variable Premium Exemption Contribution	\$ 25	\$ 75	\$ 25
Quarterly Contribution Exception	Yes	No	Yes
Maximum 401(h) Deduction Limit	No	Yes	Yes

In order to achieve these corporate goals, a number of solvency interest rates were tested to find the one that would achieve the best results. Often the enrolled actuary, in the absence of additional information from the financial executive, will automatically use the highest possible interest rate, but OBRA and RPA provide a range of interest rates. Choosing a different interest rate results in different amounts for the maximum deductible pension contribution, the necessary contribution to be exempt from paying the PBGC variable premium, and exemption from three different scenarios using three different interest rates were developed from the permissible range of 5.41% to 6.31%. Scenario 1 set the rate at the maximum. Scenario 2 used the minimum rate and Scenario 3 used a rate designed to achieve all the company's goals. Each scenario changed how, and if, the company could meet its corporate financial objectives regarding the contribution strategy. In each scenario the contribution for maximum 401(h) funding flexibility was \$30 million.

Scenario 1

In the first scenario, the interest rate was set at the top of the range: 6.31%. Often this is the way the enrolled actuary selects the rate (without guidance from the financial executive, this rate is chosen to produce the lowest possible liability).

This produced a maximum deductible contribution to the pension plan of \$25 million. To avoid a PBGC variable premium, the company must contribute at least \$22 million—the “full funding” limit under the ERISA rules. Under this scenario, the company was exempt from the quarterly contribution requirement. However, under this funding scenario the goal for 401(h) funding flexibility was not achieved: the maximum deductible pension contribution was less than the pension normal cost of \$30 million.

Scenario 2

The second scenario used the lowest possible interest rate of 5.41%. This rate generated a maximum deductible pension contribution of \$133 million and required contribution of \$75 million to avoid a PBGC variable premium. The plan would

not be exempt from the quarterly contribution requirement unless a contribution of \$133 million was made—well in excess of the desired contribution level. While this scenario allowed for a very large contribution by the company, it made the contribution for PBGC variable premium exemption 240% greater than the amount needed to maintain the maximum possible 401(h) deduction limit.

Scenario 3

After some analysis the enrolled actuary (in consultation with the financial executive) set the interest rate .05% below the maximum interest rate possible. This produced a maximum deductible pension contribution equal to the \$30 million, and it set the necessary contribution for variable premium exemption at \$22 million. This scenario also left the company free of the quarterly contribution requirement. Under this scenario the company achieved all its corporate financial objectives.

Conclusion

Funding options for pension plans lie within a tangle of laws and regulations that become even more snarled with the introduction of post-retirement medical benefits. ERISA, OBRA, and RPA have each added a set of standards and requirements that apply to these plans. Navigating these standards can be a daunting task, yet there are options that can be used to optimize contribution strategies. Possible means of optimization range from a change to another actuarial cost methods sanctioned by ERISA to selecting the appropriate solvency test interest rate. The use of these tools can allow plan sponsors to achieve their contribution strategy and thus further overall corporate financial objectives.

However, none of these objectives can be achieved if the enrolled actuary and financial executive do not discuss and analyze the company's funding goals together. A little planning before the calculation process has begun can go a long way to finding the "ideal" funding strategy.

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2001 Enrolled Actuaries Meeting Session 406 - Multi-employer Plans

March 20, 2001

by Pam Marlin

Editor's Note: This panel discussion featured two consultants and three IRS representatives. The session was more formal than the related Session 606 and concentrated more on compliance.

The IRS was looking to issue the multi-employer plan guidelines in final form shortly at the time of the meeting. Some tips on avoiding common errors were given. Not only should there be a system in place to satisfy the compliance rules, but it should be documented and there should be evidence that it is followed. Collective bargaining agreements need to be reviewed to make sure that they are not in conflict with the plan document. Locator services should be used to find participants who have turned age 70 1/2 and who have not yet applied for their benefits. Suspension of benefits notices must be given to participants continuing to work beyond their normal retirement date. Benefits lost prior to the issuance of the notice must be made up. The IRS representatives responded informally to several prepared questions:

If a retroactive amendment is adopted following the close of a plan year to cure deductibility problems, it must be made retroactive to the beginning of the year if the cost of the amendment is to be deductible for the year. Also, anyone retiring during the year must have his or her benefits recalculated to reflect the terms of the new amendment.

