State of Minnesota

LEGISLATIVE COMMISSION ON PENSIONS AND RETIREMENT



TO:

Members of the Actuarial Services Subcommittee of the

Legislative Commission on Pensions and Retirement

FROM:

Lawrence A. Martin, Executive Director

RE:

Points of Consideration in the Retention of a Reviewing/Auditing Consulting

Actuarial Firm

DATE:

October 1, 2008

Introduction

Laws 2008, Chapter 349, Article 10, Section 9, amending Minnesota Statutes, Section 356.214, by adding Subdivision 4, permits the Legislative Commission on Pensions and Retirement to contract with an established actuarial consulting firm to audit or review the actuarial work newly assigned to the various consulting actuaries retained by the six pension plan administrations of Minnesota statewide and major local public pension plans.

The chair of the Legislative Commission on Pensions and Retirement, Representative Mary Murphy, has decided to utilize a subcommittee to resolve the scope of service to be provided by an auditing actuary, formulate a Request For Proposal to be circulated to qualified interested consulting actuarial firms, interview responding consulting actuarial firms, and forward a recommendation of an auditing consulting actuarial firm to the full Legislative Commission on Pensions and Retirement for action.

This memorandum attempts to assist the subcommittee members in the process by reviewing Laws 2008, Chapter 349, Article 10, Section 9 and 17, by identifying the alternatives in the scope of actuarial services to be provided by an auditing consulting actuarial firm, by identifying the alternatives in the qualifications that could be required of potential auditing consulting actuarial firms, by identifying the alternatives in a potential schedule for the work of an auditing consulting actuarial firm, by identifying the alternatives in the duration of a contract with an auditing consulting actuarial firm, and by identifying the elements potentially included in a Request For Proposal for an auditing consulting actuarial firm.

Laws 2008, Chapter 349, Article 10, Sections 9 and 17

Laws 2008, Chapter 349, Article 10, Sections 9 and 17, enacted as part of a change in the manner in which actuarial services regarding Minnesota statewide and major local public retirement plans is provided, permits the Legislative Commission on Pensions and Retirement to retain a consulting actuarial firm to review or audit the work of the various consulting actuarial firms retained by the six applicable retirement systems, to assess the reasonableness and reliability of that actuarial work, and to identify areas of concern or potential improvement in the actuarial reports, actuarial procedures, the Commission's Standards for Actuarial Work, or actuarial assumptions. The Legislative Commission on Pensions and Retirement is provided with an increase in its base appropriation of \$140,000 annually as long as the Commission retains a consulting actuarial under contract. The actuarial firms retained by the various retirement plan administrations are obligated to cooperate fully with the auditing consulting actuary and to make available to the auditing actuary any data or other materials necessary for the auditing actuary to conduct reviews and provide advice to the Commission. Audits of actuarial valuation reports by the auditing consulting actuary are to be conducted under a schedule to be determined under an agreement with the Commission. The principal actuary with the auditing consulting actuary must be an approved actuary under state law, which is a holder of a Fellow of the Society of Actuaries credential.

The auditing consulting actuary provision is not particularly detailed or specific, but does indicate the following:

- 1. <u>Permissive, Not Mandatory</u>. The retention of an auditing consulting actuary by the Commission is permitted, but is not mandated.
- 2. Consultant Required. The auditing consulting actuary must be an established actuarial consulting firm.
- 3. <u>Principal Must Be F.S.A.</u> The principal individual with the auditing consulting actuarial firm must be a Fellow in the Society of Actuaries, which is the higher of two credentials awarded by that private (non-governmental) organization.

- 4. <u>Broad Audit/Review Function</u>. The auditing consulting actuarial firm is to "audit or review" the actuarial valuations, the experience studies, and the actuarial cost analyses prepared by the actuaries retained by the various statewide or major local Minnesota public pension plans.
- 5. <u>Review/Audit Schedule Negotiable But Unclear</u>. The schedule for reviewing or auditing actuarial valuation reports is to be determined under an agreement between the Commission and, presumably, the auditing consulting actuarial firm, although the agreement as referenced in the statute could be intended to be between the Commission and the retirement plan administrations.
- 6. Cooperation and Data Provision. The consulting actuaries retained by the various statewide and major local retirement plans, but not the various retirement plan administrations, are required to cooperate fully and "make available" data and other materials necessary for the auditing consulting actuarial firm to conduct a review and provide advice. The determiner of what is necessary to conduct a review is not specified. No reference is made to data privacy restrictions or requirements in state law, so some data requests to the retirement plans or their consulting actuaries could potentially be refused on that basis. The statutory cooperation and data request provision does not require that the contracts between the various retirement plan administrations and their actuaries contain the same cooperation and data provision requirement.
- 7. No Contracting Process or Duration Limit Specified. Unless there is a general law that supersedes, the Legislative Commission on Pensions and Retirement appears to be able to follow any contracting process that it desires and to enter into a contract for any length it deems appropriate.

Alternatives in the Scope of Actuarial Services of Auditing Actuary

The clear purpose of an auditing or reviewing actuary is to assess the reliability and reasonableness of the regular actuarial work previously performed by a single consulting actuary (originally retained by the Legislative Commission on Pensions and Retirement in 1984 and most recently (2004) retained jointly by the statewide and major local pension plan administrators) and now assigned to the individual consulting actuaries retained by the statewide and major local retirement plans. Additionally, the auditing or reviewing actuary could function as the general actuarial consultant to the Commission on general benefit plan and other retirement-related issues.

