PENSION SECTION NEWS

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Discounting Pension Liabilities under the New SEC Rules

by Lawrence N. Bader

Editor's Note: *This article is a condensation of* Introducing the Salomon Brothers Pension Discount Curve℠ and the Salomon Brothers Pension Liability Index:℠ Discounting Pension Liabilities and Retiree Medical Liabilities Under the New SEC Interpretation, published by *Salomon Brothers Inc., March 1994.*

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The March 1994 issue of *Risks and Rewards* (the Investment Section newsletter) explains two approaches to the new SEC guidance on discount rates under *SFAS 87* and *SFAS 106*. This article introduces two indexes that Salomon Brothers has developed to deal with the resulting compliance and investment issues.

The Salomon Brothers Pension Discount Curve

The Salomon Brothers Pension Discount Curve is a set of yields on hypothetical double-A zero-coupon bonds whose maturities range up to 30 years. A plan sponsor can use these yields to discount the pension cash flows. Figure 1 depicts the

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A U.S. Perspective on Goode

by Thomas Z. Reicher

Editor's Note: *This article originally appeared in the November 1993 issue of* British Pension Lawyer *and is reprinted with permission. It was written while Mr. Reicher was on sabbatical leave in the U.K.*

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The U.S. has already had its Maxwell scandal, its Goode Report and its Pension Reform Act. In that fact perhaps lie some lessons for the U.K. as it contemplates the reform of its pension system, since a number of the reforms, or variations thereon, proposed by the Goode Report, for better or worse, have been in place in the U.S. for some time.

Thirty years ago in the U.S., the closing of a Studebaker plant and the termination of its pension scheme the following year left over 4,000 workers with benefits reduced by 85 percent because of the final salary scheme's underfunding. This crisis, followed by various instances of misuse and theft of pension scheme assets, ultimately led to the enactment in 1974 of the Employee Retirement Income Security Act (ERISA).

ERISA is a comprehensive statute that imposes both substantive and procedural requirements on pension schemes and those individuals and institutions who are responsible for the administration of benefits and the investment of assets. I have selected four areas in which ERISA and the U.S. experience bear directly on an issue raised by, and a recommendation contained in, the Goode Report. These are compensation, information for scheme members, dispute resolution, and the prudent person standard.

Compensation

This is an area most obviously triggered by the Maxwell scandal. In the U.S., the mismanagement of assets by two New Jersey pension funds, which diverted assets to "charitable organizations" in Liberia and Puerto Rico, is an example of the sort of behavior that prompted the compensation scheme of ERISA.

That scheme is twofold: bonding of every scheme fiduciary and of every other person who handles pension funds; and guarantee of the payment of pension benefits by a quasi governmental entity, the Pension Benefit Guaranty Corporation (PBGC). ERISA requires that a bond shall be in place protecting the scheme against loss by reason of acts of fraud or dishonesty on the part of a scheme official, whether directly or through connivance with others. The amount of the bond is to be fixed at the beginning of each year and shall not be less than 10 per cent of the amount of funds handled, with a minimum of $1,000 and a maximum of $500,000 (although it is possible that the Secretary of Labor can prescribe an amount in excess of $500,000). The U.S. Department of Labor has issued rather extensive regulations prescribing the way in which one determines the proper amount of the bond and setting forth some standard provisions of such bonds.

My experience is that so-called ERISA bonds are readily obtainable and are not perceived by employers as being expensive. However, one

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Letters to the Editor

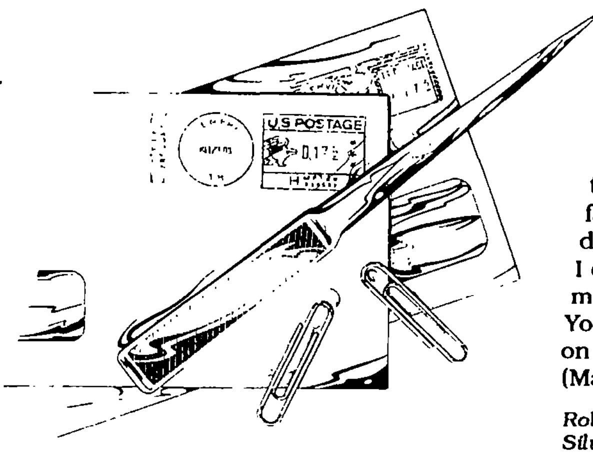
"Pension Funding Simplification ... Proposal"

Dear Dan:

James G. Berberian's proposal regarding pension funding simplification (*Pension Section News*, March 1994, p.7) is useful, but doesn't go nearly far enough toward achieving true simplification. I propose that the IRS develop a computer program for calculating minimum required and maximum deductible contribution amounts for qualified defined-benefit pension plans. Each year sponsors would be required to submit a plan summary and demographic data on magnetic media to the IRS, which would run the data through its program and transmit back to the sponsor the minimum and maximum contribution amounts. Now that's real simplification.

Of course, there would be some drawbacks to this approach. First, plan provisions would be limited to those which the IRS's program could handle, but this would be only a minor inconvenience when measured against the benefits of simplification. Second, the IRS would undoubtedly levy a user fee for this service, but the fee would probably be less, in most cases, than what actuaries in private consulting practice charge for the same service. Which brings me to the third drawback—that most pension actuaries would be out of a job. Even here there is a silver lining. Ever since computers have become a widespread business tool, the work of pension actuaries has amounted to little more than entering data into a computer and pressing a button. Yet we have continued to charge our clients outrageous fees for our services. Under my suggested approach to pension funding simplification, we would be forced to get productive jobs instead of sucking the lifeblood from the nation's economy.

Eric J. Klieber, FSA
Senior Actuary
W.F. Corroon
Cleveland, Ohio



"Funding Social Security for the Baby Boom Generation"

Dear Mr. Shemtob:

I read with interest your letter about Don Grubb's article on funding Social Security for the baby-boomers in *Pension Section News* (March 1994, p. 15). Because of your interest in the confidence (or lack thereof) of younger persons in the viability of the Social Security system and the investment of its assets, I am taking the liberty of sending you some articles that I have written on these subjects. As you can see, I recognize the undue lack of confidence (which I think is too much), and I do not agree that the investment of the assets is faulty and that they have been dissipated (despite the fact that I do not favor building up mammoth fund balances in the future). You may also have seen my article on this subject in *Contingencies* (March/April 1994, p. 66).

Robert J. Myers, FSA
Silver Spring, Maryland

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might well ask how an ERISA bond would have protected the Maxwell schemes, both because of the question of whether what actually occurred would fall within the *scope* of the bond (protecting against fraud or dishonesty of a scheme official) and because even if within the bond's scope, the *amount* of cover would likely have been dwarfed by the amount of the loss.

The proposal in the Goode Report regarding protection against fraud, theft and other acts of misappropriation strikes me as preferable to an ERISA-type bond, if—and perhaps this is a big if—the system

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works smoothly as set out in the Report. I like the idea of making a levy on schemes generally only after an instance of misappropriation has occurred, and I would expect that this would, in the end, cost less than annually maintaining a bond for this purpose.

But it seems to me that the Goode Report is far less convincing in arguing that a broader compensation system is inappropriate. The report specifically rejects protection for scheme members against the risk that the pension scheme will be unable to pay promised benefits, not because its assets have been misappropriated by a Maxwell-type fraud, but because, for example, the trustees have so poorly managed or supervised the investment of trust funds that there are insufficient assets to pay benefits, and at the same time, the employer is insolvent and unable to make up the shortfall. Despite the proposed minimum solvency rules, the Committee appears to believe that any broader compensation would prompt some employers to favor risky investments or make scheme benefit improvements in lieu of wage increases.

Having spent some time on fact-finding expeditions to Canada, Australia and the U.S., the Committee points to the guaranty portion of the U.S. compensation system as evidence that some employers would behave in this way. While it is true that there were cases in which employers successfully dumped pension scheme liabilities onto the PBGC under the provisions originally in ERISA, subsequent revisions to ERISA have restricted the deficiency compensation to situations in which the termination of the earnings-related scheme is on account of the employer's "distress." And "distress" is limited to an employer's actual or prospective insolvency or workforce reductions resulting, in the judgment of the PBGC, in unreasonably burdensome pension scheme costs for the employer.

