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SOCIETY OF ACTUARIES

# Pension Section News

## Summary of the Financial Economics and the Traditional Actuarial Paradigm Roundtable

by Emily K. Kessler

The SOA sponsored a roundtable, Financial Economics and the Traditional Actuarial Paradigm, on November 18, 2004, at New York University. Attendees of the event included volunteer leaders from the SOA, the American Academy of Actuaries and other actuarial organizations, as well as academics, investment bankers, academics, market analysts and representatives from the PBGC, the GAO, the Federal Reserve and the IRS. There were 63 attendees in total.

The roundtable was designed to encourage discussion among volunteer leaders in the actuarial community and others on what effect pension finance, aka financial economics, might have on actuarial practice. Attendees discussed and debated what pension financial principles would say about pension investments, funding standards, accounting standards and plan design. The joint Academy/SOA Task Force on Financial Economics and the Actuarial Model organized the roundtable and will be using the discussions from it to further its work in the coming year.

The discussion, led by Jeremy Gold, was lively and focused on five main areas:

- An overview of pension finance concepts, including efficiency, friction, transparency, arbitrage and agency theory.
- Investments: Pension finance teaches that diversified shareholders would be indifferent to how funds are invested if not for tax and security effects. These effects imply that plan assets should be invested in bonds rather than stocks. Plan sponsors (i.e., managers of corporate and public plans) favor equities, but that is more likely caused by biases in funding requirements, accounting standards and actuarial methods. Pension finance argues that these biases represent inappropriate anticipation of the equity premium, and should be eliminated.
- Accounting: The United Kingdom's FRS 17 accounting standard for pensions gives us a hint at how an accounting statement influenced by pension finance would look. Pension finance suggests that modifications to the existing FRS 17 standard should include using a yield curve adjusted for default risk instead of AA corporate bond rates, an ABO/VBO instead of PBO liability measure and no anticipation of equity returns in operating income (expense).
- Funding: Pension finance principles state that it is rational, transparent and efficient for plans to be fully funded for all accrued liabilities at all times, valued using a treasury yield curve (or similar default-free instrument).
- Plan design: Are there ways to design DB plans to make them better workforce

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# Excerpts from the PBGC Actuarial Valuation Report—2004

by Joan M. Weiss

*Editor's Note: The 2004 Annual Performance and Accountability Report, the 2004 Annual Report of the PBGC, and the complete 2004 Actuarial Valuation Report, including additional actuarial data tables, are available under Publications at* www.PBGC.gov.

The 2004 Pension Benefit Guaranty Corporation (PBGC) Annual Performance and Accountability Report and the 2004 Annual Report of the PBGC each contain a summary of the results of the September 30, 2004 actuarial valuation. The purpose of the separate Actuarial Valuation Report is to provide greater detail concerning the valuation of future benefits than is presented in the PBGC's annual report.

## Overview

The PBGC calculated and validated the present value of future benefits (PVFB) for both single-employer and multiemployer programs and of nonrecoverable financial assistance under the multiemployer program. For the single employer program, the liability as of September 30, 2004, consisted of:

- $44.95 billion for the 3,469 terminated plans
- $30.95 billion for the 45 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 loss. In addition, the liability for reasonably possible terminations has been calculated and is discussed in Note 7—Contingencies to the financial statements on page 33 of PBGC's 2004 Annual Performance and Accountability Report. A discussion of PBGC's program exposure and net financial condition is presented on pages 4 through 10 of that report. For the multiemployer program, the liability as of September 30, 2004, consisted of:

- $3 million for 10 pension plans that terminated before passage of the Multiemployer Pension Plan Amendments Act (MPPAA) of which PBGC is trustee.
- $1,295 million for probable and estimable post-MPPAA losses due to financial assistance to 67 multiemployer pension plans that were, or 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 multiemployer valuations are presented in the table on page 14 of the 2004 Actuarial Report. Assumptions concerning data that were not available are discussed in the data section of the report.

As in previous valuations, the select and ultimate interest rates used to value PBGC liabilities were derived using an assumed underlying mortality basis and current annuity purchase prices. The interest rates so determined for the 2004 valuation were 4.80 percent for

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# Chairperson's Corner

by Tonya B. Manning

I am thrilled with the opportunity to chair the Pension Section Council. Now is a time of potential change, when the Society is discussing proposals that could drastically alter our current retirement and social insurance systems. These changes will be at the forefront of the Pension Section Council agenda for the coming year. I look forward to my time as chair and will be reporting to you regularly on our activities.

The Society of Actuaries is changing too. Under its new structure the Pension Section Council has taken on responsibility for all the activities formerly performed by the Retirement Systems Practice Area. Gap analysis and environmental scanning for retirement issues are now key responsibilities of the council. The council met in January with select SOA Board members, committee chairs and representatives from other sections and organizations to help set our goals for 2005 and for the long term. Attendees were asked to share a topic that is a primary concern for them at their job or position. The first issue that was raised evolved into the most common issue among the group: the survival of DB plans. It was proposed that a sound business case be outlined that supports DB plans from both the perspective of the plan sponsor, as well as the participant. To achieve this goal, the council has formed a task force that will explore developing a utility analysis of DB versus DC plans. This analysis would provide a fair comparison of the relative risks of each type of plan to the employer, employee and society.

The recent proposed change to pension funding was discussed, along with the general question of what is the best method for funding DB plans. The council has recently released a call for papers regarding the funding of DB plans. Thus far, there has been an unprecedented interest in this topic. Writers are asked to 'take a fresh look at the issues related to funding for pension plans and how funded status is reported to plan stakeholders, particularly plan participants, guaranty agencies and regulators.' The resulting papers are intended to provide the basis for a symposium or conference.

Another concern that was prevalent among the group was the education of not only plan sponsors, but also the general public regarding retirement issues. Why do certain groups of employees demand pension plans much more vigorously than other groups? Does the public fully understand the social benefits of a strong DB system? Last year, with this issue in mind, the council began exploring the development of a Web site that would provide general retirement education material. It would contain information on the different types of plans, their inherent risks, and how one may plan for retirement while addressing the associated risks. It was also suggested that a tool be developed so that individuals can model their retirement risk and determine the value of their DB plan versus their DC plan in light of the risks.

Professionalism was also a topic. How can we better link practice with theory and ensure actuaries are properly trained as leading-edge professionals? In addition, the council's Basic Education Committee has been asked to determine if a 'business skills' component should be added to the basic education requirement. It is critical that retirement actuaries are able to understand the many aspects of a company's business and be able to effectively communicate their ideas. This business skill component might include some of the following: general knowledge of Sarbanes-Oxley issues affecting companies, loan and debt covenants, impact of floating equity and the buy back of outstanding shares, accounting issues, communication skills, enterprise risk management, etc.