A multi-employer plan can establish the deductibility of contributions that would otherwise exceed the deductible limits for multi-employer plans under the 90% of current liability funding threshold rules using the interest-rate assumption at the bottom of the statutory corridor. However, this same interest rate must then be used for determining the full funding limits for meeting minimum funding requirements.

2001 Enrolled Actuaries Meeting - Session 606 Multi-employer Plans Workshop

March 20, 2001

by Pam Marlin

Editor's Note: This session was related to Session 406 - Multi-employer Plans but was structured as more of a workshop than a panel discussion.

One topic of interest was keeping contributions within the minimum required/maximum deductible corridor in the current economic environment. Until last year, huge gains in the stock market sent many plans into full funding, an event that normally causes little concern in the single employer sector. However, contributions to multi-employer plans are normally fixed over the life of the collective bargaining agreement. If the full funding limit applies, a benefit increase may be required to keep these contributions deductible. One approach to benefit increases was to note that investment gains are past experience and should only be used to increase past service benefits, not a bad idea in light of the recent stock market reversal.

There was a strong feeling that an asset smoothing method best serves these plans. Practitioners using one of these methods delay full funding restrictions on maximum deductible contributions during upswings in the market and help to soften the impact of dramatic downturns in the market on minimum funding requirements.

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Pension Forecasts, Part 2: The Model Has No Clothes

by Lawrence N. Bader

Editor's Note: In the previous issue of this newsletter, Part 1 of this article described a simplified problem in pension plan financing and presented two questions about how that pension plan can be modeled. The questions are repeated here, together with answers.

Consider this simplified pension plan and funding system. The liabilities consist of a single known benefit payment to be made 20 years from today. That benefit payment can be matched in timing and amount by a portfolio of 20-year zero-coupon Treasury bonds with a market value of \$1 million. The plan assets also equal \$1 million.

The company will make no interim contributions to or withdrawals from the plan. At the end of year 20, the company will wind up the plan by withdrawing the surplus or contributing to cover the deficit. (We ignore taxes and assume that there is no risk of default by the company.¹)

The corporate sponsor of this plan asks for your help. The assets are currently invested in the matching Treasury portfolio, which will ensure full funding of the plan with a zero company cost. The sponsor believes that, over a 20-year horizon, equity investments would give rise to potential withdrawals that greatly outweigh the potential contributions, in both probability and magnitude. So he asks you *Question #1: Ignoring taxes, how would shifting the \$1 million from Treasuries into equities affect shareholder value?*

You decide to use a pension forecasting model. You prepare a series of 20-year simulations that show a range of terminal company contributions or withdrawals. To provide a single answer to Question #1, you need to discount each of these terminal payments to a present value. This presents *Question #2: What*

discount rate should you use—the Treasury yield, the expected return on the plan assets, the company's borrowing rate, the company's weighted average cost of capital, or some other rate?

Answers

At the end of year 20, the company will withdraw from the plan an amount equal to the cumulative change in the assets minus the cumulative change in the liability (or contribute the difference, if negative). Because the matching Treasury portfolio mimics the liability, we can think of the withdrawal as the total asset return minus the total return of the matching Treasury portfolio (the "liability return"). If the assets are in fact invested in that matching Treasury portfolio, the asset and liability returns are of course identical and the withdrawal is zero. If the assets are equities, readers familiar with swaps will recognize that the company is engaging in a simple debt-for-equity swap, paying the return on a specific Treasury portfolio and receiving the return on an equity portfolio of equal size. *The value of such a swap is zero. Therefore the proposed equity investment would leave shareholder value unchanged.*

This result may seem quite counter-intuitive to those who have not studied swaps, and a simple swap illustration may be helpful. We ignore tax considerations, transaction costs, and other frictions, and assume that you and I both have flawless credit—we can borrow at Treasury rates.

