CITY of SPRINGFIELD

Police-Fire Pension Fund Citizen's Task Force

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POLICE AND FIRE PENSION FUND
CITIZENS TASK FORCE
MEMBERSHIP ROSTER

Last Name	First Name	Home Telephone	Business Telephone	Email Address
Fenstermaker (Chair)	Jerry	314-494-5509	417-886-6600	jfenster@ffgrp.net
Baldwin	Lorenzo	417-423-7204	417-890-9213	lzbaldwin1965@gmail.com
Daniels	Mary Beth	417-889-3175	417-882-8203	mbdhunter@aol.com
Elliott	Gordon	417-883-0757	417-887-5658	gordon@elliottlodging.com
Harmison (Vice Chair)	Jerry	417-839-3450	417-877-0015	jerry@harmisonpearman.com
Herd	Carl	417-865-5719	417-299-1514	carl.herd@sbcglobal.net
Homan	Kenneth	417-886-5616	417-883-3838	khoman@springfieldtrust.com
Horton	Bob	417-224-5790	417-865-4774	rmhorton@unaonline.org
Hyde	Danny	417-831-1530		dmhyde@sbcglobal.net
Jeffries	James	417-887-2321	417-886-2000	jjeffries@lathropgage.com
Jones	Robert (Bob)	417-831-2558		
Kubicek	Peggy	417-882-3806		pckubicek@prodigy.net
Munsey	Charles	417-886-5357	417-881-6623	cmunsey@nixonins.com
Trippe	David	417-865-6333		d.trippe@mchsi.com
Wagoner	Craig	417-832-9408	417-865-8698	wagaces@aol.com
Young	Lloyd	417-887-8443		LloydYoung@missouristate.edu

Pub. Imp. _____
Govt. Grnt. _____
Emer. _____
P. Hrngs. _____
Pgs. 5
Filed: 4-3-09

Sponsored by: Council

COUNCIL BILL NO. 2009- 079 RESOLUTION NO. 9673

A RESOLUTION

ADOPTING the scope of duties for the Police Fire Pension Fund Citizens' Task Force.

WHEREAS, in response to feedback received from voters and residents of the City of Springfield, the City Council has determined that a more in-depth study of the possible methods to fund the shortfall that exists in the Springfield Police Officers' and Fire Fighters' Retirement System should be undertaken by a panel of citizens selected by Council; and

WHEREAS, the City Council has reviewed the proposed scope of duties the Citizens' Task Force is to undertake which is attached to this Resolution as "Exhibit A" and finds that the scope of duties will fulfill the purpose stated by Council to obtain additional input on possible funding proposals.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SPRINGFIELD AS FOLLOWS:

Section 1 - The City Council adopts the scope of duties for the Police and Fire Pension Fund Citizens' Task Force attached hereto as "Exhibit A".

Passed at meeting: April 6, 2009

Thomas A Carlson
Mayor

Attest: _____, City Clerk

Filed as Ordinance: April 6, 2009

Approved as to form: _____, City Attorney

Approved for Council action: _____, City Manager

N:\SHARE\CBILLS 2009\4-6-09\Adopting Duties P&F Pension Fund Citizen Task Force

Aff. Agcy. Noticed _____
Emergency Required _____
IPO Required _____
P. Hrngs. Required _____
IPO Required _____
Fiscal Note Required _____
Board Rec. Required _____

EXPLANATION TO COUNCIL BILL NO. 2009 - _____

ORIGINATING DEPARTMENT: City Manager

PURPOSE: To adopt the scope of duties for the Police Fire Pension Fund Citizens' Task Force.

BACKGROUND:

In response to feedback received from voters and residents of the City of Springfield, the City Council has determined that a more in-depth study of the possible methods to fund the shortfall that exists in the Springfield Police Officers' and Fire Fighters' Retirement System should be undertaken by a panel of citizens selected by Council.

In order to meet those requirements, the City Council needs to adopt the scope of duties for the Police and Fire Pension Fund Citizens' Task Force attached hereto as "Exhibit A".

REMARKS:

Staff recommends approval.