I shall spare you the details of the guaranty system administered by the PBGC. It is enough to say that on termination of an earnings-related pension scheme with assets insufficient to pay all benefits, those benefits guaranteed by the PBGC will be paid by the PBGC. There are dollar limits on guaranteed benefits as well as a rule that excludes certain recent benefit improvements from the guaranty. For this protection, the employer is required to pay a per capita premium that can range from $19 to $72, depending upon the level of unfunded vested benefits. (This range of premium may represent between 1½ and 6% of a typical employer's plan contributions.)

Having paid out benefits, the PBGC will seek recovery from the employer, and its claim enjoys a certain priority status (though not as great as the PBGC would like) with respect to the employer's other creditors. This has come to mean that those creditors—particularly the bankers—will take an active interest in the solvency of the pension scheme and will exert pressure on the employer to adequately fund it.

Despite the tightening of the guaranty system, all is still not well with the PBGC (its deficit presently stands at $2.5 billion), and

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Actuaries Online

Actuaries Online, the new online information service sponsored by the SOA on the CompuServe network, is now available. This forum, more commonly known as a bulletin board service, or BBS, has three primary components:

- The Message Board, which offers users a place to hold publicly visible real-time dialogues
- Conferencing, a moderated use of the messaging concept, in which users can have private conversations, participate in meetings or meet with featured guests on current issues
- Data Libraries, which contain files for downloading to users' own PCs; users can browse the data libraries by subject, keyword, or date.

Although most subscribers are individuals, some subscriptions are company-sponsored and shared by more than one actuary. Subscribers from the U.S., Canada, Australia, and the U.K. participate in discussions on many topics including health-care reform, pension issues, and exposure drafts. On Tag-A-Long day, when children accompanied their parents to work, discussion centered around the actuarial profession.

Other items of interest in the libraries have been early-release transcripts from the SOA meetings, highlighted articles from Section newsletters, and software available to download to subscribers' PCs.

For more information, contact Peggy Grillot at the SOA office at 708-706-3504 or E-mail, 72662,356.

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there is said to be a proposal in the works to place a larger proportion of the annual premium burden on underfunded schemes and to require faster funding of underfunded schemes. But I do not think that problems with the U.S. system necessarily mean that a better system of this sort cannot be devised. Indeed, my guess is that a guaranty system of the U.S. sort, coupled with rigorous minimum solvency rules like those in the Goode Report, would be effective.

I would also guess that even if the limited compensation approach of Goode is all that is enacted in round one, eventually compensation will be extended to cover underfunding in general. The U.S. experience thus appears instructive on how not to do things; it does not mean that a workable broad compensation system cannot be devised.

Information for Scheme Members

The Goode Report, with the support of its survey of scheme members, recommends that specific items of basic scheme information, written in plain English, be provided to employees.

The list of items, found at paragraph 4.12.26, closely resembles the requirements of the U.S. Department of Labor under ERISA's general requirement that each scheme member be furnished with a summary plan description "written in a manner calculated to be understood by the average plan participant, and ...sufficiently accurate and comprehensive to reasonably apprise such participants and beneficiaries of their rights and obligations under the plan." The Labor Department's regulations specify that making the summary comprehensible "will usually require the limitation or elimination of technical jargon and of long, complex sentences, the use of clarifying examples and illustrations, the use of clear cross-references and a table of contents." It may even be necessary to provide summaries in non-English languages depending upon the composition of the workforce.

I realize that scheme summaries are used by many, if not most, U.K. pension schemes. But my impression is that there is often a tendency not to try to summarize all scheme provisions in the scheme booklet. In other words, a scheme member would not in all circumstances be able to understand all possible benefit provisions by reading the booklet.

The general approach in the U.S. to scheme summaries is to try to make the summary as comprehensive as possible in describing the provisions of the scheme. The writing of such a document in plain English thus often becomes a more time-consuming task than the preparation of the scheme document itself. Many hours are consumed in arriving at a summary that is comprehensive, comprehensible and accurate, and there is often significant involvement of the employer's benefits manager, the scheme's actuary and the scheme's lawyer.

Apart from the requirements of ERISA, one important reason for the effort expended on the summary is that it is not uncommon in pension litigation for the *summary* to be the document to which the court refers in determining what the scheme provides with respect to the issue in dispute.

The court's reasoning is that the summary is what the member or beneficiary was provided with by the scheme (despite the availability of the scheme document itself) and therefore it is only fair that the summary be regarded as determinative. My guess is that this same sort of reasoning would not be unexpected from a U.K. court, or from the Pension Ombudsman, particularly if the Goode recommendation is adopted.

Dispute Resolution

The Goode Report calls for each scheme (other than a small scheme) to be required to establish a formal internal disputes procedure [1] and to make the details of this known to scheme members. Here there is another direct parallel with an ERISA requirement. Specifically, all schemes must provide for a claims procedure for members whose claims for benefits have been denied. The Department of Labor has issued regulations setting forth minimum standards for such procedures (access to documents, time periods, and so on), and the terms of the procedure must be set forth in detail in the summary of the scheme.

Courts have noted that the intent of the internal claims procedure was to minimize the number of frivolous lawsuits, promote the consistent treatment of benefit claims, provide a nonadversarial dispute resolution process and decrease the time and cost of claims settlements. Although not a mandate of ERISA, courts have often required a claimant to have exhausted the internal procedure before being permitted to sue in court.

My experience is that internal dispute resolution procedures can, and often do, work well. They can defuse what might otherwise have escalated into a pitched adversarial contest by giving the scheme and the member an opportunity to determine where a misunderstanding may have arisen, all of this done in a relatively informal manner.

As counsel to the scheme, I will often ask the administrator to think beyond the claim at hand: have similar claims been made in the past, and if so how were they resolved? If not, what is the appropriate decision in this dispute, keeping in mind that this decision will effectively bind the administrator if presented with the identical issue in the future. It is also possible that the dispute brings to the fore a gap in the scheme provisions, and this will also require a broader consideration of the issue.

When disputes have not been resolved internally—in other words, the member was not satisfied with the result—reviewing courts have accorded the decision made by the administrator of the scheme great weight, overturning that decision only if it was arbitrary or capricious. Put differently, the administrator's decision need not be the best possible decision, only one with a rational justification.

How the Goode recommendation, if implemented, will work together with the Pension Ombudsman remains to be seen. But I would predict that some deference would be given to the internal decision, especially if the member-appointed trustee recommendations are also adopted. If so, the internal procedure should reduce the number of disputes that proceed to the Ombudsman or to the courts.

The Prudent Person Standard

The trustees of a pension fund, whether or not they engage outside professional investment managers, are responsible for setting the fund's overall investment strategy and for

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A U.S. Perspective on Goode
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ensuring that assets are prudently invested and sufficient to meet the scheme's liabilities. These core duties are acknowledged in the Goode Report. **However, in my view the report misses a clear opportunity to raise, for the benefit of scheme members, the standard by which the actions of the trustees will be judged.**

Drawing upon the standards of prudence required (or proposed to be required) of scheme trustees in Australia and Ontario, **the report requires trustees "to exercise, in relation to all matters affecting the fund, the same degree of care and diligence as an ordinary prudent person would exercise** in dealing with property of another for whom the person felt morally bound to provide **and to use such additional knowledge and skill as the trustee possesses or ought to possess by reason on the trustee's profession, business or calling."**

Under ERISA, **by contrast, trustees are required to act "with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims."** This standard is quoted (paragraph 4.9.7) but not adopted by the report. In my view, this is a lost opportunity to increase the protection of scheme members, and nicely complements the recommendation of an increased number of member-appointed trustees. Let me explain why.

Under the ERISA standard I have just quoted, trustees are presumed to be familiar with investment management (the words "familiar with such matters") and so their actions will be evaluated as if they were professional managers. It is sometimes said that trustees are presumed to be prudent experts in managing the funds in their charge, and it is generally felt that trustees who themselves are not at least knowledgeable in the area of trust fund investment should seek expert assistance with decisions concerning the hiring and retention of fund managers. The prudent expert standard thus denies protection to the unskilled trustee [2] who, however well-intentioned his or her actions on behalf of the trust fund may be, causes loss to the fund by a failure to follow a prudent process of hiring and reviewing outside fund managers.