Let's agree to engage in the following swap transaction:

I'll pay you the return of the S&P 500 on a \$1 million investment for the next 20 years (or I'll collect from you if the return is negative). You'll pay me the return on \$1 million of 20-year zero-coupon Treasury bonds. Although swaps are



commonly for shorter periods with periodic interim settlement, we'll duplicate the pension problem by waiting and settling the entire difference at the end of 20 years.

Both history and common sense indicate that you're much more likely to collect than to pay, and your likely collections are much larger than your likely payments. It seems that you are receiving, and I am paying, something with a substantial positive present value. So, would it be fair for you to pay me a little extra to get this deal—say, 2% annually on top of the Treasury return?

The correct answer is that the swap is a fair deal and no additional payment is appropriate. We can show that the swap is fair by demonstrating that I can hedge my position:

1. I borrow \$1 million at the Treasury rate, with all interest and principal due in 20 years.
2. I invest the loan proceeds in the S&P 500. During the next 20 years, I earn the S&P return on my \$1 million investment.
3. I pay that S&P return to you in exchange for 20 years of Treasury bond interest.
4. I use that interest plus the original \$1 million investment to repay my loan.

This hedge assures me of breaking even on the swap. If you're willing to

give me any extra payment beyond the Treasury bond interest, I can pocket it as pure and certain profit, which I make without putting up any capital or taking any risk. Therefore my offer to pay you the equity return minus the Treasury bond return has a true present value of zero. (These results can easily be generalized to any pair of marketable portfolios and any length period, and the swap market reflects this zero present value.)

To put the matter in its starkest form, *\$1 million worth of equity is not worth more than a \$1 million worth of Treasury bonds. Current shareholder value is unaffected when the company replaces one with the other, or with any other marketable asset.* (A change in investment strategy can affect shareholder value if other factors, such as corporate taxation and PBGC premiums, are considered.) The corporation can hope, even expect, that the equity will be worth more in the future than the Treasuries, but *that higher expected return is only anticipated compensation for bearing risk, not additional present value.*

Question #2, the discount rate for company withdrawals (or contributions), becomes moot in our example, because we have determined from general principles that the true present value of the company's withdrawals must be zero. The expected equity return exceeds the Treasury return, so the company withdrawal, before discounting, has a positive expected value. The expected value remains positive after applying any single finite discount rate. We conclude that *any single finite discount rate gives a positive and therefore incorrect discounted present value of the company withdrawals, just as it would incorrectly attribute a non-zero value to a swap.*

Although the correct expected present value of the company cost is zero, we may still wish to discount the individually simulated paths to understand the risks inherent in the distribution of costs around their zero mean. Is there any

discounting procedure that enables us to observe the distribution while preserving a zero mean? Corporate finance principles require that a discount rate reflect the risk of the cash-flow stream to which it is applied. For example, we would discount the scheduled flows from a noncallable bond at the market yield appropriate to the bond's quality, and the discounted value would be the fair market price. By discounting expected equity returns at the expected equity return rate, we similarly arrive at the market value of the equity.

In our pension fund example, the cash flow that we seek to discount is actually the difference between two flows—the asset return and the liability return—with different risks. We must recognize that these two components should have separate discount rates to reflect their different risk levels. We can then discount each simulated terminal value of assets and liability, as the market does, at its own appropriate discount rate—we discount the Treasury bond maturity value (liability value) at the Treasury rate, and the simulated terminal asset values at the expected asset return rate.²

On any particular simulation, the discounted terminal asset value may differ from the initial market value, but the expected discounted value will equal that initial market value. For each simulation, we can then net the separately discounted values of terminal assets and liabilities, with a correct expected net present value of zero.³

The standard pension modeling practice of using a single discount rate or yield curve gives the wrong answer: It fails to adjust for the different risks of the asset and liability components of cost, and would therefore show a net present value gain for any asset reallocation (or swap) that raises expected return.