Submitted by:

City Manager

N:\SHARE\CBILLS 2009\4-06-09\Adopting Duties P&F Pension Fund Citizen Task Force. EXP

EXHIBIT A

(SCOPE OF DUTIES)

Police-Fire Pension Fund Citizens' Task Force

Task Force Charge

4/6/09

The Police-Fire Pension Fund Citizens' Task Force is charged with the following tasks:

- Research and investigate the police-fire pension funding issue to determine the scope of the problem and the level of urgency to resolve the problem.
- Consider and analyze a variety of potential methods to provide a multi-year plan that restores and maintains the fiscal responsibility of the plan and ensures our ability to recruit and retain a well-trained, stable employee base for the delivery of high-quality public safety services to our community.
- Meet with all stakeholders to collect input and hear various perspectives, including, but not limited to, the Pension Board and related advisors/consultants, Police Department leadership, SPOA representatives, Fire Department leadership, IAFF representatives, police/fire retirees, City leadership, the Citizens for Keeping our Commitment Committee, critics of the previous proposal, and any other group with whom the Committee desires to meet. The task force may consider any option.
- Provide written recommendations to the Mayor and City Manager, ranking the one or more recommended options that should be considered, recognizing that City Council must ultimately approve any proposal. In addition to ranking the Task Force's recommendations, the report should indicate the advantages and disadvantages of each option considered from the perspective of the citizen, the City as employer, the employee, and the pension system.

The Task Force is to submit its written report to the City Council and City Manager by June 30, 2009; however, Council may extend this deadline if deemed necessary to allow the Task Force ample time to complete its charge. This will be a public report that will be posted to the City's web site. All meetings of the Citizens' Task Force are considered public meetings and are required to be posted at least 24 hours in advance with the City Clerk's Office.

Please be aware that a significant commitment of time and effort will be required of all task force members in order to fully research the problem, analyze various options, and select one or more recommended solutions to address the problem. I encourage the Task Force to set an aggressive meeting schedule in order to permit a thorough analysis and the development of recommendations by the report due date noted above. During the Task Force's work, the City will provide the following support:

- Background information, as requested
- Research into various issues and solution options, as requested
- Clerical support to schedule meetings, reserve meeting rooms, and take notes
- Legal support from the City Attorney's office

CITY of SPRINGFIELD

Police Fire Pension Fund Citizens Task Force

Police Fire Pension Fund

Monday, April 27, 2009

6:00 PM

Busch Building, 4th Floor Conference Room

AGENDA

1. Individual introductions
   i. 3 minutes each
   ii. Email for all members

2. Assign members to three teams
   i. Set initial list of team tasks
   ii. Assign City Manager, SOS and Task Force recommendations

3. Deliverables / Assignments
   i. Completed formation of teams
   ii. Resolve requirements needed
      1. Cash Flows, other data to collect
      2. Pension Fund education request
      3. Interviews needed
   iii. Initial written goals

4. Press ground rules

5. Next steps

City of Springfield, Missouri

City Code Retirement Plan Provisions

Police Officers & Firefighters Retirement System

Revised June, 2007

Police Officers & Firefighters Retirement System

CITY of SPRINGFIELD

City of Springfield, Missouri

CITY CODE RETIREMENT PLAN PROVISIONS

POLICE OFFICERS & FIREFIGHTERS RETIREMENT SYSTEM

Revised June, 2007

Pension Board Members

Evelyn Honea, President
Kevin Austin
Beau Barrett
Jim Edwards
Anthony Gomez
David Hall
Ron Hoffman
Ken Homan
Gerry Koeneman
Sheila Maerz
Mary Mannix-Decker
Cynthia Rushefsky, City Council
Dan Wichmer, City Attorney
Shelley Smith, Secretary

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City of Springfield, Missouri

Springfield City Code, Chapter 2, Article VI, Division 4

POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT PLAN

Sec. 2-441. Definitions.

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Board of trustees or Board means the board of trustees created in this division to administer the police officers' and fire fighters' retirement system.

Disability means disability from performing the labor or occupation which the member was following at the time of the accident, sickness or injury, and not some vocation which he might be able to follow after the accident, sickness or injury.

Disability beneficiary means any person receiving a disability pension under this division.