An auditing or reviewing actuary is intended to improve the actuarial work of the primary consulting actuary or actuaries by providing an independent peer review process. The work of the auditing or reviewing actuary, in general, can range from a basic review to ascertain the reasonableness of actuarial valuations or other actuarial work product through a comprehensive full-result replication audit of actuarial valuations or other actuarial work product to more precisely determine the reliability of the results. A basic review logically should involve a smaller expenditure of time and resources by the auditing or reviewing actuary while a full-result replication audit logically should involve a considerable expenditure of time and resources by the auditing or reviewing actuary.

The consulting actuaries retained by the various statewide or major local public retirement plans perform several different tasks or functions that could be reviewed or audited. These tasks or functions are:

- 1. <u>Actuarial Valuations</u>. Annually, for each of the 13 statewide or major local retirement plans, the consulting actuary performs an actuarial valuation, comparing the actuarial accrued liabilities under the benefit plan with the actuarial value of assets amassed in the respective retirement fund and comparing the ongoing benefit plan normal cost, administrative expenses, and amortization requirement with the ongoing member contributions, employer contributions, and other recurring state pension aids or other revenues.
- 2. Experience Studies. Quadrennially, for the three largest statewide retirement plans (the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), and the Teachers Retirement Association (TRA)) and irregularly for the remaining ten statewide or major local retirement plans, the consulting actuary compares recent past actual experience with the expected experience under the economic or demographic actuarial assumptions in force to assess the continuing reliability and reasonableness of those assumptions for use in preparing future actuarial valuations.
- 3. <u>Proposed Pension Legislation Cost Estimates</u>. Periodically, if requested or desired, the consulting actuary assesses the likely change in the actuarial accrued liability, normal cost, and amortization requirement that would result in the most recent actuarial valuation results from proposed pension

- legislation (i.e., benefit plan changes, economic actuarial assumption changes, actuarial method changes, or a combination).
- 4. Optional Annuity Form Table or Annuity Reserve Factor Changes. With changes in some economic (i.e., interest) or demographic (i.e., mortality) assumptions, optional annuity form tables or annuity reserve factors used day-to-day by pension plan administrations must be revised, with the consulting actuary either calculating the table or factor changes or monitoring the revisions in the tables or factors for reliability or accuracy.
- 5. <u>Prior Service Credit Purchase Payment Amount Determinations</u>. The consulting actuary either determines the "full actuarial value" prior service credit purchase payment amount under Minnesota Statutes, Section 356.551, or reviews for accuracy and reliability the automated determination process to be used by the plan administrations.
- 6. <u>Public Employer Privatization Gain and Loss Determinations</u>. Primarily attributable to the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) and potentially attributable to the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the consulting actuary compares the actuarial gain attributable to a privatization of a public employer and the resulting disqualification from future retirement plan coverage of its employees with the actuarial cost of the inclusion in the applicable privatization chapter (i.e., Minnesota Statutes, Chapter 352F or Chapter 353F).
- 7. <u>General Benefit Plan Design and Other Consulting</u>. The consulting actuary, upon request, provides design advice on potential benefit plan changes and other consulting services.

Of the seven tasks or functions, the Legislature has the greatest interest in the actuarial cost estimates for proposed pension legislation prepared by the retirement plan consulting actuary, has essentially no interest in the general benefit plan design and other consulting activities by the retirement plan consulting actuary, and has considerable interest in the remaining five tasks or functions. Because of the relatively short deadlines for processing proposed pension legislation and the potential for modifications in any proposed legislation through amendment, obtaining more than a very general review of actuarial cost estimates for proposed pension legislation from a reviewing or auditing actuary would be difficult or impossible, even though errors or omissions in the preparation of those cost estimates could materially affect the legislative perception of and action on proposed legislation.

The decision facing the Subcommittee is which of the actuarial functions a review or audit is desired and whether the reviewing consulting actuary's desired role for each function is a determination of the appropriateness of the process used, the conformity with law, the standards, and profession rubrics and the reasonableness of the results obtained, or is an appropriateness, conformity and reasonableness review combined with a full-result replication of all results. Beyond these decisions, the Subcommittee also should decide to what extent it desires the consulting actuary to also function as a general benefit plan design and related issues consultant for the Commission and the Legislature.

Alternatives in the Required Reviewing Actuary Qualifications

In addition to being an approved actuary under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c), which means that the person is regularly engaged in the business of providing actuarial services and is a fellow in the Society of Actuaries, there are other potential requirements for or restrictions on the auditing or reviewing actuary that the Subcommittee may wish to consider to add to the statutory requirement.