The simple model presented in this article does not offer a unique or all-purpose solution to forecasting questions. It serves two lesser purposes: to illustrate some financial principles regarding the valuation of risky cash flows that any

model must respect—arbitrage-free pricing in particular—and to provide a setting in which a model may be tested for compliance with these principles. In real-world pension funding, various deferrals mask the underlying exchange of liability returns for asset returns. But to the plan sponsor, the financial essence of funding remains a swap, which customary pension discount methodology clearly misvalues. So our final question: *If traditional actuarial models and techniques stumble over questions about pension cost and asset allocation for the simple case described here, is there any reason to think that they get it right for real-world pension plans and funding practices?*

Lawrence N. Bader, FSA, is a retired member of the Society of Actuaries, and can be reached at larrybader@aol.com.

Footnotes

- 1) The assumption of no default risk was inadvertently omitted from Part 1 as published in the previous issue. The discussion following initially reflects this assumption, but a footnote explains how to adjust for default risk.
- 2) If the corporate sponsor has default risk, we use its own borrowing rate rather than the Treasury rate on the unfunded portion of the terminal liability. (An unfunded liability can arise only if the assets are *not* invested in the matching Treasury portfolio.) This higher discount rate lowers the liability. By investing in risky assets, the sponsor can then show an average *gain* on the plan, with a corresponding loss to the participants or guarantee agency.
- 3) Interpreting the results of individual simulations raises some interesting issues that are outside the scope of this brief article.

Joint Meeting Committee on Retirement Systems Research (CRSR) and Committee on Retirement Systems Professional Education and Development (CRSPED) Minutes

January 12, 2001, Sheraton Crescent Hotel, Phoenix, Arizona

Members Present: Joe Applebaum, Bob Campbell, Gerry Campbell, Ho Kuen Ng, Anna Rappaport, Zenaida Samaniego, Kevin Shand, Arnold Shapiro, Diane Storm

Members on conference call: Kevin Binder, Kelley McKeating, Marilyn Oliver, Beverly Rose

Non-Members on conference call: Joe Anderson, Chris Bone

Staff present: Judy Anderson, Tom Edwalds

I. Administration

- 1. Welcome
- 2. Minutes – Minutes of the October meeting in Chicago were prepared by Bob Campbell. These minutes, with minor adjustments, were approved by the joint committee. Gerry Campbell agreed to take minutes for this meeting. Diane Storm volunteered to take minutes at our next meeting.

3. Future meetings – Zenaida reconfirmed the following schedule for 2001:

Washington D.C. -
 March 21-22 (Wed./Thur.)
Dallas -
 June 1-2 (Fri./Sat.)
New Orleans -
 Oct. 24-25 (Wed./Thur.)

4. Membership – Zenaida announced several membership changes. New members welcomed to the committee were: Kevin Binder, Kelley McKeating, Diane Storm, and Joseph Wang. Members retiring from the committee

are: Mary Adams and Gerry Campbell.

5. World at Work Presentation – At the invitation of Anna Rappaport, guests Liz McIntyre and Joanne Frigillana each made a presentation to the joint committee highlighting the common goals of their organization and our committees. World at Work, formerly the American Compensation Association and Canadian Compensation Association, is dedicated to knowledge leadership in “total rewards” (which includes compensation, benefits and the work experience). World at Work will be conducting an e-mail survey of their members relating to Retirement Education and Advice. World at Work will participate in the upcoming Retirement Symposium expected this fall.

6. Research Funding – Tom Edwalds reviewed the budget allocation to date against the actual 2001 Budget of \$70,000. Projects budgeted and amounts are as follows:

Turnover and Retirement Rates (Phase 3)\$20,000
Demography and Rates of Return10,000
Retirement Risk Survey	...10,000
Self Annuitization and Retirement Review10,000
Mortality Risk Analysis7,500
<u>Committee Expenses</u>7,500
Total Allocated for 2001	...\$65,000

II. Chairs’ Report

1. Joe Applebaum provided an update on issues discussed at the most recent Retirement Systems Practice Advancement Committee Meeting.