Disability pension means the pensions provided for in this division.

Duty-connected death means a death by a participant as the direct result of the performance of an act of duty.

Participant means:

(1) Those persons who are members on the date of passage of the ordinance from which this section is derived; and

(2) All persons who are currently employed in the following positions, in positions declared to be within the plan under separate or prior ordinances, or whom may subsequently be employed in positions created or amended by ordinance to be included within the plan, including but not limited to the following positions:

a. Police officer.

b. Major accident investigator.

c. Police corporal.

d. Police sergeant.

e. Police lieutenant.

f. Police captain.

g. Police major.

h. Firefighter.

i. Fire equipment operator.

j. Rescue and salvage specialist.

k. Fire training captain.

l. Fire captain.

m. Truck company captain.

n. Fire marshal.

o. Battalion chief.

p. Administrative battalion chief.

q. Fire operations officer.

r. Assistant fire chief.

s. The police chief.

t. The fire chief.

Involuntary service in the armed forces of the United States means service as a member of the United States armed forces, not undertaken by voluntary enlistment or reenlistment, including mandatory National Guard, Air National Guard or military or Coast Guard reserve call up or activation.

Medical group means a group of three medical doctors, or such other number as may be designated by the board in a particular matter, appointed by the board as provided in this division.

Minor child means a natural or adopted unmarried child under the age of 18 years, or, if over the age of 18 years, such an unmarried child enrolled in and attending in a continuous fashion as a full time student in a secondary school in pursuit of a high school diploma, an institution of higher education or a vocational or technical school, but under the age of 23 years.

Non-duty disability means a total and permanent disability from causes not the direct result of occupational duties.

Police officers' and fire fighters' retirement fund, or the retirement fund, or the fund, means a fund established by this division to provide retirement, disability and death benefits to participants.

Police officers' and fire fighters retirement system, or the retirement system, or, the system, or the retirement plan, or the plan, unless otherwise defined herein, shall mean the police officers' and fire fighters' retirement system established and defined in these ordinances, as they may be amended from time to time.

President means the presiding officer or chairman of the Board as described in Section 2-445 herein.

Secretary means the secretary to be elected by the Board.

Service retirement means a retirement as provided for by Section 2-465.

Survivors' pension means a pension for the surviving spouse and minor children upon the death of a participant.

Sec. 2-442. Amendment of existing plan.

The existing policemen's and firemen's retirement fund, article 7, chapter IX, of the Revised Ordinances of 1946, is hereby amended, such fund to provide for the retirement of the employees of the police and fire departments, and also to provide a pension for the surviving spouses and minor children of deceased employees of the police and fire departments, as provided in this division; provided that the rights of any person now on retirement shall not be changed by this division, nor shall the liability of the pension fund to any such person be changed by this division.

Sec. 2-443. Continuation of retirement fund.

The retirement fund created by Section 652 of the Revised Ordinances of 194(

previously designated and known as "The Policemen's and Firemen's Retirement Fund" shall be designated as "The Police Officers' and Fire Fighters' Retirement Fund." Such fund shall be under the exclusive management and control of a board of trustees, as provided in Section 2-444.

Sec. 2-444. Board of trustees established; membership; election of members.

(a) There is hereby created a board to be known as the Board of Trustees of the Police Officers' and Fire Fighters' Retirement Fund of the City of Springfield, Missouri. The board of trustees shall consist of two (2) participants employed by the police department, two (2) participants employed by the fire department, the Director of Finance, the Director of Human Resources, a designee of the City Manager, one (1) former participant who is currently receiving benefits from the system, and three (3) citizen members which shall be recommended by the City Manager and approved by the City Council, to be chosen from the professional community in the areas of law, accounting, financial management, investment management or actuarial analysis. The mayor shall also be authorized to appoint a City Council member to act as a liaison between the board of trustees and the council, who shall have no vote on the board of trustees, but whose duties shall include the following:

(1) Acts as City Council's liaison to the Police/Fire Pension Board.

(2) Attend monthly Board meetings as desired or requested.

(3) Submit an annual report to City Council on the activities, actuarial information, and fund performance of the pension system.