The standard proposed by Goode looks only to the knowledge and skill of the ordinary person, as supplemented by any additional knowledge and skill that the trustee actually has. By contrast with the U.S. standard, the Goode proposal accepts trustees as it finds them; there is no attempt made to raise the level of care, and thus the level of protection for employees, by requiring that trustees act as prudent experts.

In the end, I am quibbling over words. But these are words that lie at the heart of ERISA, and I expect that the statutory formulation of the trustees' standard of care will lie at the heart of the expected Pension Reform Act that will likely follow the Goode Report.

The report concludes that mandatory training of trustees would be impracticable, and I agree. However, it is practicable to hold trustees to the highest standard of conduct. In this age of sophisticated financial markets (and here I refer the reader to *The Economist* of October 9 and its article entitled "Mathematics of Markets"), trustees must be held accountable for actions that do not reflect familiarity with principles of sound management of the large sums of money securing complex promises of future pension benefits. Such a standard, it is hoped, will mean that only those truly qualified individuals will join the ranks of trustees of pension funds. Anything less weakens the solid foundation that the Goode Report seeks to rebuild for the U.K. pension system.

Thomas Z. Reicher is an attorney with the law firm of Day, Berry, and Howard in Hartford, Connecticut.

End Notes

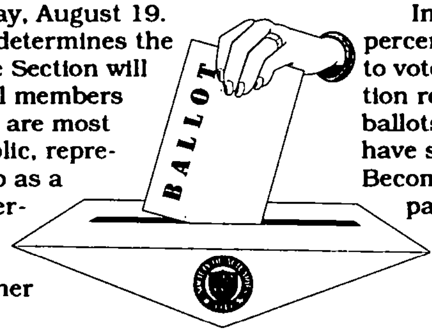
1. Readers may be aware that **Re Wynn** [1952] Ch. 271 currently may operate to preclude trustees from adopting and implementing binding internal dispute resolution machinery. Editor.
2. To be fair, to argue the converse, it would be inconsistent to press for the appointment of workforce trustees, while imposing on these persons the legal responsibility for not acting with an expertise no one in fact expects them to possess. However, the conduct standard I argue for only requires care in the *engagement* and *review* of investment and other professionals.

It's Time to Vote!

Section Council ballots are scheduled to go in the mail the week of July 18. We would like to encourage you, as a Pension Section member, to take an active role in the election process. Review the list of candidates and biographical material and determine whom you would like to represent you. Mail your ballots so they will reach the Society office by Friday, August 19.

The Council determines the direction that the Section will take. The Council members are the ones who are most visible to the public, representing the group as a whole. Your leadership makes decisions regarding programs and other sponsored activities that the Section will participate in to achieve its mission.

Fellows will also receive second ballots for the Society-wide election about the same time. Take the time to study material on the candidates and then vote for those who you think will best represent your interests in your professional organization.



In 1993, only 39.9 percent of those eligible to vote in the Society election returned their second ballots. Section elections have similar statistics. Become an active participant in the election process and VOTE!

The Effect of Volatility in Pension Plan Funding on the Reputation of Actuaries

by Richard M. Kaye

I am concerned about the reputation of the actuarial profession and the somewhat related negative viewpoint on the desirability of maintaining a defined-benefit plan. In this spirit, the thoughts in this paper represent my experience not only as an actuary, but also as an actuary/CPA of an accounting firm. In the latter connection, I annually review, for numerous nonactuarial audit clients, financial statement pension provisions and related pension footnotes as well as disclosures relating to *SFAS No. 106*. In the case of pension plans, my review naturally also extends to the funding policy of the company.

Actuaries are under intense and increased scrutiny due to the year-to-year volatility of the funding figures they provide (including retiree health liabilities funded in a 401(h) account); the differences in figures provided for funding versus expensing purposes (including retiree health liabilities funded in a 401(h) account); and unexpected shortfalls when a company is deciding or contemplating terminating the pension plan.[1] Though my sample is unscientific, I have observed that actuaries sometimes (if not often) tend to respond to questions on these volatilities and differences by blaming the burdensome, illogical and "nonactuarially controlled" accounting rules.

However, in an absolute sense, or at least in comparison to funding rules and restrictions, accounting rules result in a rather rational and systematic method for measuring costs. Furthermore, reported *expense*, to the extent practical, is *comparable* among companies, and furthermore, expensing generally results in *consistency* between years with differences arising only from "real" causes such as changes in settlement rates from one year to the next, rather than from artificial causes.

On the other hand, *funding* is a function of funding rules that are governed not by rational and systematic considerations but more by the spirit of revenue-raising (through tax policy) and/or the desire to protect employees by minimizing the possibility of underfunded plans. Not only do these governing considerations bear no reasonable resemblance to a systematic, rational funding stream, but perhaps more importantly, by definition, revenue-raising and employee protection are inherently inconsistent; therefore, when applied jointly, volatility is exacerbated and anomalies upon plan termination are maximized (see Table 1).

TABLE 1

Body	Goal
PBGC	Protect participants, protect taxpayers
DOL	Protect participants
IRS	Raise revenue
Employer	Flexibility in cash flow, low volatility

More specifically, consider how volatility *in funding* is caused by external rules, as follows.

Rules that exist to maximize the raising of revenue (see Table 2)

1. 401(a)(17) (limits on compensation recognized in the determination of defined benefit):
   a. Expensing—future increases to the limit should be recognized (but "probably" are not always)
   b. Funding—compensation beyond the *current* limits not allowed to be recognized

   Result: volatility, especially in smaller plans with relatively old high paid employees
2. 415 (limits for benefits payable):
   a. Expensing—future increases should be recognized (and "probably" are usually)
   b. Funding—benefits beyond the *current* limits not allowed to be recognized

   Result: volatility, especially in smaller plans with relatively old high paid employees.
3. Collective Bargaining (negotiated increases not to be effective until a later date):
   a. Expensing—future increases should be recognized (and "probably" are usually)
   b. Funding—not allowed to be recognized

   Result: volatility and increased likelihood of unfunded liabilities.
4. Collective Bargaining (likely future increases):
   a. Expensing—future increases should be recognized if a pattern exists (however, perhaps not recognized that often)
   b. Funding—not recognized in non-salaried related plans (recognized, at least to some extent, in salaried-related plans by use of a salary scale)

   Result: volatility and increased likelihood of unfunded liabilities

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TABLE 2

Factor	Recognition for Expense Purposes	Recognition for Funding Purposes
401(a)(17)	Yes	No
415	Yes	No
CB Agreed-Upon Increases	Yes	No
CB Pattern Increases	Yes	No (except indirectly in salary-related plans through use of a salary scale)
Retiree Medical Funding	Yes—*SFAS 106*	Possibly limited funding under VEBA or 419A
Maximum Deductible Limits	Not Relevant	Yes

[1]The author acknowledges that in some cases volatility in funding is consistent with the objectives of the plan sponsor in connection with cash-flow and/or tax deduction considerations.

The Effect of Volatility in Pension Plan Funding on the Reputation of Actuaries
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5. Retiree Medical Funding:
   a. Expensing—pursuant to *SFAS No. 106*
   b. Funding—generally none—even if 401(h) account set up, pension Full Funding Limitation may artificially prevent funding. If funded through a VEBA, severely limited under Sec 419A

   Result: unfunded liabilities.
6. Maximum Deductible Limits:
   a. Expensing purposes—not relevant
   b. Funding—reflected; exacerbated by concurrent application of two independently determined full funding limits.

This shows that funding rules (limits) can cause great volatility in contribution requirements and exacerbate or cause unfunded liabilities, while the expense may progress rather smoothly, especially if there are only minor changes to the actuarial assumptions, particularly the discount rate. The possible client frustration of volatile funding results is maximized for smaller plans. Also, in the event of plan termination, companies can find themselves in the position of funding at the maximum allowable level in each year but still having unexpected liabilities in the event of plan termination. Finally, partially due to volatility and partially to accounting guidelines for determining discount rates under *SFAS No. 87*, funding status among companies is much more *comparable* on an *SFAS No. 87* basis than on a funding basis. Also, expense is determined under a uniform method; funding, under any number of methods.