Social Security is a top issue for the second term of the Bush administration. The Social Security Committee was asked to help educate our members about the possible changes and the supporting data that is used to argue for one proposal versus another. Particularly, we could provide an analysis of the assumed mortality and other assumption used for the projections. Also, it would be helpful to be able to compare the social insurance programs in Canada and the United States to those in other countries.

More and more of our members are consulting with multinational clients. The council will set up a network to help members involved in international work connect with each other. The network will allow members to share information about the specific countries that they work with and allow for better cross-fertilization of ideas about plan design.

There were other concerns raised by attendees at the meeting, including phased retirement, cash-balance plans and the SOA's basic education program. Some of the concerns are already being addressed in our research and education programs. The council and its various committees are determining what their next steps will be to further address the issues brought up during the meeting. But we want to ensure that we include all the important issues for our members. We are very interested in hearing about any other concerns you have, that the council can address in its mission to provide education and research to its members. Please provide your thoughts and suggestions to either me at *Tonya_Manning@aon.com* or Emily Kessler at *ekessler@soa.org*. ◆

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management tools and preserve much of their inherent value? Pension finance principles imply that plan features such as lump sums and long cliff eligibilities destroy value in defined-benefit (DB) plans; thus we should work to create value by designing annuity plans with both transparent financing and benefits, rights and features aimed at attracting, retaining, motivating and, finally, exiting employees.

Lively discussions were had around many topics, including:

- If the demand for bonds were to increase, could the market issue sufficient quantities of long bonds? Many representing the investment banks thought that the market would be able to respond, and respond quickly.
- Are there advantages to being the "first mover" from an equity-primary asset mix to a bond-primary asset mix? Some thought that the first mover might have a slight disadvantage, as the market wouldn't yet have the long bonds available, giving the advantage to second movers.
- Does the market set a higher value on a company that is invested primarily in bonds (incurring higher costs but at a lower risk) than one invested primarily in equities? Can any advantage be seen until specific parts of the accounting statement are changed?

- Is ABO the proper liability measure for accounting costs rather than the traditional PBO? Many felt we wouldn't properly reflect the true cost of the plan if we moved to an ABO standard. Other arguments were made that using PBO allocates too high a cost for participants early in their working careers, making DB plans expensive vis-à-vis DC plans for young participants.
- Many felt that measuring liabilities using exact year-end yield curves would create too much volatility, particularly as yields on any December 31 can vary widely compared to the 15 days before or 15 days after. They would prefer something using a smoothed rate. However, others noted that smoothed rates, while they add to the predictability of the liability result, don't offer opportunities to hedge. Hedging allows the plan to take, dispose of or manage risk as it sees fit. Averaging defeats this risk-management opportunity.
- Are the AA rates adequate for funding of pension plans? What level of risk is too much for the PBGC?

After the meeting, we surveyed participants to see what their thoughts were about the concepts discussed. Participants were given 21 different statements covering the lessons of pension finance in accounting, funding, investments and plan design and were asked if they strongly disagreed, somewhat disagreed, were neutral, somewhat agreed or strongly agreed with this statement both before they attended roundtable and after.[1]

Approximately 35 participants took the survey. The full results of the survey are available on the Web site. Survey results for seven of the 21 questions are shown with this article. Some highlights are noted below.[2]

- Participants were in more agreement with these statements after attending the roundtable than before attending the roundtable.
- By far the strongest agreement was with the statement "Financial economics offers valuable insights to the risks faced by shareholders and participants when pension plans invest in equities rather than bonds." Thirty-one respondents somewhat or strongly agreed and only one person strongly or somewhat disagreed. There was moderate agreement with the following statements:
  — "Once the biased accounting is removed from the picture, bonds will become a more attractive investment because the advantages … will be more obvious." Twenty-six respondents somewhat or strongly agreed with this statement and only six somewhat or strongly disagreed.

— "The move to bonds may have real benefits to the corporation, but others (corporate managers, investment managers) do not agree with this statement." Twenty-four respondents somewhat or strongly agreed with this statement, and four somewhat or strongly disagreed.
— "Accounting standards should not anticipate equity returns (i.e., no expected return on assets) but instead financing charges should reflect actual asset returns." Twenty-seven somewhat or strongly agreed with this statement, and six somewhat or strongly disagreed.
— "Accounting standards should use an ABO/VBO rather than PBO as the main liability measure." Twenty-three respondents somewhat or strongly agreed with this statement and six somewhat or strongly disagreed.
— "Agency costs (i.e., inefficiencies that occur when managers act on their own behalf rather than that of shareholders) destroy long-term value." Twenty-four respondents somewhat or strongly agreed with this statement, and four somewhat or strongly disagreed with this statement.

- In general, there was less agreement with the statements related to funding standards than those related to accounting standards. For example, only 17 respondents somewhat or strongly agreed with while 12 respondents somewhat or strongly disagreed with the statement "It is rational, transparent and efficient for minimum funding standards to require that sponsors fully fund all accrued liabilities." The only statement for which there was moderate agreement was "A case can be made to embrace funding reform in a financial economic framework and continue to argue for the continuation of DB plans." (Twenty-four somewhat or strongly agreed, while seven somewhat or strongly disagreed).
- In general, there was less agreement with the statements among those who were consulting actuaries than those who were not (the latter group includes non-actuaries and actuaries employed by the government (PBGC and IRS), government plans and associations).

The Task Force on Financial Economics and the Actuarial Model will use the results of the roundtable, including the survey, to inform its work in the coming year. The task force is actively involved with the Pension Section's Continuing Education committee in planning the seminar to be embedded in the SOA Pension/Health Spring Meeting titled "Addressing the Financial Risks from Retirement Systems." It is also working on the "Actuary's Guide to Financial Economics Consulting" (working title), to be published in conjunction with the spring meeting. The task force hopes both the seminar and the guide can help actuaries understand the implications of pension financial principles on actuarial science and on the risk management of pension plans.

Results from the survey are available on the Pension Finance web page on the SOA Web site at *http://www.soa.org/ccm/content/areas-of-practice/special-interest-sections/pension/pension-finance/pension-finance-resources/*. We also have a list of participants there, too. On that page, you can also read more about how pension finance concepts might affect how pension actuaries look at pension plans.

If you have any questions about the work of the task force, please contact the chair, Mark Ruloff, at *mark.ruloff@watsonwyatt.com* or (202) 715-7580; or Emily Kessler, SOA staff fellow, at *ekessler@soa.org* or (847) 706-3530. ◆

[1] We asked the questions only after the roundtable, but participants were asked to reflect on whether they would have agreed or disagreed before the roundtable and after the roundtable to gauge if their views changed as a result of the roundtable.