(4) Provide input to the Board regarding Council priorities/policies related to pension issues.

(5) Attend pension related training, seminars and conferences to stay abreast of pension issues, as desired or requested.

(6) Coordinate legislation and/or pension changes with appropriate Council committee.

(7) Such other duties as assigned by the City Council.

(b) The board members of the police and fire departments, respectively, shall be elected by the employees thereof, such election to be held within the respective departments for five (5) consecutive days, beginning on the first Monday in

December of each year, for terms of two (2) years. Said elections shall be staggered such that one (1) fire and one (1) police participant shall be elected each year, with the board to determine the process by which the initial stagger of the election terms occurs. Such election shall be held by secret ballot. The board shall determine the procedure for nomination of candidates, for distributing or otherwise making ballots available to participants in the police and fire departments, for the casting of the ballots, and for the collection of such ballots after voting. The ballot boxes and ballots shall be placed at locations and in sufficient number as will accommodate the participants in each department and their respective working schedules as determined by the board, but shall include at least one (1) ballot box at each of the following locations: the police headquarters building, and the south side combined police and fire station, in their respective main lobby areas. The member who is a former participant shall be elected for a two-year term by a vote of all former participants and surviving spouses of deceased former participants who are receiving benefits from the system in accordance with the provisions set forth in this section, provided that no such beneficiary shall be entitled to more than one (1) vote, and further provided that the board shall establish procedures for absentee or mail-in ballots for former participants and surviving spouses.

(c) Except as otherwise stated in this ordinance, the qualifications, terms restrictions, appointment, confirmation and removal of the three (3) citizen members of the board appointed by the City Manager and confirmed by the City Council shall be the same as described in Article XV of the City Charter generally for members of administrative boards established under said article, except that, such citizen members shall not be required to be residents and qualified voters of the city either prior to or at the time of their appointment, or during their membership on the board. If a citizen member is not a resident of the city at the time of his appointment, the location of his professional business office or his employer shall be within the city at the time of his appointment. The City Manager will notify the chairman of the board of trustees in writing of the names of persons he intends to appoint to the board not less than ten (10) days prior to a regularly scheduled meeting of the board, and said regular meeting of the board shall be prior to the date of the submission of the appointment to the City Council. The City Manager may also appoint or reappoint one (1) or more of these board members for terms of less than three (3) years, so that the expiration of the appointed board members' terms are staggered such that no more than one (1) appointed board member's term expires in any given year; provided that any appointed member appointed or reappointed to a shortened term for this purpose shall be eligible for reappointment to serve two (2) full terms. An appointed member may also be subject to removal by the City Manager, in his sole discretion, if the member fails to attend three (3) or more regularly scheduled monthly board meetings in a 12-month period during the member's term.

(d) Elected board members shall serve until their successors are elected and qualified. Appointed members shall also serve until their successors are duly appointed and confirmed. If an elected board member fails to serve a full term, a special election to fill the vacancy shall be called after at least fifteen (15) days notice, on the first Monday of the next succeeding month thereafter. Voting shall be according to the same procedures applicable to regularly called board meetings.

(e) Notwithstanding anything herein to the contrary, no special election shall be called if, after notice, the first Monday of the next succeeding month would fall in the month of November.

(f) In the event the board determines by an affirmative vote of five (5) or more of its members that any elected member has an actual or apparent conflict of interest such that the said member cannot reasonably perform his duties in an appropriate manner, and said member fails or refuses to take such action to purge himself of the conflict after such finding, the board may act by an affirmative vote of five (5) or more of its members to remove said member as a member of the board, and the seat shall be declared vacant and a new election for the seat shall be held. In such event, the unseated member may submit an appeal of the removal within ten (10) days to the secretary of the board, who shall arrange for a hearing examiner to review and determine the issue of the conflict of interest and the appropriateness of the board's removal action. The hearing examiner shall conduct the hearing pursuant to the procedures set out in Section 2-449(c) and shall review the facts and the action taken in light of the applicable law, relevant City Charter and City ordinance provisions, and City custom and practice regarding conflict of interest issues. The decision of the hearing examiner upon the nature and extent of the conflict of interest shall be final upon the board and the member.