Rules that relate to protecting employees

Other rules in connection with funding that create volatility (especially in small plans) are related to protecting employees and include:

a. Special volatile and independently determined additional minimum funding requirements under Sec 412(l) (Deficit Reduction Contribution)
b. Variable PBGC premiums
c. Minimum lump sums determined under independently established PBGC interest rates.

Again, expensing is not affected by these rules. Also, for expense purposes, pursuant to requirements of *SFAS No. 87*, the discount rate could be changed each year, or certainly more often than the interest rate for funding purposes. However, the associated volatility for expense purposes associated with the discount rate changes seem more understandable to the client than the aforementioned factors that affect volatility in funding.

Finally, one practice that is used by "many" actuaries relates also to volatility. This is the practice of utilizing market value of bonds (as required) without making a corresponding adjustment in the interest rate assumption relating to the bonds. For example, say the portfolio of bonds were purchased at 9 percent, which was the actuarial assumption utilized. *In a period of declining interest rates*, actuaries often keep the 9 percent assumption constant under the theory that the rate is locked in even if interest rates decrease, and furthermore relying on the fact that when interest rates decrease, the market value will rise. It is fairly easy to demonstrate that for bonds held to maturity, in the example, the interest rate earned *on the market value* will be less than 9 percent. Furthermore, especially for smaller plans and/or plans with a large percentage of their assets in bonds that will be held to maturity, it is easy to demonstrate the *unnecessary* volatility in funding that will result as the market value drops toward maturity.

What can the actuary do to deal with, minimize or eliminate the frustration caused by volatility and surprises upon plan termination?

What can the actuary do to deal with, minimize or eliminate the frustration caused by volatility and surprises upon plan termination?

- Communicate better—instead of performing just one year's valuation, project several years, so the possible volatility and plan termination unfunded liabilities can be shown in advance.
- To the extent practical, choose actuarial assumptions and methods for funding that simulate rational and systematic expensing. If possible to do so, volatility can be minimized and unfunded liabilities (or at least surprises upon plan termination) can be minimized, with the following added benefit—funding and expensing amounts can be similar, which would minimize confusion. It may be important to note that for funding purposes, the actuary must assert that the actuarial assumptions are the best estimate of future experience; therefore, at least in theory, the actuary should be able to have strong input on the actuarial assumptions.
- Use an interest rate on the bond portion of the portfolio consistent with the yield being realized on the market value of bonds.
- If at all feasible, lobby for:
  - Removal of artificial full funding limits, or at least a corridor approach for gains and losses
  - Contribution to 401(h) accounts based on pension contribution prior to application of limits.

Actuaries **can have a great effect not only on their own professional reputation but also on the integrity of pension plans.** The latter is important for "provincial" reasons (for example, providing profitable work for actuaries), but such plans should, with proper communication and management by the actuary, provide ever-important benefits to baby-boomers as they near retirement. The opportunity to revive defined-benefit plans is especially obvious when it is recognized that most current projections of interest rates are much lower than those used when the original 401(k) balances at retirement were projected. The upcoming opportunity for actuaries should not be lost.

Richard M. Kaye, FSA, CPA, is Managing Partner at Coopers & Lybrand in Detroit, Michigan. Also contributing to the development of this paper were John P. Bremer, FSA, James D. Kershner, FSA, and Keith J. Panetta, all of Coopers & Lybrand.

Proposed U.S. Rules on Tax Deductibility for Foreign Pension Plans

by Keith J. Goodell and Martha A. Moeller

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In May 1993, the IRS issued proposed regulations under Section 404A relating to a U.S. tax law passed in 1980. The proposed regulations could significantly impact U.S. taxes paid on foreign source income for U.S. multinational companies.

- They confirm that Section 404A is the sole means for recognizing tax deductions for foreign pension contributions. Under prior proposals, it appeared possible to treat deductible pension contributions made by a foreign subsidiary as a necessary business expense without applying Section 404A. The new proposal eliminates that option.
- Companies whose foreign subsidiaries or branches maintain pension plans will often find Section 404A more restrictive than foreign rules for deductibility. This is generally true for both funded pension plans and for pension plans financed via internal book reserves.
- While the IRS considers the regulations to be a liberalization of pre-404A rules, many companies will find the proposed rules to be more restrictive than current practice.

Background and Operation of Section 404A

The U.S. Tax Code prescribes complex rules for recognizing a contribution to a U.S. pension plan as a tax-deductible expense. Plans must meet qualification standards, and contributions must be invested in pension trust funds. The same rules broadly apply to contributions to pension plans sponsored by foreign subsidiaries and branches of U.S. firms. However, as U.S. pension law has become more restrictive over 20 years, essentially no foreign pension plans would now qualify under U.S. rules.

In an effort to legitimize deductions for foreign pension contributions, Congress passed into law Section 404A. Generally, if a foreign pension plan has tax-deferred status in the foreign country, tax-deductible contributions are eligible for U.S. recognition under 404A without application of the full U.S. qualification standards.

Section 404A rules apply to qualified funded plans maintained by a foreign subsidiary or branch of a U.S. firm. Pension contributions made by the foreign entity are usually deductible on the local entity tax return. In certain countries, pension plans financed through book reserves are given tax-preferred treatment. Section 404A is also concerned with these qualified reserve plans maintained by foreign subsidiaries or branches of a U.S. firm.

For subsidiaries, Section 404A rules do not directly restrict contributions to a fund, additions to a book reserve or relevant local tax deductions. The potential restriction comes when the local entity pays a dividend to its U.S. parent. Section 404A restricts recognition of local deductions in the U.S. tax calculation through the operation of "foreign tax credits." If the local deduction for pension provision is greater than the amount calculated under 404A, or if the pension fund does not meet certain characteristics of a U.S. qualified trust, then the foreign tax credit will be lower. This raises taxable foreign source income for the U.S. return. For branches, local pension deductions are directly restricted by 404A.

Current Proposed Regulations

The 1993 proposal grants rather harsh treatment of foreign contributions in some respects:

- The definition of "qualified funded plan" requires that the related trust now allow assets to be diverted for any purpose other than provision for employee benefits until all plan liabilities are met. This could be a problem for plans in the U.K., for example, where in certain circumstances of over-funding, U.K. Revenue requires withdrawal of funds by the employer.
- Actuarial methods must comply with requirements for the funding of the U.S. plans. This may curtail deductibility for contributions in some countries. Of particular concern is application of the U.S. "full funding limitations" which prohibit the deduction of contributions after a plan becomes fully funded. Also, there appears to be no allowance for advance funding of discretionary provisions, such as cost-of-living adjustments. To determine the appropriate 404A amount, the local actuarial valuation must be revised to reflect restrictions under 404A.

Recommended Action

While waiting for the IRS to issue final regulations, U.S. multinational firms should:

- Determine which foreign plans are given tax preference locally. This assessment should include termination indemnity plans as well as traditional pension plans.
- Investigate how foreign pension tax deductions have been treated in U.S. tax returns. Compare actual deductions with amounts allowable under the new rules. Companies which took no credit for foreign pension deductions can expect retroactive refunds if 404A is elected. Many companies, however, will find that the new regulations limit recognition of local deductions, thus increasing taxable income.

Summary

For many companies which traditionally use the local tax deduction for pension contributions in the determination of foreign source

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GASB to Issue Proposal on Pensions

by Stephen Gauthier

Editor's Note: *This article originally appeared in the April 1994 issue of* Government Finance Review, *the membership magazine of the Government Finance Officers Association of the United States and Canada, and is reprinted with permission.*

The Governmental Accounting Standards Board (GASB) has released three exposure drafts (ED) addressing the proper accounting and financial reporting for pensions. If approved, the new guidance would affect both pension plans and employers offering pension benefits to their employees.

Accounting for Pensions

The first of the three pension EDs is *Accounting for Pensions by State and Local Governmental Employers.* This ED would retain the traditional linkage between accounting and funding for employers; in other words, employers participating in single-employer pension plans generally would continue to use their annual required contribution as the measure of annual pension expense/expenditure.