[2] All responses summarized here reflect the "after" roundtable response to the question.

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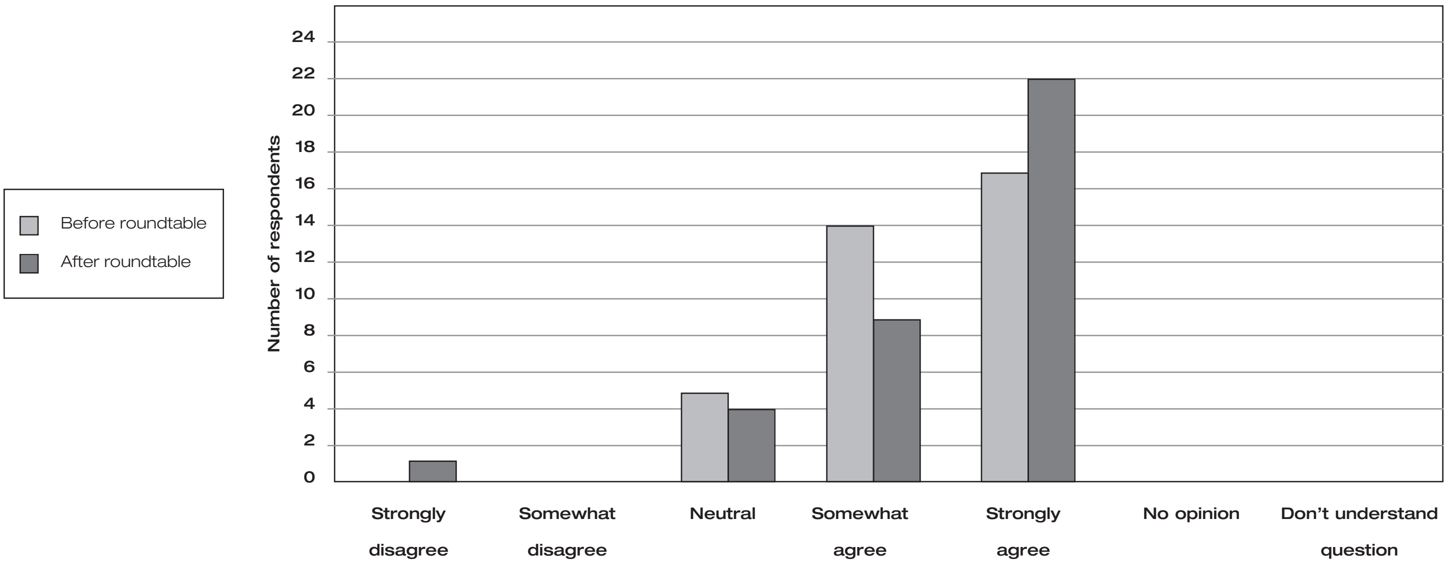
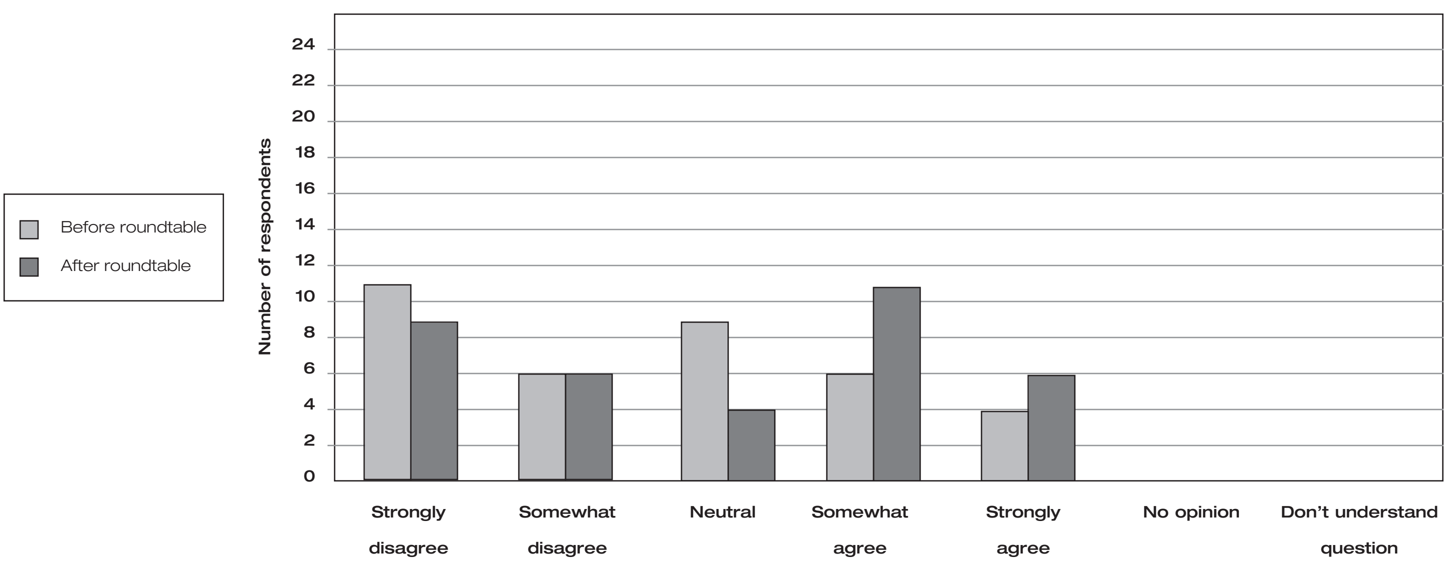
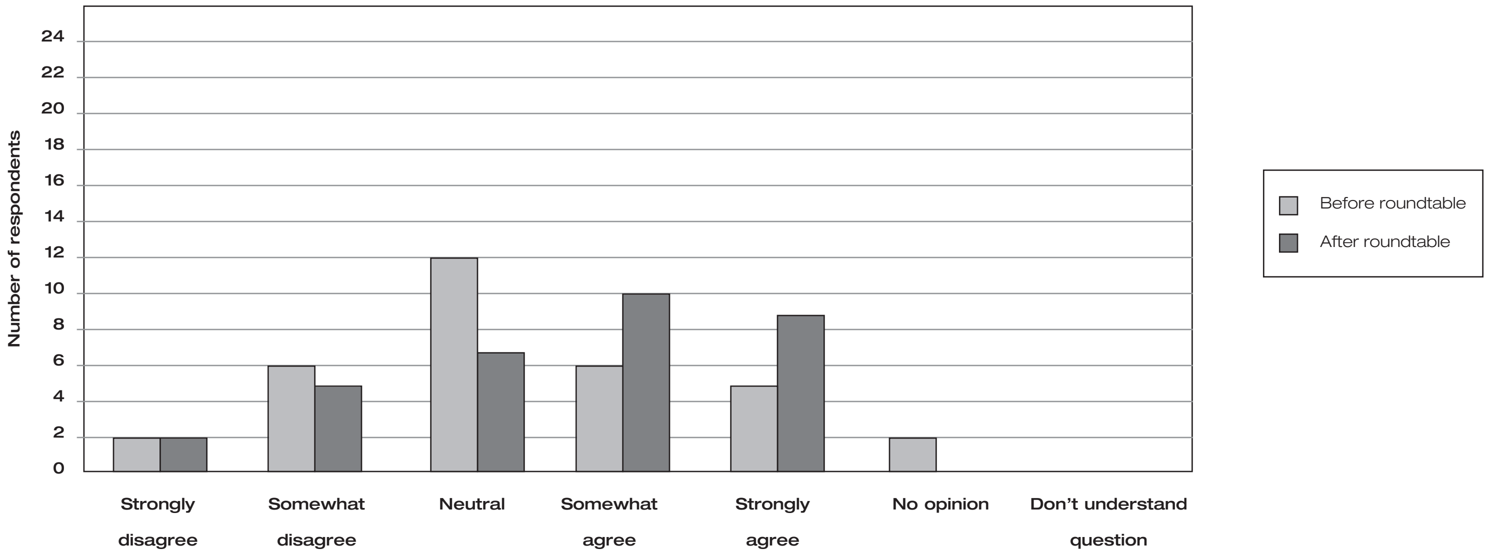
**Financial economics offers valuable insights to the risks faced by shareholders and participants when pension plans invest in equities rather than bonds.**