Sec. 2-445. Officers of board of trustees.

The President of the Board of Trustees shall be a designee of the City Manager. The board of trustees shall, by a majority vote of its members, elect a secretary, who may, but need not, be one of its members. The Director of Finance shall be Treasurer of the board.

Sec. 2-446. Payment of expenses of board of trustees; management of retirement fund.

The compensation of all persons engaged by the board of trustees, and all other expenses of the board necessary for the operation of the retirement system, shall be paid at such rate and in such amounts as the board shall approve, such compensation and expense to be paid out of the retirement fund. The retirement fund shall be under the exclusive management and control of the board, in whose name it shall contract all its business and hold all its money, securities and other property.

Sec. 2-447. Meetings of board of trustees.

The board of trustees shall have at least one meeting per month to transact all business which may come before it. Also, it may have special call meetings at any time. At any regular or special meeting, no business shall be transacted until a quorum of six (6) is present. A majority vote of those present shall pass any motion, resolution or other matter which may be decided upon. Unless otherwise determined by the Board, meetings will generally be conducted pursuant to the procedures set out in Robert's Rules of Order.

Sec. 2-448. Records and reports of board of trustees.

The board of trustees shall keep a record of all its proceedings, which report sha be open to public inspection. It shall meet whenever necessary and transact all business before it. The board shall annually make a report to the City Council, such report to be made within two (2) months following the close of the calendar year, showing all financial transactions of the retirement fund for the preceding fiscal year, including both income and expenditures, the amount of the accumulated cash and securities of the retirement fund, and the last balance sheet showing the financial condition of such fund by means of an actuarial valuation of the assets and liabilities of the retirement fund.

Sec. 2-449. Authority of board of trustees to establish rules and regulations; hearings on claims for disability pensions.

(a) *Authority to establish rules and regulations.* The board of trustees shall make rules and regulations for the management of its affairs, for the administration of the retirement fund, and for the limitation of time within which claims may be filed, and to effectuate the provisions of this division.

(b) *Application for disability pension; request for formal hearing.* When a claim for non-duty or duty-connected disability pension is filed, the board of trustees shall review the application and arrange for the claimant to be examined by one (1) r more members of the medical group as the board may deem appropriate. Afte

such examinations have been conducted and the reports returned to the board, the board shall thereafter act on the application based upon the reports and other information submitted to the board. After an informal review and decision by the board, the applicant or the city, acting through the City Manager, may request a formal hearing by filing a notice requesting a formal hearing within ten (10) days after the decision of the board has been delivered to them. Delivery of documents or notice shall be deemed to occur at the time the document or notice is personally served on such persons or within three (3) days after they are placed in the United States mail with the mailing address on file with the secretary of the board and postage prepaid. A request for a formal hearing shall be in writing and filed with the secretary of the board or with any member of the board, who shall thereafter notify the hearing examiner.

(c) *Conduct of formal hearing.* If a request for formal hearing is filed by the City Manager or the applicant, then a formal hearing shall be convened within thirty (30) days after the request. The hearing shall be held by a hearing examiner who shall be licensed to practice law in the state and who shall have been appointed for such purposes by the City Council. The time for the hearing may be extended beyond the date of thirty (30) days if both parties, that is, the city, through the City Manager, and the applicant, agree thereto, or upon motion showing good cause directed to the hearing examiner. All of the costs of the formal hearing shall be borne by the retirement system and costs therefore shall be paid by the board upon receipt of proper claims therefore; however, none of the costs of any witness shall be paid from the system but shall be paid by the party calling the witness. The cost of the hearing examiner shall be paid at the rate approved by the City Council upon the appointment of the hearing examiner and at no greater rate. The hearing examiner shall have the power, at the request of any party or upon his own motion, to require medical examinations, and to compel the attendance for discovery purposes or at the hearing of any person or witness, together with books, papers or other documents relevant to the issue. The board shall have the power to establish procedures for hearing such matters, including therein rules for the receipt of evidence. Unless otherwise designated by the board, or as stated in this section, or as may be otherwise determined by direction of the hearing examiner in a particular matter, including stipulation of the parties, the procedures applicable for the conduct of administrative hearings set out under Section 536.070, RSMo, shall apply to the conduct of these matters. At the formal hearing, the hearing examiner shall take and preserve evidence on all disputed matters, and at the conclusion thereof the hearing examiner shall, within a reasonable time, make findings of fact and law upon the matter before him. Written notice of his decision shall thereupon be filed with the board of trustees and notice thereof shall be served by regular United States mail upon the applicant at his address shown in his application and upon the city by service upon the City Manager or the City Attorney.