The ED also proposes retaining a traditional approach to the calculation and reporting of pension liabilities. That is to say, government employers would continue to report pension liabilities on the balance sheet only to the extent that their annual required contribution is not fully funded. In addition, the ED would require employers to report a net pension obligation (NPO) for their past failure to fully fund annual required contributions. At a minimum, this liability would reflect funding shortfalls for fiscal years beginning after December 15, 1986. If information is available for earlier periods, the NPO would need to reflect funding shortfalls from those periods, as well.

If an employer reported an NPO, the amount of pension expense/expenditure reported in the operating statement still would be the employer's annual required contribution, but it would be adjusted to reflect (1) imputed interest on the NPO during the year and (2) the amortization of past under- or overfunding reflected in the annual required contribution.

For employers contributing to cost-sharing, multiple-employer pension plans, the amount of pension expense/expenditure reported for the period would equal the employer's contractually required contributions. Required note disclosures would provide three years of information on annual pension cost. Required supplementary information would present information on the pension plan's funding progress for the past three actuarial valuations (actuarial valuations are required at least once every two years).

Pension Plan Financial Reporting

The second pension ED is *Financial Reporting for Defined-Benefit Pension Plans and Note Disclosure for Defined-Contribution Plans.*

Currently, the financial statements of pension plans may be prepared in conformity with any one of the following three approaches:

- National Council on Governmental Accounting (NCGA) Statement 1, *Governmental Accounting and Financial Reporting Principles*
- NCGA Statement 6, *Pension Accounting and Financial Reporting: Public Employee Retirement Systems and State and Local Employers*
- Financial Accounting Standards Board (FASB) Statement No. 35, *Accounting and Reporting by Defined Benefit Pension Plans.*

The GASB's ED proposes to replace these three options with a single method of accounting and financial reporting for public-sector pension plans. The GASB's suggested approach would feature two basic financial statements: the statement of net assets available for benefits and the statement of changes in net assets available for benefits. For financial reporting purposes, assets would be reported at their market value rather than at cost. Also, the only liabilities to be reported on the statement of net assets available for benefits would be (1) benefits and refunds due and (2) accrued investment and administrative expenses. The actuarial accrued liability would *not* be reported on the face of the basic financial statements.

The ED also proposes that the two basic financial statements for pension plans be accompanied by schedules of funding progress and of employer contributions. Both of these schedules would present data from the six previous consecutive fiscal years. Both pension plans and employers would be required to use the same actuarial methods and assumptions.

The ED would place some limitations on the actuarial methods and assumptions used by pension plans, including the following:

- Actuarial assumptions would need to be based on the actual experience of the covered group
- The reasonableness of each actuarial assumption would need to be considered separately, although primary emphasis would still be placed on the combined effect of all assumptions
- The consistency of actuarial assumptions would need to be considered
- The interest rate assumption would need to be based on the estimated long-term investment yield for the plan
- Either the entry age, frozen entry age, attained age, frozen attained age, projected unit credit or aggregate actuarial cost method would be used
- The annual required contribution (ARC) for participating employers would need to include both normal cost and a provision for amortizing the unfunded actuarial accrued liability
- After a 10-year transition period, the amortization period would be limited to a maximum of 30 years
- Decreases in the total unfunded liability generated by a change in actuarial cost method, or by a significant change in the method used to determine the actuarial value of plan assets, generally would need to be amortized over a period of not less than 10 years
- Amortization would need to be calculated as either a level dollar amount of a level percentage of projected payroll (without anticipating future member *increases*)

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Public Pension Governance and Performance

by Olivia S. Mitchell and Ping Lung Hsin

Editor's Note: *This paper was presented at the January 1994 American Economic Association meetings (Boston, Massachusetts) and at the January 1994 Conference on "Mandatory Pensions: Funding, Privatization, and Macroeconomic Policy" (Santiago, Chile) and can be obtained in its entirety by contacting Dr. Olivia S. Mitchell at the Wharton School, University of Pennsylvania, Colonial Penn Center, Philadelphia, PA 19104-6218. Telephone 215-898-0424; Fax 215-898-0310.*

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This paper investigates the determinants of public sector pension plan investment and funding performance. Its goal is to draw lessons that can be used to improve the design and governance of public pensions. Plan performance is related to characteristics of the pension systems' governance structure and authority, with the help of a new data set on state and local public pension plans in the U.S.

For public pension plan investment performance, three findings stand out:

- Having more retirees on the public pension board lowers pension investment returns
- Returns do not differ depending on whether a pension board has in-house or external money managers
- Social investment rules reduce pension investment yields. Public plans required to devote a portion of their assets to state-specific projects earn lower returns.

The study also shows that most large public pension systems fund their plans satisfactorily, but some do not. We conclude that:

- Public pension funding is reduced by fiscal stress and is lower when more retirees and active workers are represented on the pension system board.
- Funding is higher when a pension system has in-house actuaries and when board members must carry liability insurance.
- Funding does not appear sensitive to statutes guaranteeing benefits, legal funding requirements, or the ability of states to carry budget deficits from one year to the next.

Policymakers in other countries may profit from the experiences of public pension funds in the U.S. Obviously no single package of pension plan practices can optimize plan performance for all systems across all time periods, but care must be taken when designing the regulatory and investment environment in which these plans will operate. The study also discusses some of the complex issues that must be confronted when seeking to establish funding norms for pension plans in the public sector.

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- If an employer paid more or less than the annual required contribution, this fact would need to be reflected in the calculation of the employer's annual required contribution for future years.

Other Postemployment Benefits (OPEB)

The third pension ED is *Financial Reporting for Postemployment Healthcare Plans Administered by Defined-Benefit Pension Plans.* This ED would require such pension plans to present both a statement of net assets available for postemployment healthcare benefits and a statement of changes in net assets available for postemployment healthcare benefits. The issue of the proper employer accounting and financial reporting for such benefits will be addressed in a later project.

Effective Date

The GASB is proposing that the guidance for pension plan financial statements and OPEB become **effective for fiscal years beginning after December 15, 1995.** The proposed guidance on employers' accounting for pensions would take effect one year later.

Stephen Gauthier is director of the Government Finance Officers Association in Chicago, Illinois.

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income, Section 404A may impose higher U.S. taxes, with retroactivity. The broad scope of the proposed regulations requires involvement of both the Benefits Department and the Tax Department of a multinational corporation.

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ASPA Favors Enrolled Administrator Designation

Editor's Note: *The following is a transcript of testimony presented on April 8, 1994, at a hearing of the Defined-Contribution Plans Work Group of the Department oj Labor ERISA Advisory Council on Employee Welfare and Pension Benefit Plans in Washington, D.C.*

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My name is Doug Burnette, and I am the government affairs coordinator at the American Society of Pension Actuaries (ASPA). Accompanying me is ASPA's executive director, Chester J. Salkind, who will assist in answering any questions you may have.

I appreciate having the opportunity today to discuss ASPA's proposal to require that defined-contribution plans have certification by government-licensed experts. These experts, whom we term enrolled administrators, would attest that plan allocations are made in accordance with the terms of the plan and applicable law and regulations.

This idea was developed in 1984 by Robert D. Lebenson, formerly the actuarial representative on this council. It was subsequently presented to the council by Howard M. Phillips. Mr. Lebenson's original proposal stated:

"At the time of ERISA's passage, the retirement plan universe was dominated by defined benefit programs. Accordingly, ERISA established ... enrolled actuary to supervise the funding of the plan 'in the interest of plan participants.' While the enrolled actuary's principal charge under the law was (and remains) the selection of actuarial assumptions and certification of the satisfaction of minimum funding requirements, the actuary's role has evolved into that of the primary 'quality control' supervisor of the plan's administration. Thus, particularly with ... smaller plans, it is common for the enrolled actuary to assume responsibility for verification of plan assets and contributions, review of benefit calculations for participants, and similar functions which ensure operation within both the terms of the plan and the provisions of the law.