The additional qualifications or restrictions that the Commission staff has identified for potential Subcommittee consideration are:

- 1. <u>Location</u>. While the location of the reviewing or auditing actuary should not matter if the work product of the actuary is expected to be largely written and few in-person presentations are likely to be required, if having the increased availability that proximity can provide is important to the Subcommittee, either the consulting actuary could be required to be located within a certain distance of the Twin Cities or a selection preference could be given to bidders with the greatest proximity.
- 2. <u>Firm Size</u>. If the auditing or reviewing consulting actuary is intended to conduct full-result replications and confirmations, a larger consulting actuarial firm will be better prepared to undertake the auditing or reviewing tasks, and if the auditing or reviewing consulting actuary will be expected to perform limited replications or confirmations and will be expected to focus primarily on process

- appropriateness and result reasonableness, any size consulting actuarial firm could undertake the required task.
- 3. <u>Prior Experience as a Reviewing/Auditing Actuary</u>. Logically, if a consulting actuary has functioned as a reviewing or auditing actuary with some regularity in the past, the consulting actuary could be expected to have a greater capability to perform reviews or audits of Minnesota public pension actuarial results.
- 4. Prior Experience with Minnesota Public Pension Plans. Presumably, if an actuary has some prior understanding of Minnesota public pension laws and operations, the ability of the actuary to reach conclusions about the reliability and accuracy of the actuarial work performed by the various retirement plan actuaries would be greater. There are unique aspects of Minnesota public retirement plans, such as the Minnesota Post Retirement Investment Fund, deferred annuities augmentation, and the Combined Service Annuity, that will have an impact on actuarial costs and must be taken into account.
- 5. <u>Time Availability</u>. While the reviewing or consulting actuary is not likely to be under the same time constraints as the retirement plan retained actuary in the conclusion of the consulting work, time availability may be of concern to the Subcommittee if the reviewing or consulting actuary is expected to review and/or replicate actuarial cost estimates of proposed pension legislation.
- 6. <u>Data Processing Capabilities</u>. With the increasing flexibility in data processing over time, the concern may be of less importance. Minnesota public pension plans involve data on almost one-half million persons and the data on the total membership must be transferred from the retirement plans to the consulting actuary. If the reviewing or auditing consulting actuary is not able to process the same raw information received from the various retirement plans as the retirement plan retained actuary receives, the auditing or reviewing actuary would not be able to fully evaluate the totality of the retirement plan actuarial valuation process.
- 7. Contractual Relationships with Minnesota Public Pension Plans. A restriction may be appropriate to avoid conflicts of interest that the reviewing or auditing actuary not also be retained by one of the Minnesota statewide or major local retirement plans at the same time. Additionally, it may be necessary to consider the appropriateness of utilizing as an auditing or reviewing actuary a consulting actuary with extensive prior contractual relationships with one or some Minnesota public retirement plans or with aspirations to have a future contractual relationship with one or some Minnesota public retirement plans.
- 8. <u>Liability Limits or Third Party Reliance Issues</u>. It may be appropriate to consider as a qualification restriction the issues that arose towards the end of the period when the Legislative Commission on Pensions and Retirement handled the contract for the primary consulting actuary for Minnesota statewide and major local retirement plans, which were liability limitations and the disallowance of third party reliance on actuarial results. If the Subcommittee does not believe that its consulting actuary should demand limits on its liability in the event of error or omission or demand that third parties may not be able to rely on the actuarial work produced, it should consider adding that restriction.

Attached is a list of 214 consulting actuarial firms which could be potential bidders for a reviewing or consulting actuarial contract. The list was assembled by the Commission staff from the attendees of the 2007 Enrolled Actuary meeting in Washington, DC, which were likely to be in the consulting business (not employed by government, a university, a labor union, or a non-actuarial business) and which included in the firm at least one Fellow in the Society of Actuaries as indicated in the online directory of the Society of Actuaries. The list is organized by location, with national firms with a Minnesota office included in the Minnesota listing rather than the actual home office location.

Alternatives in Potential Scheduling of Auditing or Reviewing Consulting Actuary Work

The appropriation to the Legislative Commission on Pensions and Retirement that accompanied the auditing or reviewing consulting actuary authority is unlikely to be sufficient to permit the reviewing or auditing consulting actuarial firm retained by the Commission to replicate all of the actuarial valuation results annually. In 2004, when The Segal Company was retained by the joint pension plan administrators, the annual cost of the actuarial valuation and experience study work each year for a three-year period was \$220,000, compared to the additional Commission appropriation of \$140,000. Assuming that the Commission also will desire to have some review or audit of other actuarial tasks, further reducing the budget for actuarial valuation review and/or replication, there will need to be some rotation of any actuarial valuation result replication work over more than one year to accommodate fiscal constraints. The Subcommittee may wish to also set priorities in any total-result replication work, since

the size of some retirement plans or the actuarial condition of some retirement plans make result reliability and accuracy more important for the Legislature. The Subcommittee could specify a two- or three-year rotation pattern as part of the Request For Proposal, requiring that one-half or one-third of the retirement plans be replicated each year or requiring that the three largest retirement plans and two or three other retirement plans be replicated each year, or, alternatively, the Subcommittee could require the bidder to specify a proposed schedule which would be a factor in evaluating each bid.

