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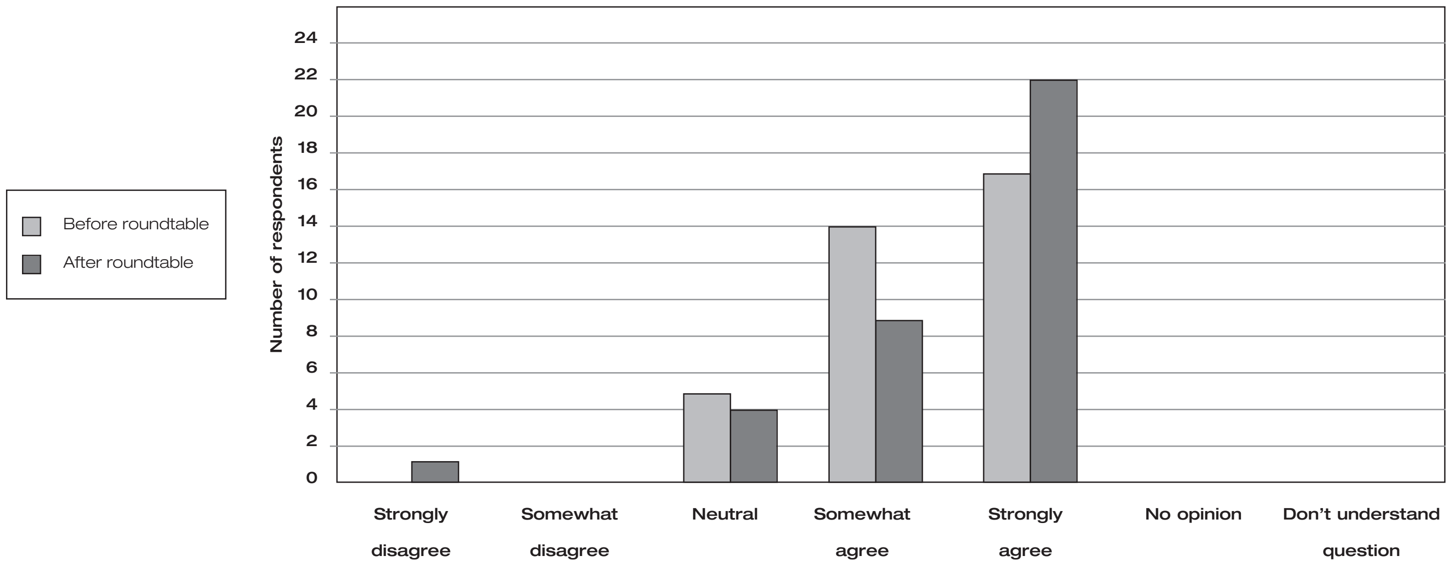
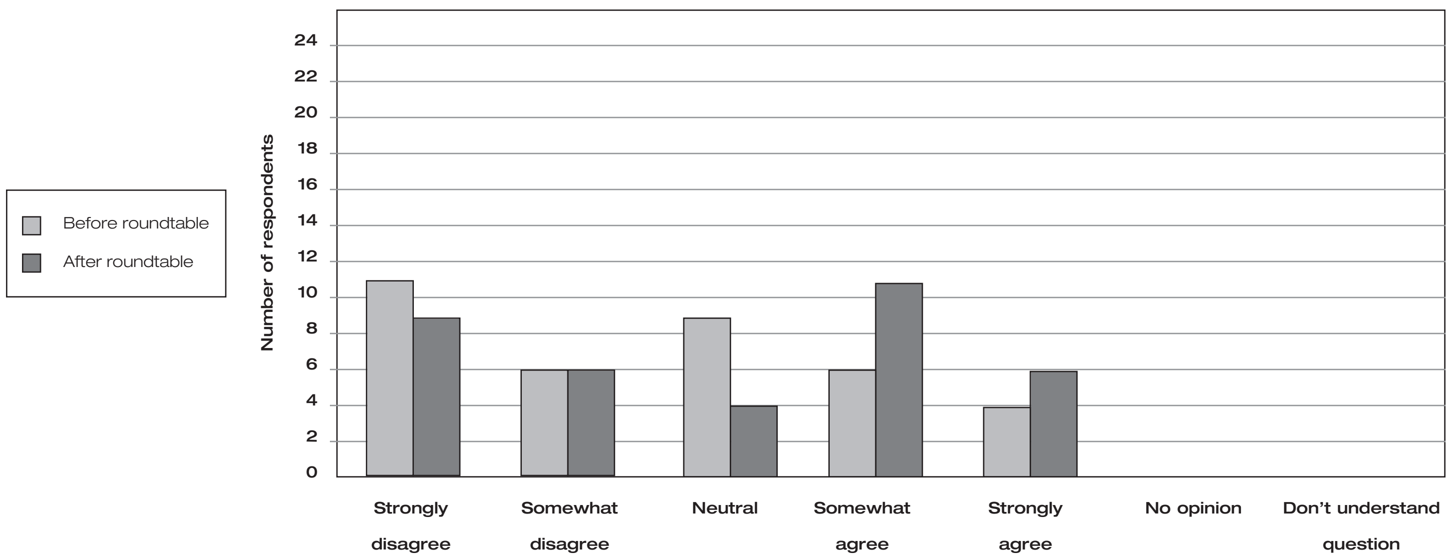
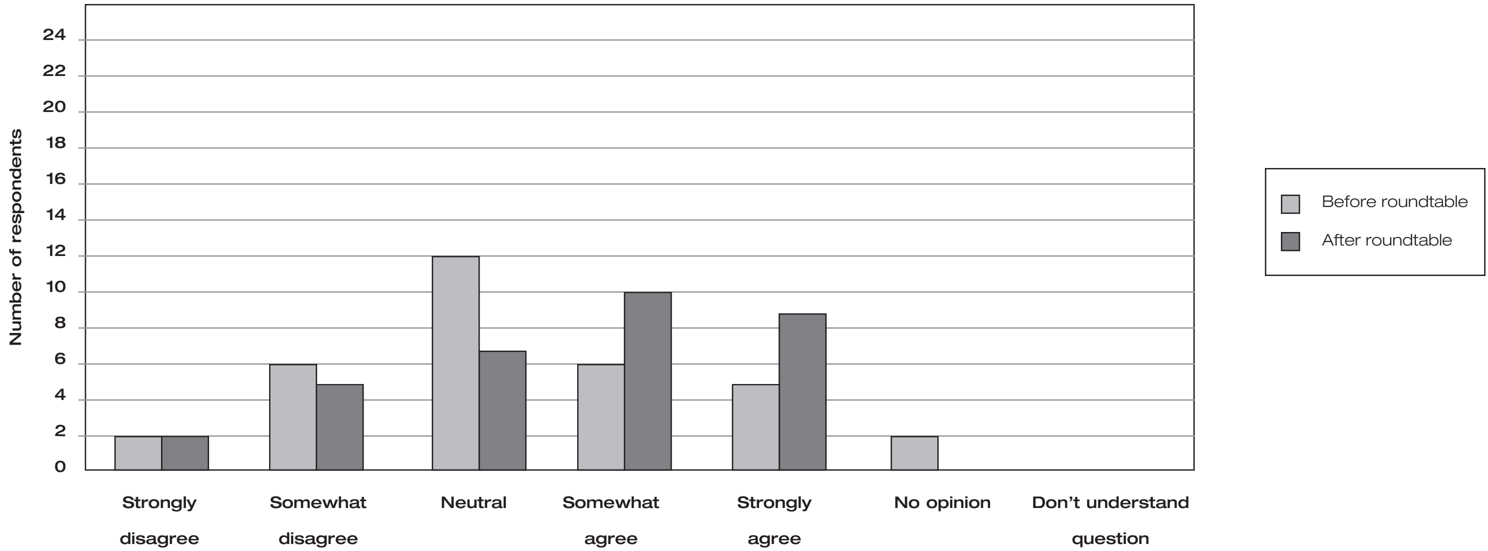
Financial economics offers valuable insights to the risks faced by shareholders and participants when pension plans invest in equities rather than bonds.



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.