"In the years since the enactment of ERISA (and especially since 1982), there has been a significant shift in the constituency of the qualified plan universe, with an ever-increasing emphasis on defined-contribution plans. Unfortunately, a parallel to the enrolled actuary does not exist for defined-contribution programs. Thus, the quality control assurance which exists for defined-benefit plans, and for their participants, is lacking in defined-contribution plans."

In many defined-contribution plans, the calculation of contributions and allocations, the testing for discrimination, and the checking for conformance with the 415 limits and for top-heavy rules, if applicable, have become as complex as the administration of defined-benefit plans, for which Congress determined that there was a clear need for certification by an enrolled actuary. Examples of these types of complex defined-contribution plans are age- and service-weighted profit-sharing plans, target benefit plans, 401(k) plans, and the like.

The certification by an enrolled administrator should not materially increase the cost of the administration of properly managed defined-contribution plans, because the work required for the certification is already being done. For those defined-contribution plans that are not now being properly administered, the increased cost is appropriate to assure that the plan is in compliance with its own terms and with the applicable legal provisions, and we believe participants are entitled to this additional protection. Furthermore, it would be less expensive for plan sponsors to correct errors early than to have to deal with audits years after the fact.

It is clear that this proposal would require legislation, and we hope that the Department of Labor will urge Congress to adopt it. ASPA's proposed pension bill, the Pension Expansion and Simplification Amendments, contains provisions for an enrolled administrator. Enrolled administrators would be certified by the government, and the director of practice, who also serves as the executive director of the Joint Board for the Enrollment of Actuaries, experienced in licensing and disciplining enrolled actuaries, would be the logical choice for this responsibility.

In many defined-contribution plans, the calculation of contributions and allocations, the testing for discrimination, and the checking for conformance with the 415 limits and for top-heavy rules, if applicable, have become as complex as the administration of defined-benefit plans...

Enrolled administrators would be required to pass a federally administered examination and meet a three-year experience requirement. We suggest that these existing specialists be grandfathered: enrolled actuaries, certified public accountants and lawyers with three years of experience in retirement plans, and individuals who hold appropriate designations from professional organizations such as ASPA, the Society of Actuaries, the Conference of Consulting Actuaries, and others.

ASPA believes enrolled administrators would reduce benefit disputes and litigation. Enrolled administrators would be beneficial for plan participants and would promote the long-term stability of the private retirement system. Thank you for your time, and we would be happy to respond to any questions.

Minutes of the Combined Meeting of the Retirement Systems Practice Education and Research Committees

January 10, 1994
Deerfield Beach, Florida

In Attendance: Chris Bone (Co-Chair), Bill Sohn (Co-Chair), Joe Applebaum, Rick Kaye, Rita Lawlor, Dave Lesueur, Lindsay Malkiewich, Marilyn Oliver, Mike Sze, and Mike Virga. Judy Anderson and Mark Doherty, SOA Staff.

1. The next meetings will be in Washington, D.C., on March 9 and 10; in San Antonio, Texas on June 18 following the SOA Spring Meeting; and in Chicago, Illinois on October 20.
2. Mike Sze discussed the survey of plan terminations in the province of Ontario. The survey, a joint undertaking of the Province of Ontario, the Society of Actuaries, the Canadian Institute of Actuaries, and the University of Waterloo, will study the causes of terminations and their effects upon pension coverage and retirement income security of Ontario residents. The survey will be of terminations from January 1, 1988 to the present.
3. Chris Bone observed that the approach taken in the termination survey illustrates the importance of delegation and contracting out of research. The need for research budgets for the upcoming year was mentioned and that figures were needed by the next meeting.
4. Dave Lesueur presented an outline of a policy paper on defined-benefit versus defined-contribution plans as well as on annuity versus lump-sum options. The paper will explore the various considerations that go into preferring lump sums (tax considerations, flexibility of payments) to annuities.
5. Bill Sohn led a discussion of the ***Economic Statistics for Pension Actuaries*** including possible additions to the publication, whether data should be available on-line, and the frequency of updates. **The consensus was that the handbook should be updated annually, with certain time-sensitive data updated quarterly. The SOA will provide data on-line through CompuServe with a start date to be announced.** At the next meeting, the committees will attempt a first cut at what information should be included on the electronic bulletin board.

   Chris Bone discussed the inclusion of retiree health statistics in *Economic Statistics*. The question of increased costs was discussed.
6. Judy Anderson briefly discussed the research proposal from the Investment Section concerning methodologies for discount rates to be used for *FAS 87* valuations. Dave Lesueur will be on an oversight group for this project.
7. There was an update on the proposed mortality tables for pensioners and group annuities now under development. Ed Hustead participated via a phone link. The two task forces preparing the UP table and the GAM table, which are headed by Mike Virga and Lindsay Malkiewich, have now prepared preliminary tables. The Retirement Systems Practice Advancement Committee has recognized these efforts and the theoretical basis for generational tables and has recommended that the task forces come to an agreement about the mortality improvement trends. The GAM table will have a 7 percent margin built in. One issue for resolution is whether there should be different trend lines for the period from 1988 to 1994 and from 1994 forward. The committee discussed the content of papers on these mortality standards including the appropriateness of each for particular purposes.
8. Dave Lesueur discussed a recent series of papers published by ASPA on national retirement income policy. Dave asked whether it would be appropriate for the Research and/or Education Committee to comment on the papers. The committees decided not to comment.
9. Mike Virga presented a short paper on late and early retirement and various ways to measure their effect. A discussion of this paper was deferred.
10. Joe Applebaum discussed the work on retirement and turnover rates. He presented a short discussion memorandum on a number of issues that will face the Task Force on Retirement Experience. There were a number of comments on the paper regarding how and what data should be collected, how the data should be aggregated and disaggregated, and what end products were most useful. A question in the minds of some members of the committees is whether the data can be meaningfully aggregated.

Respectfully Submitted,
Joseph Applebaum, FSA

Annual Update Published

Robert J. Myers has published "The Role of Social Security in the Smoke and Mirrors Budget Deficit," which appeared in the First Quarter 1994 issue of *Benefits Quarterly*. His annually updated *Summary of the Provisions of the Old-Age, Survivors, and Disability Insurance System, the Hospital Insurance System, and the Supplementary Medical Insurance System* (December 1993) is available to those who send him a self-addressed mailing label and five 29-cent stamps. His address is 9610 Wire Avenue, Silver Spring, MD 20901-3040.

Accounting Standards for Pension and Employee Benefits Around the World

by Robert Heitzman

Editor's Note: *The following is a summary of a Panel Discussion held at the Society of Actuaries Annual Meeting in New York City on October 20, 1993. The panel comprised Robert Heitzman, Gareth Williams, and David Healy.*

Ten years ago, the only accounting standard for pensions of any note anywhere was "Accounting Principles Board Opinion No. 8." That rather permissive document placed few constraints on actuarial decisions, such as the choice of funding method, assumptions, valuation of assets, and so on. In most cases, in the U.S. and elsewhere around the world, the accounting expense was equal to the contribution to the fund, and unfunded plans were usually accounted for on a pay-as-you-go basis.

Now we have very specific accounting standards in the U.S., Canada, the U.K., and Ireland. Standards in such countries as Germany and Spain are more rudimentary. And Mexico has just adopted a new standard, known as D3. An exposure draft was issued in Australia called ED53 that is still being considered. About 11 years ago, the International Accounting Standards Committee promulgated IAS 19. Like APB 8, it was a rather permissive document that to date has not had much of an impact on our work. In 1990, the IASC issued a statement of intent that proposed specific changes to IAS 19, to toughen it up and make it more meaningful. A new exposure draft has just been issued.

As a result, nowadays there is unlikely to be an identity among the three major gauges of a retirement plan's costs: the amount contributed to the fund, the amount deducted on the tax return, and the amount expensed on the books of the company. For multinationals, the plot thickens, because in many situations a plan may have to comply with more than one country's accounting standard. Compounding the confusion, if the plan sponsor is a foreign subsidiary or branch of a U.S. company, its cost under §404A of the IRC may have to be determined. So we have a lot of different numbers floating around.