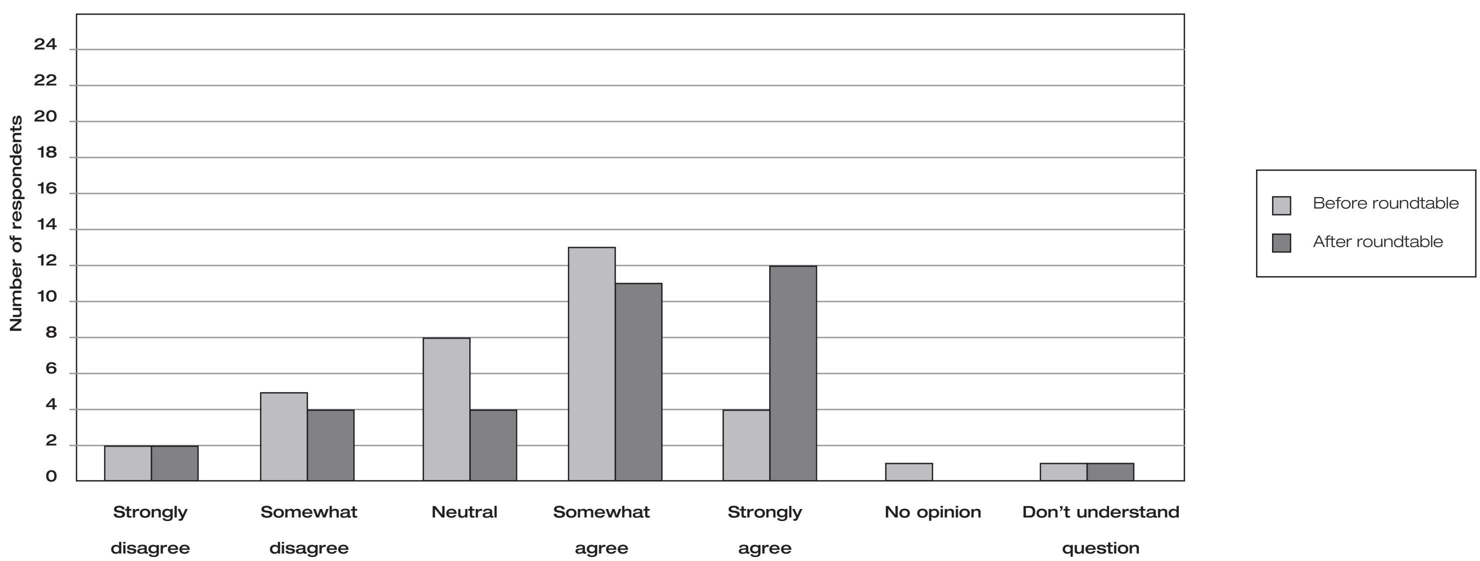

**Bonds should be the majority if not exclusive investment in a pension plan trust.**



**Transitioning the plan from a 60/40 equity/bond asset mix to a 20/80 equity/bond asset mix will not be as problematic as it might seem because the market will respond by issuing more long bonds.**




