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Chairperson's Corner

Smo-o-th!

by Paul Angelo

As all pension folks know, asset smoothing methods have been around for a long time. The landmark 1968 paper by Jackson and Hamilton (TSA XX) catalogs something like 119 methods, and there are chapters on smoothing methods in all the standard pension mathematics textbooks. Recently there has been a flurry of research and other industry activity on the subject, and the recent market downturn has triggered a heightened level of interest on the part of plan sponsors. Here is a very personal perspective on some of the recent action, with some pointers on what to watch out for.

Let's start with the research. Your SOA Retirement Systems Practice Advancement Committee's research wing commissioned a survey on the classification and prevalence of various smoothing methods. The results were published in the August 2001 issue of the Pension Section *Forum* (volume 13, No.1), along with other research papers on the subject. You can find this, along with a cornucopia of other useful resources, on the Pension Section Web site, at *http://www.soa.org/sections/pension.html*.

The next piece of research almost got me put into restraints at the San Francisco airport. Before going there, let me note that the regulatory history of asset smoothing methods for qualified plans can fairly be described as tortured. After the laissez-faire era of Rev. Proc. 95-51 ("any acceptable asset valuation method (!)"), Rev. Proc. 95-51 severely limited the choice of methods receiving automatic approval. Some relief came with Rev. Proc. 98-10, but that guidance also included a seemingly benign transitional version of "average value" (Approval #17) that on analysis produced an income recognition pattern resembling an alpine ski jump. Curiouser and curiouser.

During this same post-1995 period, anecdotal evidence indicates that ad hoc approval of algebraically equivalent methods sometimes depended on the particular formulation used in the request. Similarly, you may recall that the 1980 regulations on asset methods described a cumbersome-looking thing called "average value," mentioned above. Now it turned out that this "average value" method appeared to have a much more algebraically accessible twin. The whole subject cried out for a cohesive, formal analysis, but who has the time, right? Well, my friends, that analysis is now readily available to all of us eager Pension Section members.

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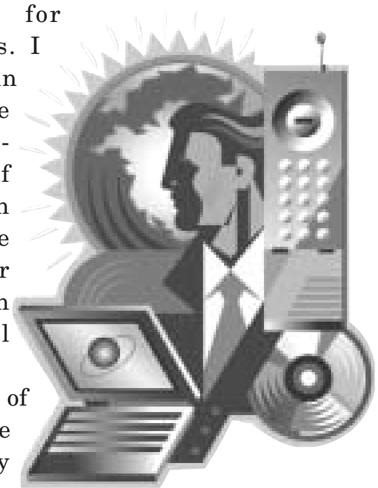
It happens that the SOA recently commissioned what was originally to be a new study note on "Asset Valuation Methods under ERISA." The authors are Paulette Tino and Edward Sypher, both staff actuaries at the IRS. As is disclaimed in their paper, this analysis "does not necessarily represent the positions of the Internal Revenue Service" but no matter. As a known dabbler in this area I was invited to review the draft note, which I saved for some light travel reading. And there at the Gate 70 waiting area in SFO I found that this was in fact the Holy Grail of algebraic analysis for smoothing methods. I could scarcely contain myself. All the rumored equivalencies, the quirks of Approval #17, even extensions to the popular rolling or asymptotic recognition methods, it was all there.



Spared the trouble of having to write the thing, I devoted my labors to expanding its audience beyond our stalwart students. I am pleased to say that this gem is now available on the Pension Section Web site, which is still at *http://www.soa.org/sections/pension.html*. It will also be published in an upcoming issue of the *Pension Forum*. Be sure either to download it or to watch for it in the *Forum* (if you are into this sort of thing), as you may want to keep it with your other favorite reference papers.

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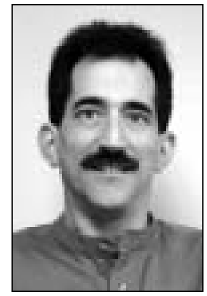
Moving on to the Actuarial Standards Board, in December 2001 the ASB issued an exposure draft on the "Selection of Asset Valuation Methods for Pension Valuations." This standard is to be part three of a four-part suite of practice standards for measuring pension obligations. Even though the comment deadline has passed (May 15, 2002), I recommend it to your attention. Of the several features on which the ASB specifically asked for comments, two got my attention. One was that realized and unrealized gains and losses are to be treated the same. Don't get me wrong, I think this is the way to go, but it will come as news to some plans I know that have not yet seen this particular light, and are (still) smoothing only unrecognized gains and losses. This would include, for example, methods that take any sort of average of book and market value, either directly, or by using historical ratios of market to book.

A more interesting wrinkle is a requirement in the draft to avoid any systematic bias relative to market value. Sounds innocent enough, but (and this really is just my opinion) a strict reading would proscribe methods that smooth realized and unrealized gains and losses, at least for plans with any substantial equity investments. For example, this would knock out three of the six methods currently eligible for automatic approval under the governing Revenue Procedures. So take a look; you can find the proposed ASB standards at *http://www.actuary.org/proposedstnds.htm.*

Let me close with a blatant exercise of chairman's privilege. The IRS' James Holland and I discussed all this good stuff during Session 76 PD at the recent SOA Spring Meeting in San Francisco. A good time was had by all, tapes are available, and the outline and handouts will be available soon on the SOA Web site. Check them out soon. ❐



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valuations are presented in the table (on page 4). 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 2001 valuation were 6.70% for the first 20 years after the valuation date and 5.25% thereafter. These interest rates are dependent upon PBGC's mortality assumption which changed from FY 2000 to FY 2001 (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 Table (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 interest rates so determined for the 2001 valuation were 6.70% for the first 20 years after the valuation date and 5.25% thereafter.

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