What will the future bring? In the immediate future, there is likely to be a proliferation of standards, as more and more countries around the world jump on the bandwagon. There are a couple of questions that this development raises. First, will the various standards required for multinationals be consistent among themselves, so that one calculation could conceivably comply with all the relevant standards? Second, to what degree, and how, will accounting standards influence the behavior, such as plan design and funding, that they are intended only to measure?

An examination of the three major current standards, FAS (U.S.), CICA (Canada) and SSAP (U.K.), indicates that there is general, but not perfect, consistency among them. The general rule is that calculations that comply with FAS probably are acceptable under the other standards. Calculations that comply with CICA are probably acceptable under SSAP, but may not comply with FAS. So we have a spectrum of permissiveness, with FAS being the most prescriptive and SSAP being the most permissive. That is not a terrible state of affairs, although there are some nagging problems, such as the criteria for selecting assumptions, that interfere with perfect cross-compliance.

> ***Do accounting standards influence behavior? Ideally, they should measure it, not influence it. In the real world, accounting standards obviously do have a major impact on behavior.***

Is there hope for a uniform worldwide standard? And, if so, what is it likely to look like? The most appropriate source for such a standard would be the International Accounting Standards Committee. However, that body may well try to draft a compromise solution, under which calculations under any of the existing national standards would be acceptable. The more permissive the IASC is, the less hope we have that it will be a source for a meaningful worldwide standard. What is more likely to happen is that *FAS 87* will become the dominant standard worldwide. Why? One reason is the dominance of the U.S. in the world economy. Another, perhaps more significant reason, is the fact that *FAS 87* is so prescriptive. Accounting standards may work something like the arms race: the heaviest artillery is likely to become the lowest common denominator.

Do accounting standards influence behavior? Ideally, they should measure it, not influence it. In the real world, accounting standards obviously do have a major impact on behavior. For example, *FAS 106* had an obvious, dramatic effect on the design of postretirement medical programs in the U.S.

There are many other, more subtle examples. For example, the proliferation of numbers referred to earlier has the effect of forcing plan sponsors to spend more energy on compliance, perhaps at the expense of sound funding approaches. The increased focus on accounting expense has subtly changed the role of financial officers in a company with respect to retirement plans. They are more aware of the plan, and they are more aware of the options available for manipulating the financial results of the company. The result is generally more aggressive assumptions and less soundly funded plans.

The complicating influence of accounting standards as they apply to defined-benefit plans is just one of the many compliance burdens that have been piled on the backs of those plans. A long-term result of those burdens has been the increasing predominance of defined-contribution arrangements, at the expense of defined-benefit plans. That probably works to the detriment of future retirees.

The way that *FAS 87* assumptions are selected has led to increased volatility in pension costs from year to year. In order to mitigate that volatility, there is an incentive to invest

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Discounting Pension Liabilities under the New SEC Rules
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development of the Pension Discount Curve at year-end 1993.

The derivation begins with a U.S. Treasury yield curve that reflects the entire Treasury coupon and STRIPS market. We then produce a double-A corporate curve based on the double-A sector of the Salomon Brothers Broad Investment Grade (BIG) Bond Index.[1] This double-A curve is derived by adding option-adjusted spreads (OAS), varying by maturity, to the Treasury curve. The OAS is an estimate of the spread at which a security would trade over a comparable duration Treasury bond if the security were noncallable. For the double-A corporate sector, the OAS averaged 50 basis points at year-end 1993, compared to an average *nominal* spread of 77 basis points.[2]

From the corporate par curve, we calculate the spot rates that compose the Pension Discount Curve.[3] We convert from semiannually compounded rates, the convention used in the U.S. fixed-income markets, to annual rates, the convention used to specify actuarial discounts rates for employee benefit plan liabilities. At current rate levels, this conversion adds about 15 basis points at the longer maturities.

The Salomon Brothers Pension Liability Index

To express the general level of the Pension Discount Curve in a single discount rate and to aid plan sponsors in reviewing their asset allocations strategies, we have developed the Salomon Brothers Pension Liability Index. This index, which is based on the pricing of a typical pension plan liability profile, reflects the change in liability that occurs in each measurement period as a consequence of the level and movement of interest rates.[4] By comparing this change with the returns of various asset classes or portfolios, plan sponsors can evaluate alternative investment strategies.

Figure 2 depicts the history of the discount rate reflected in the Liability Index during the past five years, which has ranged from 7.0 percent to 10.0 percent. Figure 2 also shows the duration of the Liability Index, ranging from 11.2 to 14.3 years. The duration moves inversely

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Figure 1
Salomon Brothers Pension Discount Curve
(December 31, 1993)

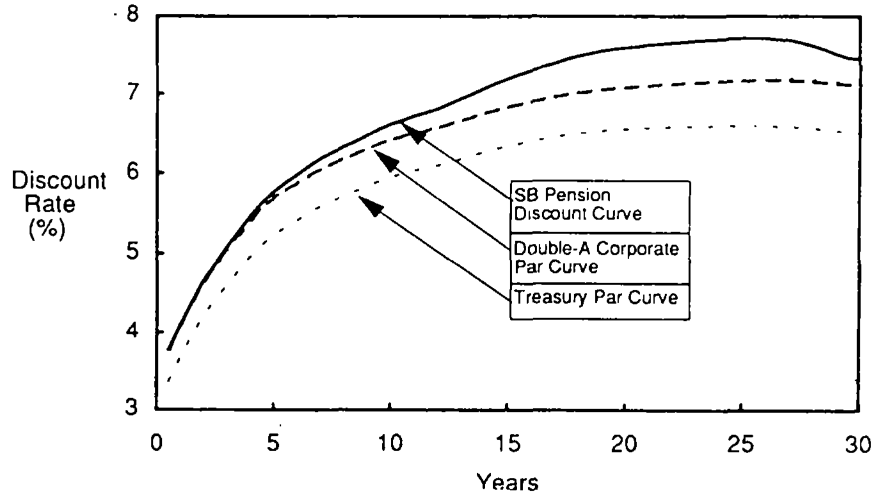


Figure 2
Discount Rate and Duration of Salomon Brothers Pension Liability Index, 1989–93

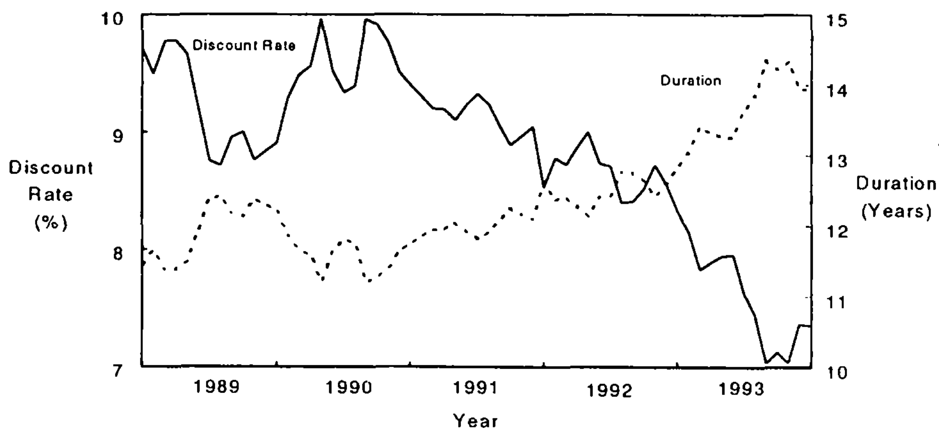
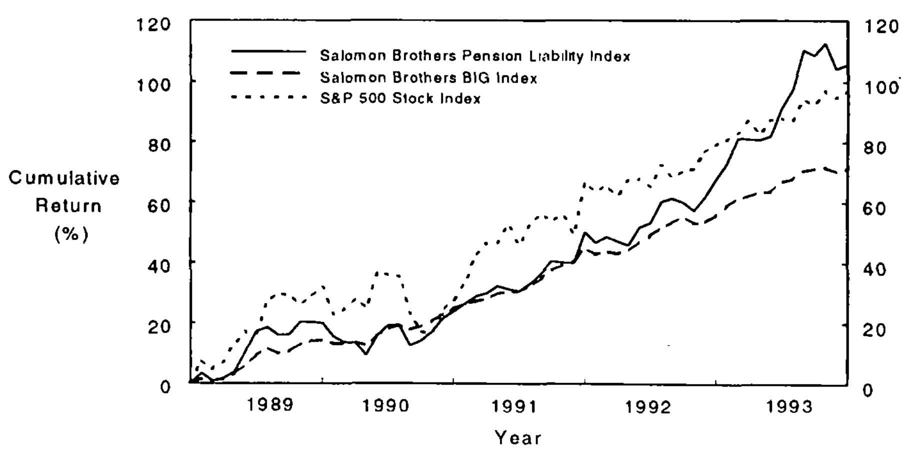


Figure 3
Pension Liability Index Return versus Investment Returns, 1989–93



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with changes in the discount rate, increasing by about one year for every 1 percent drop in the discount rate. At year-end 1993, the discount rate stood at 7.36 percent, with a duration of 14.0 years.