Since the introduction of an auditing or reviewing consulting actuary to be retained by the Legislative Commission on Pensions and Retirement coincides with a significant shift in responsibilities for the preparation of the regular actuarial valuations and related work, some consideration should probably be given to delaying any total-result actuarial valuation replication until the consulting actuarial firms that will be newly preparing regular actuarial valuations have prepared more than one set of valuations. The initial valuation review by the Commission's reviewing or auditing actuary probably should emphasize a review for reasonableness of results, appropriateness of procedures, and conformity with the requirements of law and the Commission's Standards for Actuarial Work for all retirement plans, to speed the learning process of the new consulting actuaries and to speed the elimination of noise in the process. After the initial year of valuations by the new actuaries, any desired replication of total actuarial valuation results could be phased in on whatever schedule is deemed to be appropriate.

Any schedule for the reviewing or auditing consulting actuary also should take into consideration a review of optional annuity factors and reserve factors caused by the mortality assumptions that were recently approved by the Commission (December 2007 and July 2008) and a review of quadrennial experience studies due in 2009 (for the period July 1, 2004, through June 30, 2008).

Alternatives for Auditing or Reviewing Consulting Actuarial Contract Duration

The contract for a reviewing or auditing actuary either could be short, advisable if the Subcommittee or the Legislative Commission on Pensions and Retirement are unsure of the viability of the whole actuarial service arrangement or are unsure of the ability of the selected consultant to fully perform required duties or to provide timely and helpful counsel, or could be long, allowing for more moderate contract compensation because the consulting actuarial firm can amortize any capital or development costs over a longer period and allowing for the auditing or reviewing actuary to become more skilled in evaluating the performance of the other consulting actuaries.

In the past, when the Commission retained the principal consulting actuary for all of the statewide and major local Minnesota public pension plans, the contract duration varied (i.e., two, three, or four years), frequently with potential one-year or two-year extensions.

Elements for Potential Inclusion in a Request For Proposal

The Commission staff, from reviewing several other requests for proposal for actuarial audit services, has identified a number of items either common to the sampling or obviously pertinent to the process.

The various elements identified are as follows:

- 1. <u>Office Addresses</u>: The main office address of the actuarial firm and the address of the actuarial firm office to provide the service.
- 2. <u>Personnel</u>: Names, titles, and qualifications of the actuarial firm personnel to be involved in the audit, including the principal actuary and the other professional staff.
- 3. <u>Firm Qualifications</u>: The qualifications of the actuarial firm that make it appropriate to conduct actuarial audit work for the Legislative Commission on Pensions and Retirement.
- 4. <u>History of Past Actuarial Auditing</u>: The history of the firm in providing actuarial auditing services and the history of the firm in having its actuarial work subject to an actuarial audit.
- 5. <u>Past and Present Firm Clients</u>: A list of present clients of the firm, with addresses and contact names, and a list of past clients of the firm over the past ten years.
- 6. Firm Methodology: A statement of the firm's operational approach to actuarial auditing.
- 7. <u>Disciplinary History</u>: An identification of any non-routine complaints to, investigations by, or disciplinary action by any governmental entity or professional organization with respect to the firm.
- 8. Restatement of Audit Needs and Audit Work: A statement in the firm's language of the firm's understanding of the audit needs of the Legislative Commission on Pensions and Retirement and of the audit work to be produced on behalf of the Legislative Commission on Pensions and Retirement.

- 9. <u>Proposed Work Plan</u>: An outline of the audit work plan, indicating key activities relating to the production of any deliverables under the contract.
- 10. <u>Fee Schedule</u>: An indication of the fee required to perform audit activities, broken down by category of personnel, anticipated number of hours, hourly rates, and an itemization of other direct costs.
- 11. <u>References</u>: An indication of references for the firm and for the principal actuary proposed for the project, with name, address, and telephone number for contact person for each reference.
- 12. Sample Recent Actuarial Audit Report: Provision of a sample of the firm's actuarial audit work product.
- 13. Other Relevant Information: Provision of any other information deemed relevant to the actuarial firm but not requested elsewhere in the request.
- 14. <u>Minnesota Law Compliance Statement</u>: Statement of compliance or intent to comply with any applicable Minnesota public contract laws, including affirmative action and provision of Workers' Compensation coverage requirements.
- 15. Firm Signature: Signature by a person authorized to bind the firm.

Attachments

- a. A general article by the consulting actuarial firm of Gabriel, Roeder, Smith & Company (<u>The Role of Actuarial Audits in Performing Due Diligence</u>) discussing the role of actuarial audits.
- b. Recent requests for proposals for actuarial auditing services for four public retirement systems that provide some sense of the possible structure and contents of a Request For Proposal:
 - 1. The Alaska Retirement Management Board
 - 2. The Los Angeles City Employees' Retirement System
 - 3. The Employees' Retirement System of Rhode Island
 - 4. The <u>Tacoma Employees' Retirement System</u>

Conclusion

The Commission staff will be available to assist the Subcommittee as it attempts to design the role and function of a reviewing or auditing actuary and issue a request for proposal for a reviewing or auditing actuary.

cc: Representative Mary Murphy Laura Sayles

Potential Actuarial Consulting Firms for Reviewing/Auditing Consulting Actuaries

Arkansas

Osborn Carreiro & Associates

124 West Capitol Avenue, Suite 1690 Little Rock, AR 72201

California

Altman & Cronin Benefit Consultants

100 Pine Street, Suite 1500 San Francisco, CA 94111

Atessa Benefits, Inc.