III. Current Topics

1. Macrodemographic Models Feasibility Study – Joe Anderson has completed the Appendix and expects to complete the individual model chapters by March 15th. Ed Husted will perform the actuarial review. Joe agreed to present an overview of his report at our next joint committee meeting on March 22 in Washington D.C.

2. Professional Development (PD) Implementations – Judy Anderson reported that CRSPED is progressing on its plan for additional pension seminars in 2001.

3. Annual Meeting 2001 sessions – Judy distributed a listing of the proposed Annual Meeting session topics. Several committee members immediately volunteered to draft descriptions, recruit speakers, and organize sessions. At least 9 pension topics are planned.

4. Asset Valuation “Call for Papers” Phase 2 – Judy reported that we are still waiting on two important papers to be finalized. The committee expects to ultimately publish all papers in *The Pension Forum*.

5. Cash Balance "Call for Papers" Phase 2 – Judy noted that all papers are expected to be completed by March 31st and a presentation will be made at the Dallas Spring Meeting in June.

6. Retirement Risk Survey – Marilyn Oliver gave a summary of the recent work with AARP, LIMRA, and EBRI relating to issues such as retirement needs and risks of outliving assets during the post-retirement period. In addition, questions on finances and retirement were submitted for the Health and Retirement Survey (HRS) to adults over age 50, as requested by the research team at the University of Michigan.

7. Mortality Projection – Marilyn outlined the approach this project team will take. Typically, pension actuaries do not incorporate mortality improvement assumptions into annual valuations, but where appropriate, make incremental changes every several years. Marilyn's team will prepare analyses based upon a simple pension plan and use the PUC cost method to determine the materiality of the error introduced in pension plan valuations by not projecting mortality improvements when mortality is, in fact, improving. Contribution rates, mortality gains and losses, and funding levels are all being studied. Marilyn hopes to have a draft report for our March meeting.

8. Turnover and Retirement Rates Phase 3 – Kelley McKeating updated the committee on the data request sent to 40 actuarial firms in the U.S. and Canada. Responses have been received from over ½ of the firms (roughly 10 responded yes). The committee discussed issues around Phase 1 (data clean up) and Phase 2 (data analysis). A decision on the researcher is expected by the end of March (when the data collection process is completed).

9. Group Annuity Mortality – Gerry Campbell reported that the 1995-1996

Group Annuity Experience Study was finalized and the final report can be located on the SOA Web site.

Canadian Pensioners Mortality Study – Tom noted that Louis Adams recently completed his paper covering Canadian mortality from 1978 - 1992. Tom will provide the committee with a copy.

10. RPEC Update – Diane Storm noted that the RPEC will soon commence the next five-year mortality study to cover the period 1995-1999 (RP 2000 was based upon data from 1990-1994). The RPEC is considering whether future data should be requested on a more frequent basis (annually?). Discussions ensued relating to high age mortality, impact of the lag in reporting of deaths and expanding the data request to include possibly Civil Service plans and military plans.

11. PSC Update – Judy presented some new and exciting ideas that the PSC is exploring. For example, there may be a Pensions Basic Course that can be taken online on the SOA Web site. The PSC is expecting to roll out their newsletter electronically later this year.

12. Demography and Rates of Return - Judy reported that there will be a conference call in February which may be followed by a literature search.

13. Retirement Implications of Demographic and Family Change "Call for Papers" There were 24 abstracts submitted and 16 have been selected so far. There will be a meeting in February to set up plans for the conference in the fall. Judy noted that there are 17 co-sponsors of the conference. Both World at Work and the SOA will be awarding prizes for the best papers.

14. Mortality Risk Analysis – Bob Campbell reported that the Social Security Committee and the CRSR will be joint sponsors for this project. A

conference call last November discussed sources of data in place and the desire to conduct a "mini-RFP" for a literature search.

15. Pension Actuary's Web page – Judy disclosed that the PSC gave very positive feedback on the proposed Web page relating to links, resources, and the lists of educational opportunities.