The return of the Liability Index provides a benchmark for pension fund performance, in that a fully funded plan whose performance matches the Liability Index would remain fully funded. During 1989–93, the Liability Index more than doubled, producing an average annual return of 15.5 percent during that period. Figure 3 compares the cumulative return of the Liability Index with the returns of the BIG index and the Standard & Poor's 500 stock Index. Because of its much shorter duration, the returns of the BIG Index fell far short of the liability growth during this period of declining rates. The S&P 500 Index returned an impressive 14.6 percent annually, but still trailed the Liability Index return. During a period when the discount rate dropped an average of almost 50 basis points annually, long-duration pension liabilities offered extremely difficult targets for sponsors.

Conclusion

The SEC's new-found activism regarding discount rates restricts accounting practices that companies have used in the past and can expose financial statements to severe fluctuations in the reported employee benefit obligations. Table 1 shows the first-quarter 1994 fluctuations in the Liability Index discount rate from its 1993 year-end level of 7.36 percent together with the corresponding Liability Index returns. A typical plan's discount rate would have dropped 19 basis points in January, risen 41 basis points in February, and risen an additional 48 basis points in March, lowering the liability by 7.4 percent during the quarter.

Lawrence N. Bader, FSA, is Vice President at Salomon Brothers, Inc. in New York City, New York.

TABLE 1
The Salomon Brothers Pension Liability Index January–March 1994

	Discount Rate	Liability Index Return
January	7.17%	3.29%
February	7.58	−4.96
March	8.06	−5.63

End Notes

1. The BIG Index covers all institutionally traded U.S. Treasury, agency, mortgage, and investment-grade corporate fixed-rate bonds with maturities of one year or more, subject generally to a minimum outstanding amount of $50 million. The index covers 4,827 issues at year-end 1993, of which 856 are rated AA+, AA, or AA by Standard & Poor's or Aa1, Aa2, or Aa3 by Moody's.
2. The method used to derive the OAS is described in *Effective Duration of Callable Bonds: The Salomon Brothers Term Structure-Based Option Pricing Model*, William Boyce, Salomon Brothers Inc., April 1987. The 50-basis-point OAS at year-end 1993 is a market average, with a standard deviation of 15 basis points. An actual defeasance may have a higher or lower spread, depending on plan size, specified portfolio

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Articles Needed for News

Your help and participation are needed and welcomed. All articles will include a by-line (name, with title and employer, if you wish) 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 give me a call at 203-521-8400.

***News* is published quarterly as follows:**

Publication Date	Submission Deadline
September	August 10
December	November 10
March	February 10
June	May 10

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

Pension Section News—Preferred Format

In order to efficiently handle articles, please use the following format when submitting articles.

Mail articles on 5¼" diskette using either ASCII or WordPerfect 5.1 or 6.0 files, or send scannable copy, i.e., typed copy that is single-spaced with 72-character lines. 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.

If this is not clear or you must submit in another manner, please call Barbara Simmons 708-706-3562 at the Society of Actuaries for help.

Please send original hard copy of article and diskette to:

Barbara Simmons
Society of Actuaries
475 N. Martingale Road
Suite 800
Schaumburg, IL 60173-2226

Please send a copy of article (hard copy only) to:

Daniel M. Arnold, FSA, FCIA
Hooker & Holcombe, Inc.
65 LaSalle Road
West Hartford, CT 06107

Thanks for your help.

Dan Arnold, Editor
Phone: 203-521-8400
Fax: 203-521-3742

Continuing Education Update

by Barbara S. Choyke

With summer just around the corner and fall on its heels, it isn't too soon to think about fulfilling your continuing education needs for 1994. The listing below indicates those topics being planned for the Fall. Several others are in "tentative" status. Watch for detailed promotional materials over the next several months. More information on these programs can be obtained by calling the Continuing Education Department of the Society of Actuaries at 708-706-3545.

Tentative Seminars

Executive Benefits	TBD
Investments for Pension Actuaries	TBD
Funding Adequacy	TBD
Pension Actuary Compliance	TBD

Chicago Annual Meeting

Monday, October 17, 1994

Pension Discount Rates	1:30–2:30 p.m.
Computer-Assisted Learning	1:30–2:30 p.m.
Ethics in Business	1:30–4:15 p.m.
Actuarial Valuation: Economic Assumptions	2:45–4:15 p.m.

Tuesday, October 18, 1994

How Much Is Enough?	8:00–10:00 a.m.
Professional Qualifications	8:00–10:00 a.m.
What's Up for Pensions?	10:30 a.m.–12:00 noon
Pension Research & Education Activities	2:30–4:00 p.m.

Wednesday, October 19, 1994

Pension FAC Case Study	8:30–10:30 a.m.
PBGC Issues	11:00 a.m.–12:00 noon
Introduction of Asset/ Liability Matching	1:30–3:00 p.m.

There will be a Computer-Assisted Learning module in each time slot. This is an interactive program on several pension topics to be named at a later date.

What's Available from the SOA Audiotape File?

- Minimum/Maximum Tax-Deductible Contributions
- Compliance with 401(a)(4)
- Amended 401(a)(4)
- Qualified Retirement Plans—Final Nondiscrimination Rules, Legislative Update and Participant-Directed Plans
- How to Requalify Your Retirement Plans after Tax Reform

Some of these tapes are dated material. There is a two-week loan period for these tapes.

If you would like to volunteer as a speaker for any of these topics or have topic suggestions, please contact Barbara Choyke at 708-706-3546.

Barbara S. Choyke is Director of Continuing Education of the Society of Actuaries.

Discounting Pension Liabilities under the New SEC Rules
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constraints, market liquidity, bid-asked spreads, and other considerations at the time of purchase.

3. A par curve specifies the yields of coupon bonds; a spot curve (or spot interest rate) measures the yields that would apply to zero-coupon bonds—or to year-by-year pension cash flows. As Figure 1 shows, the year-end 1993 spot rates exceed the par curve rates. This relationship holds for a positively sloped yield curve, because the spot rate (the yield on a zero-coupon bond) is not diluted by the lower yields on the short-term coupons that drag down the par rate.

   Because of the uncertainty concerning the pattern of corporate rates beyond 30 years, we confine the Pension Discount Curve to the below-30-year range. In calculating the Pension Liability Index, introduced in the following section, we apply the 30-year spot rate to all cash flows beyond 30 years.

4. The index reflects a typical projected benefit obligation (PBO). We do not reflect changes in the salary increase assumption, which can partially offset the effect on the PBO of changes in nominal interest rates. We have not developed a comparable retiree medical liability index because of the sensitivity of medical liabilities to varying plan designs and to the health care cost trend rate, which is a highly volatile and subjective assumption. The Pension Discount Curve, however, is appropriate for valuing retiree medical liabilities.

Accounting Standards for Pension and Employee Benefits Around the World
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in fixed-income investments, so that there is a better correlation between what happens to the assets and what happens to the liabilities. Under *FAS 87*, some companies have found that if they settle a portion of their liabilities through the purchase of annuities, they can create a huge one-year effect on their bottom line. These are two instances of accounting standards influencing investment approach, again probably to the detriment of future retirees, since most agree that equities, not fixed-income instruments or annuities, are the best investments for retirement plans.

Robert E. Heitzman, FSA, is Director of International Compensation and Benefit Consulting at Ernst & Young in New York City.