17085 Via Del Campo San Diego, CA 92127

Peter D Austin & Associates

PO Box 3009

Westlake Village, CA 91359-0009

Matthew E. Blechner

2403 South Meyler Street San Pedro, CA 90731

Block Consulting Actuaries Inc.

3601 N Aviation Blvd

Manhattan Beach, CA 90266

George R. Chadwick, Jr.

12761 Via Moura San Diego, CA 92128-1536

Victor B. Chernoff, Consulting Actuary

11045 Missouri Avenue #202 Los Angeles, CA 90025

Crews MacQuarrie & Associates Inc.

420 Exchange Suite 260 Irvine, CA 92602

Robin J Cunningham

26 Venetia Meadows San Rafael, CA 94903

Curcio Webb LLC

100 Bush Street, Suite 2400 San Francisco, CA 94104

Demsey Filliger & Associates

21006 Devonshire, Suite 205 Chatsworth, CA 91311

John G. Eng

12310 Dormouse Road San Diego, CA 92129-4516

Leslie Kenney Finertie

PO Box 619 Orinda, CA 94563

M S Fox & Associates Inc

233 Wilshire Blvd, Suite 340 Santa Monica, CA 90401-1208

Mona Choi Hwang

20215 Burnt Tree Lane Walnut, CA 91789

Steven T Itelson Consulting Actuary

1309 Diamond Street San Francisco, CA 94131

LM093008-1

The Kagan Company

14724 Ventura Blvd, Suite 1110 Sherman Oaks, CA 91403

Kaufmann and Goble Associates

10 Almaden Blvd San Jose, CA 95113-2226

Kenney Consulting LLC

2115 Milvia Street, 4th Floor Berkeley, CA 94704

Jon L. King

512 South Bay Front Balboa Island, CA 92662

Louis Kravitz & Associates Inc

15760 Ventura Blvd, Suite 910 Encino, CA 91436-3017

Norman S Losk

8583 Westin Lane Orangevale, CA 95662

Suzanne M. Makshanoff

525 Arbolado Drive Fullerton, CA 92835

George W McCauslan, Actuary-Consultant

PO Box 460038 San Francisco, CA 94146-0038

McGinn Actuaries Ltd.

Stadium Towers Plaza, Suite 660 2400 East Katella Avenue Anaheim, CA 92806

McKinnie Consulting

2780 Skypark Drive, Suite 220 Torrance, CA 90505

MullinTBG

2029 Century Park East, 37th Floor Los Angeles, CA 90067

MyVal Center

50 California Street, Suite 1500 San Francisco, CA 94111

National Pension Consultants

500 Airport Blvd, Suite 100 Burlingame, CA 94010

Nicolay Consulting Group

575 Market Street, Suite 2450 San Francisco, CA 94105-2896

North Bay Pensions

550 Dufranc Avenue Sebastopol, CA 95472-3341

P. M. Kahn & Associates

2430 Pacific Avenue San Francisco, CA 94115-1238

Pacific Benefit Services

14011 Ventura Blvd, Suite 222 Sherman Oaks, CA 91423

Rael & Letson

35 North Lake Avenue, Suite 810 Pasadena, CA 91101

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Sunlin Consulting LLP

PO Box 83907 Los Angeles, CA 90083-0921

Colorado

Fall River Consulting Group LLC

3090 South Jamaica Court, Suite 208 Aurora, CO 80014-2683

Gabriel Roeder Smith & Company

4600 South Ulster Street, Suite 700 Denver, CO 80237

Principal Financial Group

155 Shoshone Ct Boulder, CO 80303

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The Benefit Practice

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Hooker & Holcombe, Inc.

65 LaSalle Road West Hartford, CT 06107

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703 Hebron Avenue, 2nd Floor Glastonbury, CT 06033-5001

Pension Benefit Consultants Inc.

195 Church Street ,16th Floor New Haven, CT 06510

Winklevoss Technologies LLC

Two Greenwich Office Park Greenwich, CT 06831

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Alston & Bird, LLP

950 'F' Street NW Washington, DC 20004-1404

EFI Actuaries

1001 Connecticut Avenue NW, Suite 315 Washington, DC 20036

<u>Florida</u>

Foster & Foster Inc.

6290 Corporate Court, Suite C-201 Fort Myers, FL 33919

<u>Georgia</u>

CMC/

Cavanaugh Macdonald Consulting LLC 3550 Busbee Parkway, Suite 250 Kennesaw, GA 30144

idelia, 6/131101

Stanley Holcombe & Associates Inc.

2000 Riveredge Parkway, Suite 540 Atlanta, GA 30328

Sullivan, Cotter and Associates, Inc.

3 Ravinia Drive, Suite 1470 Atlanta, GA 30346

Swerdlin & Company

5901 Peachtree Dunwoody Building B Suite 170 Atlanta, GA 30328

<u>Illinois</u>

AAR Corp

1100 North Wood Dale Road Wood Dale, IL 60191

Alliance Pension Consultants LLC

630 Dundee Road, Suite 200 Northbrook, IL 60062

Kay Ann Blaszczyk

620 Hillside Court Barrington, IL 60010-4604

Brackey Consulting Inc.