**Accounting standards should use an ABO/VBO rather than PBO as the main liability measure.**

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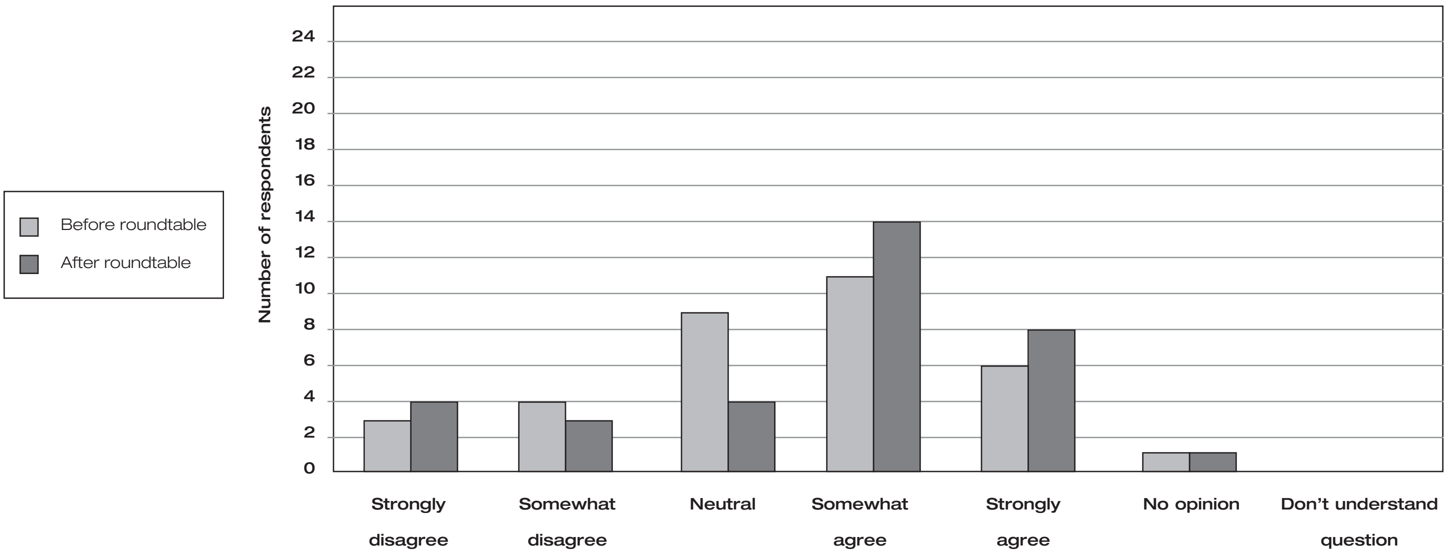
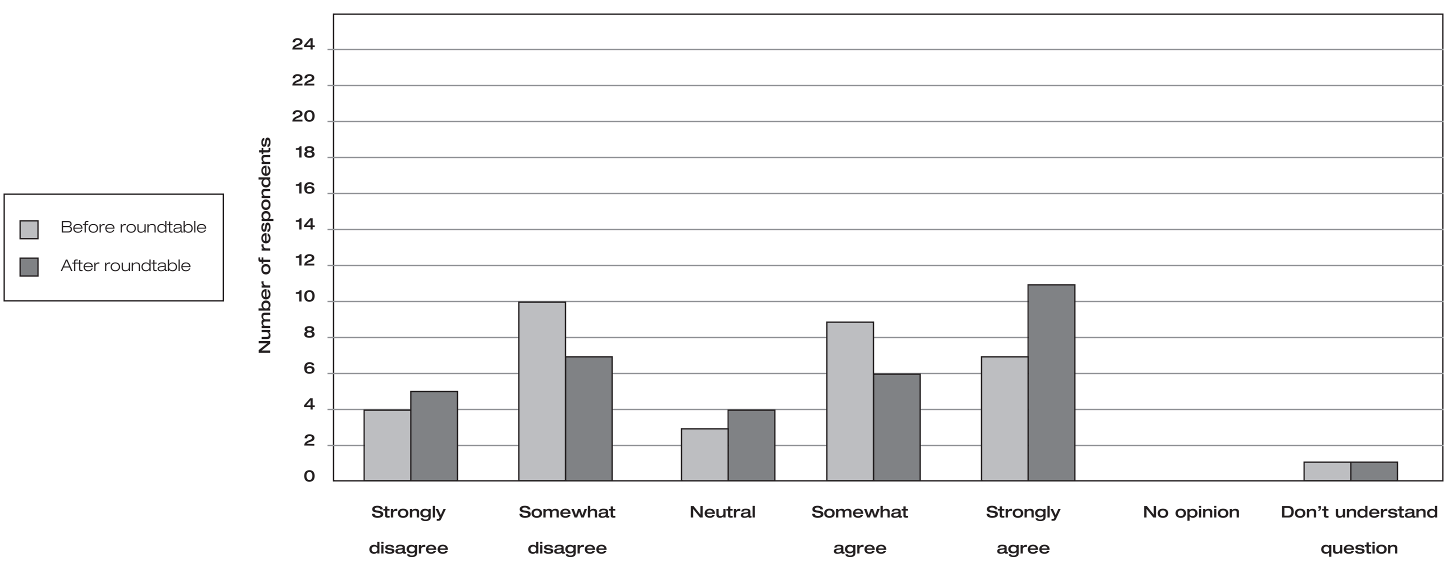
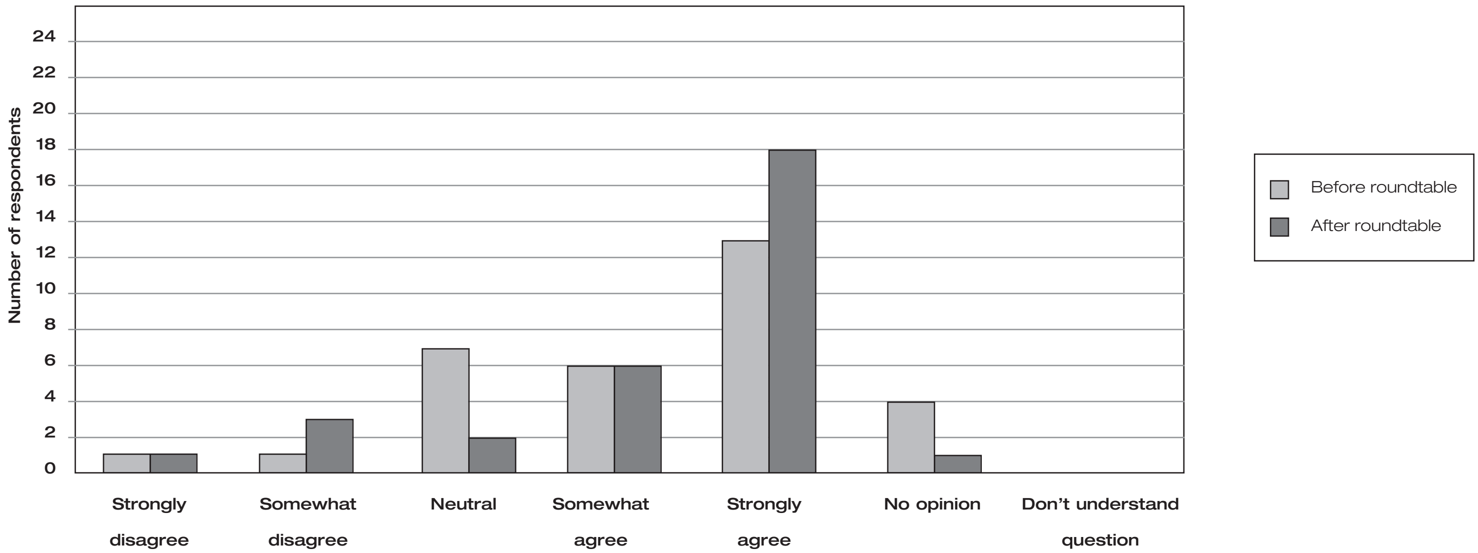
### Funding obligations (e.g., current liability) should be measured using a yield curve.




### It is rational, transparent and efficient for minimum funding standards to require that sponsors fully fund all accrued liabilities.