IV. New Topics

1. 30-Year Treasuries – Judy advised that the next step is to coordinate efforts with the AAA (Ed Burrows) and the PSC (Tom Lowman). Initially, this project will involve identifying alternative approaches to the current use of the 30 year Treasury rate for valuing pension liabilities.

2. Deferred Retirement Option Programs (DROPs) – Judy distributed a copy of a proposal submitted by Tom Lowman. The purpose is to study current DROP plan designs and funding (these plans fall generally into the public sector). The committee concluded that more detail on current usage and whether they are designed to be cost neutral is necessary before proceeding. The committee also felt that, if it would be more appropriate to submit this idea through the CKER grants competition, it would be sent out as an RFP.

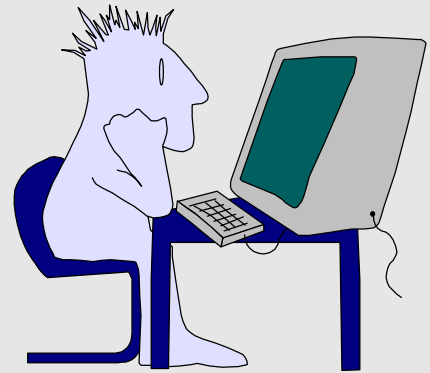
3. Self-Annuitization and Retirement Ruin (SARR) – Judy provided copies of a note from Tom Lowman on the issue of self investing versus annuitizing retirement assets. The committee felt this was a good idea that needed to be fleshed out. Judy will set up a conference call that will include Tom Lowman, Arnold Shapiro, and Tom Edwalds.

Joint Board for the Enrollment of Actuaries
Department of Labor
Department of the Treasury
Department of the Treasury Internal Revenue Service
Washington, D.C. 20224

April 26, 2001

Announcement of New Website

The Joint Board for the Enrollment of Actuaries is pleased to announce that it has recently established a website. The site contains information for the enrolled actuary and for the individual who wishes to become an enrolled actuary.



How do you access the website?

- Go to *www.irs.gov*. This is the Digital Daily, which is the Internal Revenue Service homepage.
- Click on Tax Info for Business
- Then click on Tax Professionals Corner
- Finally click on Joint Board for the Enrollment of Actuaries

What can be found on the website?

- The latest news from the Joint Board
- How to become an enrolled actuary
- The application form to become an enrolled actuary
- Information about the Joint Board examination program including how to study for the examinations
- Past Joint Board examinations
- Regulations governing enrolled actuaries
- Renewal of enrollment information

2001 Meeting Editors Wanted

Are you interested in reading 2000-2001 SOA meeting manuscripts in your specialty areas (Pension) before they are published onto our Web site? Do you want an opportunity to increase your professional actuarial knowledge and exposure to current ideas? If so, this volunteer position is for you.

What would I do?

Review *Record* manuscripts that have already been edited for grammar, style, and format for actuarial content and accuracy. Work with SOA staff and moderators to help us get the *Record* sessions onto the SOA Web site faster.

What do I need?

A red pen and actuarial knowledge in the following areas: Actuary of the Future, Financial Reporting, Health, Health Disability Income, Investments, Long-Term Care, Management and Personal/Professional Development, Nontraditional Marketing, Pension, and Reinsurance.

How much time will it take?

It takes a few hours to review papers. We only send one or two manuscripts at a time depending on your workload. You can choose 1-3 meetings.

How can I sign up?

Contact the Chairperson, Rich Cruise at 402-361-7499 or by e-mail at: rcruise@LincolnDirectLife.com.

Do it now!

You'll be listed in the *Yearbook* as a member of the Editorial Board and your name will appear in the meeting Table of Contents on the SOA Web site.



Tax Bill Includes Pension Reforms

Pension provisions in EGTRRA, signed into law 6/7/2001, include:

- New rules for notices of plan amendments reducing future benefit accruals, effective immediately.
- \$160,000 benefit limitation, effective for limitation years ending in 2002 (i.e., starting in 2001 for non-calendar years).
- Increases in other limitations, effective for years beginning in 2002.
- Other rules affecting vesting, distributions, funding, deductibility, and other areas, including tax credits and new opportunities for retirement savings.