(d) *Board action after formal hearing.* The board, upon receipt of the decision of the hearing examiner, shall, upon review of the record made before the hearing examiner, accept, modify or reject the hearing examiner's decision; however, if the board rejects or modifies the decision of the hearing examiner, the board shall be required to have reasons based upon the evidence for the modification or rejection and shall state such reasons in its decision. A copy of the decision of the board shall be filed with the secretary of the board and mailed to the applicant and the City Manager or City Attorney. The board shall not hear or take any new evidence when reviewing the decision of the hearing examiner.

(e) *Abandonment of request for formal hearing.* An applicant or the city, acting through the City Manager, may, at any time prior to the time a formal hearing is to be held, abandon its request for a formal hearing by filing a written notice with the board and hearing examiner of such action. Upon the city's or the applicant's filing such notice, the applicant shall be referred to the board for a determination pursuant to procedures set forth in Subsection (b) of this section. Abandonment of a request for a formal hearing shall constitute a waiver by the party of the right to thereafter request such hearing.

(f) *Appeals.* The decision of the board shall be subject to review under the Administrative Review Act of the State of Missouri (RSMo ch. 536); and either the applicant or the city, acting by and through the City Manager, may appeal from the decision of the board. If the city appeals the decision of the board, the board may employ special legal counsel to represent the board in the appeal process provided all expenses as established by the board shall be paid out of funds which are subject to the board's control under this division.

Sec. 2-450. Actuarial data.

The board of trustees shall keep in convenient form such data as shall be necessary for actuarial valuation of the funds of the retirement fund, and for checking periodically the operating experience of the retirement fund. The board shall cause an actuarial study to be conducted of the fund annually, with the study to be completed by the end of the calendar year. The Director of Finance shall prepare at the direction and approval the board's criteria and procedures for the selection and retention of an independent actuary to prepare the written actuarial study, and to advise the board upon the matters covered within the report. The study and the report shall be conducted and prepared by the actuary at the direction of the Director of Finance and the board. The costs and fees of the actuary and the study shall be paid by the board from the fund.

Sec. 2-451. Medical opinions.

(a) The board shall, either directly or as set out in Subsection (b) below, appoint doctors to make all physical examinations required under this division, which shall be known as the medical group. The board may appoint doctors specializing in certain medical areas to perform examinations if the nature of the condition to be examined indicates such expertise is needed. Unless determined differently by the board as set out in Subsection (b) below, the board shall obtain three (3) medical opinions in connection with an application reviewed. The board may also in its sole discretion adopt other existing medical opinions about the condition under review as a part of the medical group. The funds for such examinations shall be supplied by the board out of the retirement fund.

(b) The board may in its discretion vote to have more or less than three (3) opinions; however, if there are less than three (3) opinions, and any member of the board, the applicant or the City Manager requests additional medical opinions prior to or within five (5) days after the board acts on the application, the board shall consider or reconsider the matter after receipt of three (3) medical opinions. If such a request is made after the board has made its decision, such request shall have the effect of suspending the board's decision until the board receives the additional medical opinion and acts thereon to grant or deny the pension. The board may contract with a medical clinic offering comprehensive medical services, which clinic may determine the type of medical opinions necessary for board consideration based upon the condition of the applicant.

Sec. 2-452. Assets of retirement fund; acceptance of gifts and grants.

The retirement fund shall consist of all money and other assets that may be given to the board of trustees and any other funds given by any person for the uses and purposes for which such fund is created. The board of trustees may receive by gift, grant, devise or bequest any money, personal property, or real estate or interest therein or any right of property. Any such gift, grant, devise or bequest may be absolute or fee simple, or upon condition that only the rents, income or profits arising therefrom shall be applied to the purpose for which the retirement fund is established.