**Agency costs (i.e., inefficiencies that occur when managers act on their own behalf rather than that of shareholders) destroy long-term value.**




the first 25 years after the valuation date and 5.00 percent thereafter. These interest rates are dependent upon the PBGC's mortality assumption, which changed from FY 2003 to FY 2004 (see below).

An independent consulting firm reviewed the PBGC's financial statement mortality assumptions for the FY2004 valuation. Their study recommended that when conducting valuations for its financial statements, the PBGC use the male and female 1994 Group Annuity Mortality Static Table (with margin), set forward one year, for healthy males and females. This table replaced the male and female 1994 Group Annuity Mortality Static Table (with margins), set forward two years, for healthy males and females used in the September 30, 2003 valuation. Changes were also made to the tables for valuing disabled lives mortality. This study also recommended that continuing mortality improvements be taken into account by using Projection Scale AA 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 2004 valuation is the 1994 Group Annuity Mortality Table, set forward one year, projected 20 years to 2014 using Scale AA. The 20 years recognizes the 10 years from 1994 to 2004 plus the 10-year duration of the 9/30/03 liabilities. The 2003 assumption incorporated an 18-year projection, determined as the sum of the nine years from 1994 to 2003 and the nine-year duration of the 9/30/02 liabilities.

**We note a major change in calculation procedure for FY2004. For both the single-employer and multi-employer probable plans, we developed and began using a standard rate of return calculation program to project assets to the evaluation date.**

The model used to determine the reserve for future administrative expenses was last changed in FY 2000 based on a study by an independent consultant. There was no change in the assumptions for retirement ages in 2004.

The Small Plan Average Recovery Ratio (SPARR) assumptions as shown in the table on page 15 were updated to reflect the actual SPARR calculated for FY 2002 (9.60 percent). The SPARRs for subsequent years are assumed to equal the FY 2002 SPARR.

We note a major change in calculation procedure for FY2004. For both the single-employer and multiemployer probable plans, we developed and began using a standard rate of return calculation program to project assets to the valuation date. The program computes annualized rates of return between two dates based on the blend of stocks and bonds the user selects. In addition, we added a general cash-flow projection capability and a computerized system to track the receipt of multiemployer information.

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, security 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 multiemployer plan insurance programs as of September 30, 2004.

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. ◆

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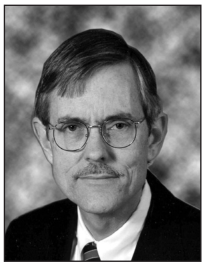
| ACTUARIAL ASSUMPTIONS | | |
|---|---|---|
| | **Previous Valuation as of 9/30/03** | **Current Valuation as of 9/30/04** |
| Interest Rate | Select and Ultimate<br>• 4.40% for 20 years.<br>• 4.50% thereafter. | Select and Ultimate<br>• 4.80% for 25 years.<br>• 5.00% thereafter. |
| Mortality<br>• Healthy Lives | • 1994 Group Annuity Mortality Static Table (with margins), set forward two years, projected 18 years to 2012 using Scale AA. | • 1994 Group Annuity Mortality Static Table (with margins), set forward one year, projected 20 years to 2014 using using Scale AA. |
| • Disabled Lives Not Receiving Social Security<br>• Disabled Lives Receiving Social Security | • Healthy Lives Table set forward three years.<br>• 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. | • Healthy Lives Table set forward seven years.<br>• Healthy Lives Table set forward seven years. |
| Small Plan Average Recovery Ratio (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<br>(most recent SPARR: FY 2001 =4.94%). | 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<br>(most recent SPARR: FY 2000=9.60%). |
| Retirement Ages | (a) Earliest possible for shutdown companies.<br>(b) Expected retirement age (XRA) tables from 29 CFR 4044 for ongoing companies.<br>(c) Participants past XRA are assumed to be in pay status.<br>(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; 1.18% of the liability for benefits plus additional reserves for cases where plan asset determinations, participant database audits and actuarial valuations were not completed. | Same |

# Social Security Private Account Reform: **Retaining the Defined-Benefit Model with Indexed Benefit Offsets**

by Stephen J. Hoeffner



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President Bush is to be commended for making Social Security private account reform a top legislative priority, but the mixed defined-benefit / defined-contribution model that he has in mind has been criticized for transferring too much investment and longevity risk to accountholders. In response, President Bush should consider an alternative approach to private account design— indexed benefit offsets —that would retain the existing defined-benefit model and eliminate this risk transfer.

In the private pension system, most large companies are way ahead of President Bush, having already transitioned to a mixed defined-benefit/defined-contribution model. This trend is an ominous one for rank and file employees, who are ill-equipped to take on the investment and longevity risks inherent in defined-contribution plans, and I agree with reform opponents who argue that it would be still worse for Social Security.

The Bush plan is expected to have two key elements: private accounts funded through a dedicated portion of current payroll taxes, and new, reduced Social Security benefit formulas that will take into account the lifetime payments that these private accounts may be able to provide (leaving total benefits theoretically unchanged). Since individual experience will differ from the life expectancy and investment earnings assumptions reflected in the benefit formula reductions, critics see only increased risk for accountholders.

President Bush should not be deterred by this criticism, because equity-related investment returns on private accounts would give Social Security a huge new source of financing, making it stronger and more secure for everyone—but especially for lower income Americans who rely so heavily upon it. Advance funding has been an enormous boon for all private pension plan participants and would be equally advantageous for Social Security. But there ought to be a better way to do it—and there is.

Here's how private account reform could retain the existing defined benefit model. Instead of reducing the existing benefit formulas today based on some *assumed* earning rate, Congress should leave the formulas completely alone. Then, at retirement, a unique benefit offset would be calculated for each accountholder based on what he or she could have *really* accumulated by investing in a stipulated performance index, such as the S&P 500.

Under this indexed benefit offset approach, when John Doe retires, the Social Security computers would calculate a notional (i.e., hypothetical) offset account balance for him based on his own private account contribution history and the performance of the index. Based on this hypothetical offset account balance, his benefit under the existing formulas would be reduced for a fixed offset period—say five or 10 years. After the offset period, Social Security would pay his full benefits.

Here's John Doe's net monthly payment, assuming a benefit under the existing formulas of $3,000, a 10-year (120-month) offset period and a *hypothetical* offset account of $50,000. (Social Security would calculate this amount—without using, or even knowing, his *actual* private account balance.)

| | |
|---|---|
| Monthly Benefit by Formula | $3,000 |
| Indexed Offset [$50,000 / 120 months] | (417) |
| Net Social Security Payment | $2,583 |

At the end of the first year, his hypothetical offset account would be updated for assumed payments ($417 per month) and changes in the index, and then his offset would be recalculated, reflecting the 108 months remaining in the offset period. (Social Security still wouldn't know his actual private account balance, or if he had actually taken any payments from it.) Annual offset calculations would continue, ceasing after 10 years.