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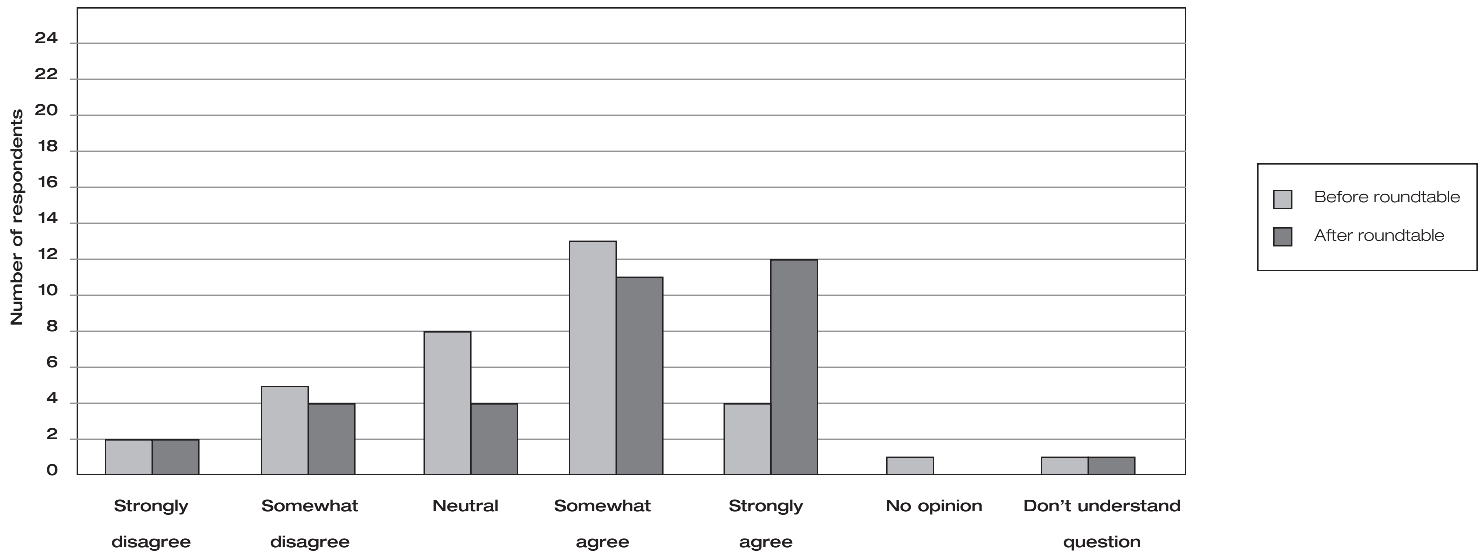

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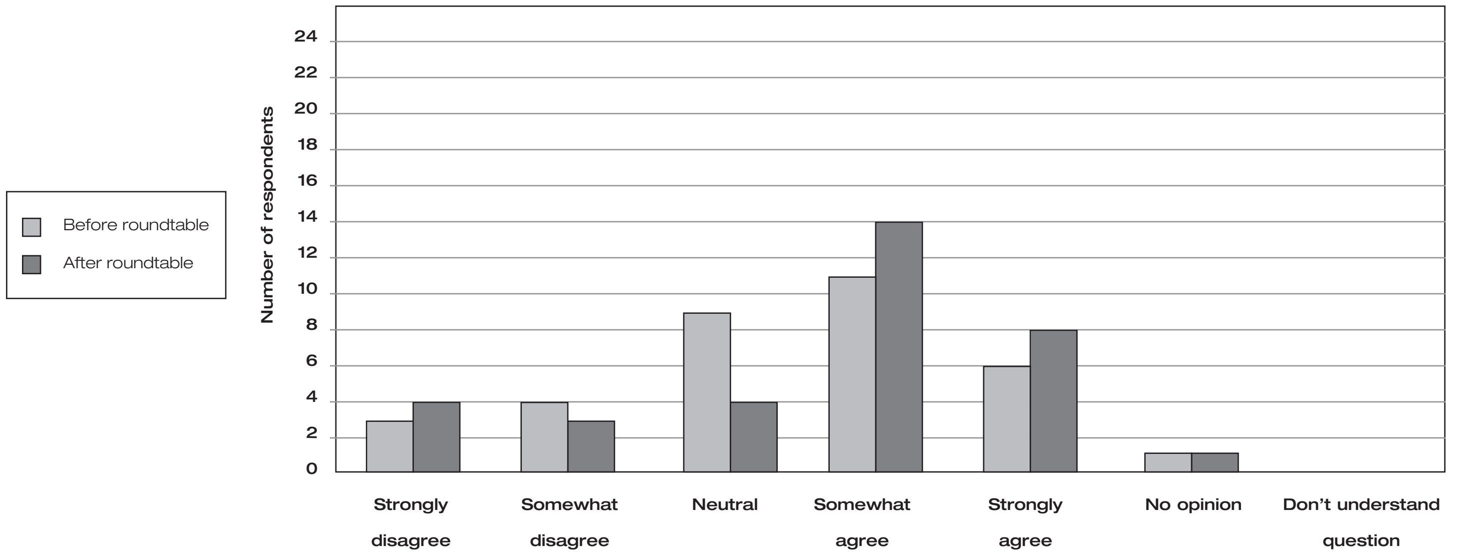
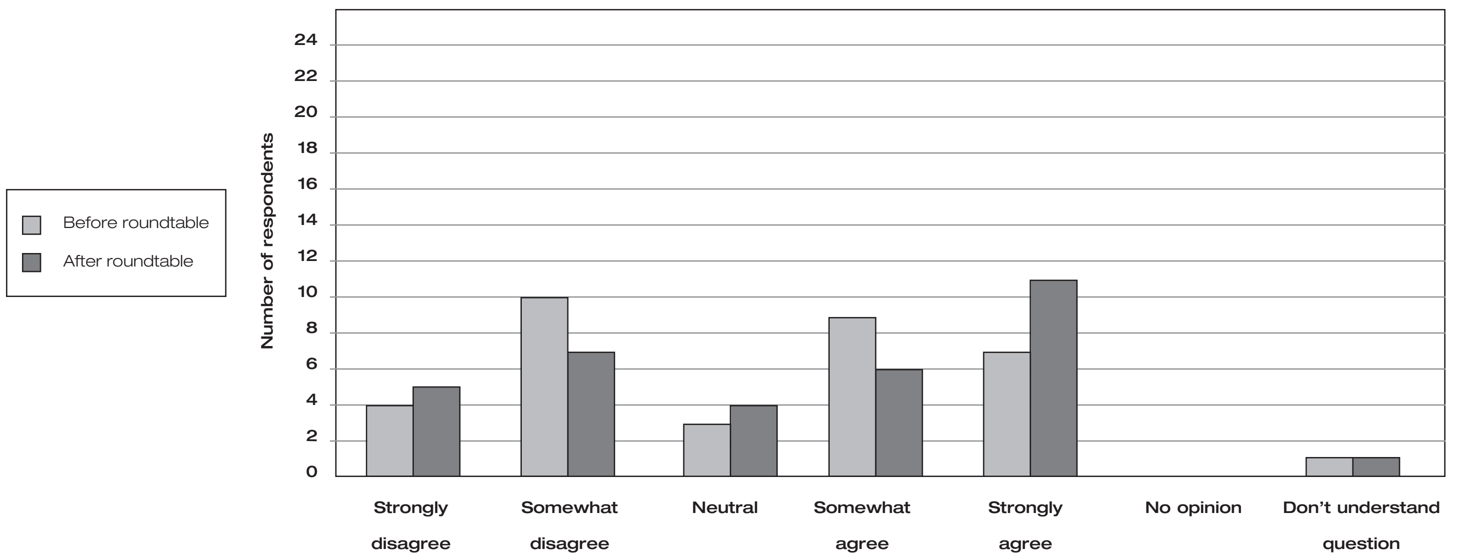

Funding obligations (e.g., current liability) should be measured using a yield curve.
Before roundtable
After roundtable
Number of respondents
24
22
20
18
16
14
12
10
8
6
4
2
0
Strongly disagree
Somewhat disagree
Neutral
Somewhat agree
Strongly agree
No opinion
Don't understand question


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