1560 Sherman Avenue, Suite 910 Evanston, IL 60201-4809

Chicago Benefit Consultants

903 Commerce Drive, Suite 304 Oak Brook, IL 60523

Clarity in Numbers

125 South Wacker Drive, Suite 300 Chicago, IL 60606

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414 North Orleans Suite 205 Chicago, IL 60610

Christine M. Frantz

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29 South LaSalle Street, Suite 735 Chicago, IL 60603

David R. Haverick

42658 North Crawford Road Antioch, IL 60002

Hewitt Associates LLC

100 Half Day Road Lincolnshire, IL 60069-3342

J & K Retirement Inc

6839 West Thorndale Avenue Chicago, IL 60631

KPMG LLP

303 East Wacker Drive Chicago, IL 60601

Merrill Lynch Retirement Group

300 South Wacker Drive, Suite 2600 Chicago, IL 60606

MWM Consulting Group

55 East Jackson Blvd, Suite 1000 Chicago, IL 60604

PricewaterhouseCoopers LLP

One North Wacker Drive Chicago, IL 60606

Red Quill Consulting

135 Park Avenue Barrington, IL 60010

RMD Pension Consulting

415 East North Water Street, Unit 1906 Chicago, IL 60611

Mitchell I. Serota & Assoc. Inc.

5215 Old Orchard Road, Suite 750 Skokie, IL 60077-1045

SMART Business Advisory & Consulting

30 North LaSalle Street, Suite 4300 Chicago, IL 60602

Towers Perrin

71 South Wacker Drive, Suite 2600 Chicago, IL 60606

Peter Charles Vojtik, FSA

21310 Montclare Lake Dr Crest Hill. IL 60403

WellPoint Inc.

233 South Wacker Drive Chicago, IL 60606

<u>Indiana</u>

Alliance Benefit Group-Indiana

9320 Priority Way West Drive Indianapolis, IN 46240-1468

Ice Miller LLP

One American Square, Box 82001 Indianapolis, IN 46282-0002

McCready & Keene Inc.

7941 Castleway Drive PO Box 50460 Indianapolis, IN 46250-0460

United Actuarial Services, Inc.

11590 North Meridian Street, Suite 610 Carmel, IN 46032-4529

Kansas

Actuarial Resources Corporation

6720 West 121st Street, Suite 200 Overland Park, KS 66209-2002

The Cottonwood Group

6900 College Boulevard, Suite 300 Overland Park, KS 66211

Lewis & Ellis, Inc.

11225 College Blvd, Suite 320 Overland Park, KS 66210

Kentucky

Bryan Pendleton Swats & McAllister LLC

(Wells Fargo affiliate) 11807 Brinley Ave, Suite 101 Louisville, KY 40243-1090

Maine

Actuarial Designs & Solutions, Inc.

200 US Route One, Suite 120 Scarborough, ME 04074

Maryland

Bolton Partners, Inc.

575 S. Charles Street, Suite 500 Baltimore, MD 21201

Massachusetts

The Arthur W. Anderson Group

21 Spring Valley Road Hull, MA 02045-3227

Benefit Management Inc.

3 Lyons Way North Attleboro, MA 02763

Cambridge Advisory Group Inc

959 Concord Street, Suite 240 Framingham, MA 01701

Punter Southall & Co. LLC

161 Worcester Road Framingham, MA 01701

Ricci Consultants Incorporated

35 Highland Circle Needham, MA 02494

The Savitz Organization of Massachusetts

275 Grove Street, Suite 2-400 Newton, MA 02466

Touchstone Consulting Group Inc.

390 Main Street, Suite 400 Worcester, MA 01608

Michigan

RKS Consultants Inc.

3644 Chippewa Drive Glennie, MI 48737-9322

Watkins Ross & Company

161 Ottawa NW, Suite 505 Grand Rapids, MI 49503

<u>Minnesota</u>

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Buck Consultants

120 South Sixth Street, Suite 2260 Minneapolis, MN 55402-1824

Deloitte Consulting LLP

400 One Financial Plaza 120 South 6th St Minneapolis, MN 55402-1844

Ernst & Young, LLP

220 South Sixth Street, Suite 1400 Minneapolis, MN 55402

Hanf Actuarial Inc

10800 Lyndale Ave South Suite 179 Valley Office Park Bloomington, MN 55420

Hildi Incorporated

11800 Singletree Lane, Suite 305 Eden Prairie, MN 55344

Richard L Jacobsen FSA

12705 Parkwood Drive Burnsville, MN 55337-3659

Lurie Besikof Lapidus & Co LLP

2501 Wayzata Blvd Minneapolis, MN 55405

Mercer

333 South 7th Street, Suite 1600 Minneapolis, MN 55402

Milliman Inc.

8500 Normandale Lake Blvd., Suite 1850 Minneapolis, MN 55437-3830

The Segal Company

3800 American Blvd W # 780 Bloomington, MN 55431

Ronald D Stockfleth

422 Itasca Court NW Rochester, MN 55901

TRL Consulting LLC

1126 Ashland Avenue, Suite 200 St Paul, MN 55104

Universal Data Corporation

601 Carlson Parkway, Suite 1050 Minnetonka, MN 55305

Van Iwaarden Associates

840 Lumber Exchange Bldg 10 South Fifth Street Minneapolis, MN 55402-1010

Watson Wyatt Worldwide

8400 Normandale Lake Blvd Bloomington, MN 55437

Zingle & Associates Inc

4627 Parkridge Drive Eagan, MN 55123

Missouri

JPMorgan Compensation and Benefit Strategies

622 Emerson Road, Suite 200 St Louis, MO 63141

Lockton Companies

444 West 47th Street Kansas City, MO 64112

Nebraska

Actuarial Consulting Services Inc.