Let's say that John Doe had always fully invested his *actual* private account in the index. He'd have accumulated about $50,000—the same as the *hypothetical* account balance Social Security was using in his offset calculation. To make himself "whole," he would just draw down the offset amounts ($417 per month in the first year, etc.) His actual private account would keep pace with his hypothetical offset account until they were both exhausted at the end of 10 years.

If his actual private account had outperformed the index, his monthly drawdowns could be larger than the offsets, and he would receive increased total benefits—but "windfalls" should be rare. If he wanted to take no risk, he would just always stay 100 percent invested in the index.

Even without potential windfalls, there are still good reasons to expect that workers would want to invest in private accounts. The accounts would be passed on to one's heirs at death, and retirees would have flexibility to draw down their accounts as slowly as they wished—or not at all. (Workers would also know that, no matter what happened to Social Security, their own private accounts would always be there for them.)

With indexed benefit offsets, there would be only one almost surefire windfall—to the Social Security system itself. The system would keep almost all investment gains, just as it would if the existing "trust fund" were invested in common stocks, instead of government bonds, but with none of the practical concerns associated with actual government ownership. (This is why it's a defined-benefit reform model.)

In closing, here's one more suggestion. Turn private account administration over to the existing private system (employer plans and IRA providers). With carefully drafted guidelines/restrictions, there should be no need for a big new government bureaucracy, and, with indexed benefit offsets and few windfalls, no insurmountable concerns over fair treatment of workers who may initially lack access to the private system.

Private system administration and indexed benefit offsets would offer most of the economic and political advantages of real, broad-based account ownership, while retaining all of the benefit guarantees and progressivity of the current Social Security benefit structure. No other approach can do all this, helping to reestablish the efficient, fair and secure Social Security system that we all want. ◆

# Announcing the Publication of Three New Issues of *The Pension Forum*

Pension Section members should have already received these recently published issues of *The Pension Forum*. To find copies online, go to *http://www.soa.org/ccm/content/areas-of-practice/special-interest-sections/pension/pension-publications/*.

**The Yield Curve Forum** (Volume 15, No. 1, December 2004), features three papers on the construction and use of corporate bond yield curves.

- "Understanding the Corporate Bond Yield Curve" by H. Höfling, R. Kiesel and G. Löffler
- "Durational (Select and Ultimate) Discount Rates for FAS 87 and 106 Valuations" by R. Iverson, H. Rackley, S. Alpert and E. Kra
- "Valuation of Pension Obligations with Lump Sums" by R. Wendt

**Do we need a Reevaluation of ASOP 27** (Volume 16, No. 1, January 2005) reprints "A Reevaluation of ASOP 27, Post-Enron: Is It an Adequate Standard of Professionalism?" by F. Todisco (originally published in the Vancouver Financial Economics Monograph)

- R. North Jr. and F. Turpin discuss Mr. Todisco's paper
- L. Bader and J. Gold contribute "What's Wrong with ASOP 27: Bad Measures, Bad Decisions"
- Also included is a comment letter sent by 24 actuaries to the Actuarial Standards Board regarding the recently revised introduction to the ASOPs.

**Financial Economics: Post-Vancouver Papers** (Volume 16, No. 2, March 2005) features three papers on the application of financial economics to pension actuarial practice, with discussants

- "Pension Deficits: An Unnecessary Evil" by L. Bader (originally published in *Financial Analysts Journal*)
- "Fixing the Pension Plan Funding Rules" by E. Burrows (originally published in the Vancouver Financial Economics Monograph)
- "Reaffirming Pension Actuarial Science" by D Mindlin (new paper) ◆

# As Seen in ***SOA News Today***

by Emily K. Kessler

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*Author's Note: We're reprinting here, for your convenience, two articles of interest that we normally would have run in the* Pension Section News, *but we decided to run in* SOA News Today *(the e-newsletter) so you could get the information sooner. These are somewhat longer versions of what ran in* SOA News Today.

## New Resource for Pension Actuaries on Pension Finance (aka Financial Economics)

(from the January 2005 issue of SOA News Today)

The Joint Academy/Society Task Force on Financial Economics has put together resource pages for pension actuaries available on the SOA Web site. This resource contains much of the writing done about pension finance (also known as financial economics) and how that might affect how we work as actuaries. Papers are from actuaries and non-actuaries from the United States, Canada and around the world. Some of these are from SOA and Academy publications, but many are from other sources as well.

The home page is the jumping off point. There you'll see that the resources have been divided into topics: Key Points, Changes in Actuarial Practice and Views of Others. There's a fourth section that features papers covering what the effects of pension finance might be to funding, accounting, investments, plan design and public funds. We also have a link to the papers from the 2003 Financial Economics Symposium in Vancouver.

The home page for these resources is found at http://www.soa.org/ccm/content/areas-of-practice/special-interest-sections/pension/pension-finance/pension-finance-resources/

The Web site will be the place to find new materials on pension finance. New to the Web site is "The Case Against Stock in Public Pension Funds," by Larry Bader and Jeremy Gold. We anticipate this will be published in *The Pension Forum* in 2005, but for now you can read it on the Web site. It's the second paper on the Key Points page.
*http:www.soa.org/ccm/content/areas-of-practice/special-interest-sections/pension/pension-finance/key-points-pension-finance-resources/*

## Public Misperceptions About Retirement Security Report Published

(From the March 2005 issue of *SOA News Today*; this was the original article—too long for *SOA News Today.*)

The SOA, in cooperation with LIMRA and Mathew Greenwald & Associates, has just published a new report, "Public Misperceptions about Retirement Security." The new report takes data from various sources and combines it to highlight common public misperceptions of the risks faced in retirement. By bringing together data from multiple sources, the report is able to draw a more complete picture of what the public knows and doesn't know, about various sources of financial risk in retirement.

The report highlights 10 common risks in retirement:

1) Saving too little.
2) Not knowing when retirement will occur.
3) Living longer than planned.
4) Not facing facts about long-term care.
5) Trying to self-insure against long life.
6) Not understanding investments.
7) Relying on poor advice.
8) Not knowing sources of retirement income.
9) Failing to deal with inflation.
10) Not providing for a surviving spouse.

