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On May 18, 2009, Gabriel, Roeder, Smith & Company (GRS) presented its paper "*Actuarial Methods and Public Pension Funding Objectives: An Empirical Examination*" at the Society of Actuaries Public Pension Symposium held in Chicago, Illinois. The paper was authored by Brian B. Murphy, FSA, EA, Ph.D., Senior Consulting Actuary and President; Norman L. Jones, FSA, EA, Chief Actuary; and Paul Zorn, Director of Governmental Research. Mr. Murphy presented the paper at the Symposium.

The paper received national attention and Brian Murphy was quoted in the May 18, 2009, *Pension and Investments (P&I) Daily*: "The use of market-value rates to discount public pension plan liabilities would create greater contribution requirements and spur the replacement of public defined benefit plans with 401(k) plans." According to Mr. Murphy, "State and local (governments) would all have 401(k)s if we had to make contributions like that to provide for market volatility."

The paper examines the degree to which certain actuarial methods satisfy public pension plan funding objectives. It compares the funding patterns that result from a conventional actuarial approach used by the majority of public plans with patterns that result from the "market value of liability" (MVL) approach. The comparison was made by applying the different approaches to a modeled public plan based on historical demographic, economic, and investment data over the 1978 to 2008 period. The paper found that funding under the MVL approach would likely result in rapid and erratic changes to a public plan's normal costs, accrued liabilities, and funded levels, largely due to changes in the MVL discount rate. By contrast, the conventional approach resulted in measures that were more stable and predictable over time.

As described in the paper, over the study period discount rates based on U.S. Treasury bonds under the MVL approach ranged from a high of 13.9% to a low of 4.3%. By comparison, over the same period, the plan's conventional discount rates ranged from 7% to 8.5% based on its long-term expected investment returns. As a result, plan contributions and liabilities were much more volatile under the MVL approach than under the conventional approach.

Consequently, the authors conclude that the conventional approach is more effective in meeting the funding objectives of public pension plans. The serious instabilities in the MVL measures would most likely lead either to erratic demands on government resources or plan terminations. If the MVL approach were applied, it would ultimately be abandoned as being too unstable for state and local governments.

A copy of the paper can be downloaded from the Society of Actuaries site at:  
<http://www.soa.org/files/pdf/2009-chicago-ppf-paper-jones-zorn-murphy.pdf>