3738 South 149th Street, Suite 108 Omaha, NE 68144

SilverStone Group Inc.

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The Role of Actuarial Audits in Performing Due Diligence

Public sector retirement plans (and retiree health plans) are receiving a great deal of attention these days. Some important reasons include:

- Recent corporate scandals and their impact on public plan investments. Some plans have lost hundreds of millions of dollars due to fraudulent financial reporting by the corporations whose shares they own.
- The end of the last decade's great bull market and the corresponding decline in plan assets and funded ratios, at the very time that the Baby Boom generation has reached retirement eligibility.
- Tax caps and reductions in state and federal revenue sharing have put tremendous pressure on local governmental budgets.

With the increased focus on public plans there is a heightened awareness of the need for due diligence on the part of trustees in performing their fiduciary duties. Trustees have a duty to select plan service providers prudently, and once selected, to monitor the quality of their work regularly. Trustees also have an obligation to review the fees paid to those service providers periodically to ensure that the fees remain reasonable and competitive. ¹

Plan trustees work with retained advisors to manage risks. The primary risk is that the assets of the system will not support the liabilities without a large increase in the employer or employee contribution rate. Public pension (and retiree health) plans commonly use a number of tools to monitor and manage this risk, including:

- Actuarial audits
- Actuarial experience studies
- Gain/Loss analyses
- Asset/Liability studies
- Asset allocation models

This article discusses actuarial audits as a due diligence tool for plan trustees. High quality actuarial work can do much to ensure the long-term soundness of a pension plan. Similarly, low quality actuarial work, left undiscovered, can undermine a plan's financial security in a fairly short time.

What is an Actuarial Audit?

An actuarial audit is the scrutiny of one actuary's work by another actuary to ensure that actuarial valuations are performed correctly and that the methods and assumptions used are reasonable. This includes a critique of the plan actuary's judgment concerning the plan's exposure to risk. Such a critique should be made in light of the financial objectives of the plan.

For example, if the financial objective of the system is to establish a contribution rate that is expected to remain approximately level as a percent of member payroll from generation to generation, the audit should not measure the contribution rate in relation to ERISA funding standards, which do not apply to governmental plans.

The Purpose of an Audit

An audit's main purpose is to verify that the actuarial work is accurate and the advice given is sound. Actuarial audits provide assurance to plan trustees and other interested parties that the financial condition of the plan, as stated by the actuary, is accurate.

In some plans, audits are performed on a regular basis. In others they are performed when danger signs in the financial structure of the plan appear. Examples of danger signs include:

- An unexplainable decline in assets resulting from payouts exceeding contributions and investment return;
- Retired life liabilities being less than fully funded with no significant progress toward full funding;

- A protracted period of decline in the funded ratio or increases in computed contribution rates without adequate explanation; and,
- An inconsistent relationship between valuation assumptions (sometimes difficult for an untrained person to notice).

Benefits of an Audit

The outcome of the actuarial audit reveals whether procedures are technically sound and if plan objectives are being met. Equally important, this type of review helps to generate a sense of security among those concerned with plan financing. The value of such knowledge may make the cost of the audit incidental.

Furthermore, the dialogue generated by the audit process usually has educational value. The basic funding principle of paying for a benefit when it is earned may be easy to grasp, but the implementation of the concept is often confusing. The proper use of good advisors provides a chance to get a good look at the forest rather than getting lost among the trees of technicalities.

If the advice a plan has been receiving is inaccurate or inappropriate, the actuarial audit should bring this to light so that remedial action can be initiated. Finally, we all benefit from someone looking over our shoulder occasionally. The mere possibility that a fellow practitioner may analyze an actuary's work can result in additional care being taken in the valuation process.

Types of Audits

There are a variety of levels of actuarial audit. These are described below on a scale of one through four (one being the most comprehensive and four being the least).

Level One

A Level One audit is a complete actuarial valuation of the plan based on the same census data, assumptions and actuarial methods used by the plan's actuary. The goal is to replicate the results of the most recent valuation. This is sometimes called a replication audit. Generally, there is some testing of plan experience as part of the review and there is dialogue among the retirement plan representatives, the retained actuary, and the reviewing actuary. A detailed report and presentation of the findings in a meeting with plan representatives is standard.

Level Two

A Level Two audit includes a review of the actuarial reports of the plan and a test of the valuation results using a mathematical model of plan activity or sampling (as opposed to performing a complete replication of the retained actuary's valuation of the plan). As in a Level One audit, there is dialogue with the plan's actuary and plan representatives. A detailed report and presentation of the findings would be included.

An auditing actuarial firm with broad public plan experience and technical capability can usually verify the retained actuary's previous results reasonably well with a Level Two audit. If results cannot be verified or explained, it may be necessary to expand the scope of the audit to Level One. This would be recommended before any action is taken as a result of the audit.