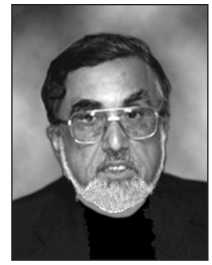
The report is currently available on the SOA Web site. To read more about it, go to *http://www.soa.org/ccm/content/areas-of-practice/special-interest-sections/areas-of-expertise/post-retirement/*. It's full of good information about who knows what when it comes to the financial risks of retirement, and it's in chapter format so you can get what you need quickly.

The report was produced under the guidance of the SOA Committee on Post-Retirement Needs & Risks. The principal authors of the report are Eric Sondergeld, ASA, CFA, MAAAA, LIMRA International and Mathew Greenwald, Ph.D., Mathew Greenwald & Associates. More about he report can be found in the April/May issue of *The Actuary*.

The Committee on Post-Retirement Needs & Risks is going to explore implications raised by these issues during the first half of 2005. This includes general implications for the public as well as consequences for plan sponsors and those providing financial risk products (e.g. annuities). If you're interested in volunteering to help the committee further the work started in the paper, please contact Emily Kessler at *ekessler@soa.org*. ◆

# Letter to the Editor
# **Defined-Benefit vs Defined-Contribution Plans**

*(A response by Samee-ul-Hasan, FIA, ASA, to Mark Ruloff's article in* Pension Section News, *January 2005)*



*Samee-ul-Hasan, ASA, FIA, FPSA, is a consulting actuary at Akhtar & Hasan in Karachi, Pakistan. He can be reached at actuaries@akhasan.com.*

Mark Ruloff's article favors DB schemes. He makes some valid points, especially from the employee-relations perspective. But there is room for an alternative view.

Defined-benefit plans range from career average to final salary. Suppose the pension is defined by the final salary, or final average of the last few years, or the average of "highest earnings" years. Then the employer is effectively issuing a blank check. The amount will be filled in many years later, perhaps decades later.

Neither bonds nor stocks can match the future salary risk. Indeed, no financial instrument can do so. In insurance terminology, it is an "uninsurable risk". It is unwise for the employer to "self-insure" it.

The rate of interest permitted by accounting standards to measure the DB liability will change from year to year. So the employer will be exposed to two risks: future salary risk and the measurement risk.

If it is a career average plan, the employer will have no future salary risk, but will remain exposed to the measurement risk. The problem is made worse by the PUC method mandated by accounting standards. Changes in the rate of interest fall through straight to the bottom line. The value is highly unstable.

There is no good business reason for employers to get involved with these complications. It distracts them from their core business. It is not sound business finance. More than two decades ago, I wrote an in-house paper for my firm, pointing this out.

A defined-contribution plan, on the other hand, is sound finance from the employer's point of view. Yes, it does transfer the investment risk to the employee. And yes, the employer's vulnerability that Mark Ruloff mentions, arising from recruitment, retention and employee morale problems, is a factor to be considered. However, if weighed against his financial vulnerability under DB plans, almost every employer will find it rational to opt for DC. Any decision-theory approach that considers worst cases will come down in favour of DC. Worldwide, most employers have realised this, and this is without taking into account the regulatory burden of DB.

For an employee, a DC plan is probably better than career average DB anyway. Under a DC plan, he has the right to the investment income. Under a career average plan, his pension is frozen in money terms. Uprating of the career average is at the employer's discretion, not an employee right.

It is not easy to run DC plans well. Accounting may be conceptually trivial, but the workload is decidedly non-trivial. Serious problems arise in respect of employee communication, investment allocation and management. Measuring and balancing risks, that participants are willing to bear versus *returns* they would like, and calibrating investment policy and its implementation to harmonize with this risk-return balance, require careful actuarial attention. So does the equitable allocation among participants of investment income, realised capital gains or losses and unrealized capital appreciation or depreciation. Drawing the benefit, whether as an annuity or as a "draw-down", is also a field for actuarial study.

Actuaries can perhaps help to define a target pension as a proportion of final salary. The target should not become an obligation of the employer, but it can be a concept. Actuaries can advise on how to modify DC plans' parameters periodically, to improve the chances of hitting this moving target.

Actuaries should focus on the design and operation of good DC plans, and gracefully accept that DB plans will be phased out.

*P.S.* There is however, one DB scheme which every civilised society needs. This is a national pay-as-you-go scheme to provide flat rate floor incomes to old persons, and to those who are physically unable to work. The income should be defined in terms of subsistence needs, not the individual's previous salary history. It should be reviewed each year in the light of inflation and other relevant factors. ◆

# SOA Spring Meeting
# June 15-17, 2005, New Orleans, LA

## The Pension Section Proudly Presents *Addressing the Financial Risks from Retirement Systems Seminar*

Thirty years ago, defined benefit plans were relatively smaller in relationship to the plan sponsor's core business of sponsoring government's infrastructure. A graying baby boom population, increased longevity and contraction of old-line industries have combined to increase the cost and financial risk engendered by pension plans. Once small fringe benefits, retirement plans have become substantial financial commitments with the accompanying risk. Many plan sponsors have reacted by terminating or freezing plans and moving to defined contribution plans.

Actuaries must help plan sponsors get back to the basics: the costs and risks inherent in defined benefit and defined contribution plans before the accumulated overlay of regulation. To help in this process, the Pension Section Council's Continuing Education Committee has designed this two-day intensive seminar and embedded it into the SOA Health/Pension Spring Meeting. The goal of the seminar is to help you better measure, discuss, manage and mitigate risks that pension plans bring to their sponsoring organizations. The seminar runs on Wednesday and Thursday.

But that's not all … the spring meeting also includes:

- Sessions on retiree medical, including a half day seminar on Friday on the Medicare Modernization Act
- Steve Goss, ASA, MAAA, Chief Actuary of the Social Security Administration as the featured luncheon speaker

For more information or to register go to *http://www.soa.org/ccm/content/ce-meetings-seminars/annual-and-spring-meetings/new-orleans-health-pension-spring-meeting/new-orleans-health-pension-spring-meeting/* or go to *www.soa.org*, click on "Meetings and Seminars," "Events" and "New Orleans (Health/Pension) Spring Meeting." ◆

**Cruisin' on the Mississippi:** Enjoy a dinner cruise on the mighty Mississippi! This event is a great opportunity for casual networking, socializing, dining and sightseeing! Docked within a short walk of the meeting hotel, the Cajun Queen boards from 7:00 to 8:00 p.m. and cruises from 8:00 to 10:00 p.m. Attendees enjoy drinks, a buffet dinner and music in grand New Orleans style.

**Limited space available;** advance registration is required. There is a non-refundable charge of $50 per person for Health and Pension Section members and $60 per person for all other attendees. **To attend, be sure to register for session 94SM.**