A summary of EGTRRA's pension provisions is available on the SOA Web site at <http://www.soa.org/sections/egtrra.html>. Pension provisions of EGTRRA are among the topics actively being discussed in the pension portion of the SOA Discussion Forum at <http://www.soa.org/forumlink.html>.

Continuing Education Update

by Barb Choyke

2001 IS THE LAST YEAR OF THE THREE-YEAR TERM (1999, 2000, 2001) ENROLLMENT CYCLE FOR EA'S

Here it is already June and half of the year is already gone! In fact, the Dallas Spring Meeting is just a memory; and a good memory at that. So, let's begin by planning for the remaining six months of 2001. Continuing education is important for all of us. It takes many forms from reading pertinent articles about concepts and issues that make us more effective and efficient in our jobs to attending more formal educational programs that may be conducted in a designated meeting room. Whatever method works the best for you should be in your annual continuing education plan. A combination of methods allows you to learn from a variety of sources and take advantage of the delivery methods that fit within your schedule. The staff at the Society of Actuaries office has been working on creating a variety of formats to help make the learning process as simple as possible. The list below indicates what's been developed to date. Watch the SOA Web site (www.soa.org) click meetings and seminars and a list of current programs will provide up-to-date topics, dates, locations, and registration information).

For those of you still needing to pick up a few enrolled actuaries credits, here's a quick reference. (Please don't wait until December to fulfill those last few credits needed to keep your EA current.)

Seminars

June 26-28

Asset Liability Management
Wharton School

July 12

Pension Reform (Update)
Teleconference

July 16-17

Mergers and Acquisitions
Chicago

September 24

Experience Analysis
Philadelphia

October 1-2 or 4-5

Executive Compensation
Toronto

November 29-30
Retirement Implications of Demographic and Family Change
Orlando

Seminars Under Construction

- Pensions from the Employee/
Employer Perspectives
- Retiree Group Benefits

Annual Meeting EA/Retirement Sessions

Monday, October 22
10:30 a.m. - 12:00 noon

15PD
Late Breaking Developments
45 Core/45
NonCore

19WS
Current Plan Sponsor Concerns
90 NonCore

2:00 p.m. - 3:30 p.m.

34PD
Insured Female Mortality-What is Really Happening
90 Core

37IF
Aging Societies and Public Policy
90 NonCore

40RP
Mock ABCD Hearing
90 Core

Tuesday, October 23
8:30 a.m. - 10:00 a.m.

62PD
Changing Patterns of Retirement
90 NonCore

66RP
Who is Your Client?
90 Core

10:30 a.m. - 12:00 noon

81PD
Best Places to Work: Public Perceptions About Long-Term Security
90 NonCore

82BG
The Future of Mortality
90 Core

87 TS
Why Don't They Comprehend My Communiqués? Business Writing for Actuaries
90 NonCore

2:30 p.m. - 4:00 p.m.

103PD
Post-Retirement Risks and the Products to Manage Them
90 NonCore

108TS
New Mortality Tables for Pension Plans
90 Core

Wednesday, October 24
8:00 am - 9:30 am

132PD
Investment Strategies to Maximize Yield
90 NonCore

135PD
Actuarial Standards—What's New in Pension Work
90 Core

137PD
Global Retirement Issues and Research
90 NonCore

138WS
Actuarial Software Quality Assurance
90 NonCore

10:00 am - 11:30 am

147PD
Hybrid Plan Issues
45 Core/45
NonCore

148PD
Modeling Retirement Needs
90 NonCore

12:00 noon - 1:30 pm

159WS
What's New with Public Pension Plans
90 NonCore

161V
Lump-Sum Topics: An Encore Presentation
90 Core

EA Questionnaires

Audio tapes and accompanying questionnaires are available for EA credit from 1999, 2000, and 2001. These are tapes and questionnaires from Spring and Annual Meeting sessions, teleconferences and seminars. Check the SOA Web site www.soa.org and click meetings and seminars; once there, scroll down to EA Questionnaires and click to open the order form.