Level Three

A Level Three audit includes a review of the previous actuarial valuation reports, dialogue with the retained actuary and plan representatives and presentation of a report. At this level, there are no independent calculations. This approach may lead to savings of time and money, but the results will usually have less value. A Level Three audit may be of interest to smaller plans with limited budgets. Sometimes a plan can benefit by listening to the views of another trained actuary with different experiences and viewpoints than the retained actuary.

Level Four

A Level Four audit includes only a review of the most recent available actuarial report and a disclosure of the findings in letter format.

The scope of levels three and four are so narrow that the term audit may be misleading. The term review would be more appropriate in these cases.

Fee Audit

In addition to commenting on the actuarial work, some audits include comment on the reasonableness of the fees charged by the retained actuary. While actuarial fees are usually small when compared with the plan's assets and with the im-

portance of the advice that the actuary provides, it is obviously important to the trustees to know if the same level of service can be provided for a lesser fee. The actuarial audit provides a barometer for the trustees to use as an aid in judging the combined service/fee level.

Alternatives

Why not just change actuaries every 2 or 3 years and get the benefit of a variety of viewpoints over a long span of years? There are a small number of public employee plans doing this. However, public plans today often have very complex provisions. Lack of continuity of advisors can result in less understanding of the financial position of the plan, lower quality actuarial work, and higher fees. There also may be a tendency to over-emphasize small differences in approach that are not material to the long term well-being of the plan and its participants.

Continuity and consistency are important to a client who is interested in obtaining the highest quality actuarial work. The best consulting advice (which may be requested on a daily basis during a period of stress or change) depends on the consultant's knowledge of the system's history and trends. The same is true for the annual valuation work and related activities.

While dealing with one actuarial firm on a continuing basis may be best for a system overall, the weaknesses are that alternate viewpoints are not heard, and actuarial methods may not be checked by an unbiased peer pro-

fessional. These weaknesses are overcome by having periodic actuarial audits.

Public plan boards that have regular annual valuations along with good communication with their advisors may feel little need for another opinion. But how many of us would seek a second medical opinion if we had to make an important medical decision for a person who could not speak for himself or herself? This is actually the position in which most public pension boards find themselves. They must make decisions for the good of the plan participants, who may have no other voice. Naturally, the size of the resources of the plan often limits practical alternatives.

Other Actuarial Risk Management Tools

An annual Gain/Loss analysis in addition to the routine actuarial valuation adds a dimension for understanding the financial condition of the retirement system. Properly executed, a Gain/Loss analysis will usually bring to light any glaring actuarial deficiencies. Of course, a periodic Experience Study (every 4 to 6 years) should also be performed to ensure that the actuarial assumptions continue to be on track.

Guidelines

Our experience as a firm is considerable and was developed over time by serving as both auditing actuary and audited actuary. The following guidelines have been developed as a result of this experience.

In the absence of danger signals or special circumstances, actuarial audits should be considered on a periodic basis. The Government Finance Officers Association recommends actuarial audits at least once every 10 years. Many larger plans have a policy of having an actuarial audit every 5 years, and a few have an audit more frequently. Of course, any time unexplained danger signals or apparent discrepancies in methods or assumptions appear. or if major plan changes involving significant costs are about to be made, the time is right.

The auditing actuary is typically selected through the competitive bidding process (the use of a request for proposal, RFP, is common).

The auditing actuary should have experience with the type of plan being audited.

Fees for an actuarial audit can vary widely depending on the complexity of the plan, and the extent of the audit. A Level One audit could cost more than the retained actuary charges for the valuation. A Level Four audit could cost as little as one or two thousand dollars. But if a plan has liabilities of, say \$1 billion, and a 5% mistake is found, the value of that mistake would be \$50 million!

Generally in actuarial work, there is no unique, correct answer; rather there is a range of reasonableness. In light of this, one might wonder what constitutes an actuarial mistake? There are two basic types: The first type of actuarial mistake includes actuarial results that are outside of the

bounds of reasonability. The second type of mistake includes actuarial results that are within a range of reasonableness but contain math errors, show poor judgment, or are based on false premises or bad data.

The second type of mistake is more common than the first. An actuarial valuation is a complex undertaking involving many assumptions and calculations. No two actuaries will ever agree precisely on what the results of an actuarial valuation should be, and almost every valuation can be found to have at least a small amount of the second type of mistake described above.

Criticisms and suggestions provided by the reviewing actuary should be classified in order of relative importance. Without this sort of classification, the audit results may cause unnecessary confusion.

If overall, the reviewer thinks the plan has been getting good advice, this should be stated as part of the findings. An audit enables a plan's trustees to fulfill their fiduciary responsibilities to the plan and maintains the continuity of service.

If areas of concern are discovered during the audit, the reviewing and retained actuary should ideally work together to resolve any concerns. If errors are found, these should be corrected in a professional manner. From our perspective, the goal is sound financial management of public employee plans. It is in everyone's best interest to ensure that a plan's actuarial work is sound.

Endnote

¹ Tess J. Ferrera, *Journal of Pension Benefits*, Volume 9, Number 1, Autumn 2001.

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