Sec. 2-453. Administration and custody of retirement fund; duties of Director of Finance.

The Director of Finance shall be the treasurer and custodian of all money, securities and other property of the retirement fund, subject to the control and direction of the board. As prescribed by the board, he shall keep separate books and complete accounts of the retirement fund, and his books and accounts shall always be subject to the inspection of the board or any of the board's members. The Director of Finance

shall be liable on his bond executed to the city as Director of Finance for all his acts concerning the police officers and fire fighters retirement fund. The board of trustees shall also arrange for bonds to cover the Director of Finance and the secretary for their acts concerning the fund in the amounts of $1 million each, to be paid for by the fund. On the expiration of his term of office, he shall deliver to his successor all unexpended money, securities, books, records and other property which may have come into his possession as treasurer of the retirement fund. The secretary of the board shall be responsible for the general administration of the fund not otherwise provided for.

Sec. 2-454. Legal advisor of board of trustees.

The City Attorney or Assistant City Attorney shall act as legal advisor of the board. In the event of a legal conflict, or for other reasons as may be jointly determined appropriate by the board and the City Attorney, the City Attorney, with the advice and recommendation of the board, may also retain special or additional counsel to advise or represent the board's interests.

Sec. 2-455. Amount of employee contributions; deduction from salary.

(a) From December 16, 1991, until July 11, 1992, there shall be contributed to the plan from the salary of every participant, an amount equal to seven and one-half percent (7½%) of such salary.

(b) From July 11, 1992, until July 10, 1993, there shall be contributed to the plan from the salary of every participant, an amount equal to eight percent (8%) of such salary.

(c) Commencing July 11, 1993, and continuing thereafter there shall be contributed to the plan and from the salary of every participant, an amount equal to eight and one-half percent (8½%) of such salary.

(d) For participants who are current employees of the police or fire departments prior to June 1, 2006, in addition to the contribution referenced in Subsection (c) above, commencing May 21, 2000, and continuing thereafter there shall be contributed to the plan and from the salary of every participant, an additional amount, also calculated as a percentage of such participant's salary, called the Additional Funding Contribution (hereinafter AFC), for purposes of this Section 2-455. The AFC is intended to cover the additional cost to the plan of the additional three-tenths percent (0.3%) multiplier, described in Section 2-465. The AFC will be calculated by the actuaries for the Board of Trustees of the retirement fund over intervals of five (5) budget years each so that the total amount derived from the AFC for all eligible employees shall be equal to the cos

of the additional three-tenths percent (0.3%) multiplier described in Section 2-465(e) for all eligible participants. This AFC will be established at the beginning of each such five-year city budget year interval following the initial interval set out in Subsection (1) below based upon the actuarial cost to the plan of the additional three-tenths percent (0.3%) multiplier described in Section 2-465(e).

(1) From May 21, 2000, through June 30, 2005, the AFC shall be two and fourteen hundredths percent (2.14%).

(2) Effective July 1, 2005, and at intervals of five (5) city budget years thereafter, upon the recommendation of the actuaries for the board and the approval of the City Manager, the AFC may be administratively changed to cover any actuarially calculated increases or decreases in the total cost of the Additional Three-Tenths Percent (0.3%) Multiplier benefit not covered by the latest AFC rate and amounts.

(e) Participants commencing employment on or after June 1, 2006, shall contribute from their salaries the amount set out in Subsection (c) above. These participants shall not contribute from their salaries the AFC amount described in the preceding Subsection (d).

(f) Such amounts contributed shall be deducted each pay period from each participant's compensation which is due him and paid into the retirement fund. This shall be done by the Director of Finance. Every person who is a current participant or who becomes a participant shall be liable for the aforesaid contributions and shall sign an authorization, prepared by the Director of Finance to deduct such eight and one-half percent (8½%)and the AFC percentage for participants who are current employees of the police or fire departments prior to June 1, 2006, and, in consideration of employment by the city, shall be conclusively deemed to undertake and agree to pay the same and to have it deducted from his compensation as provided in this section. The execution of such authorization cards shall be a condition of employment and any employee who fails to do so shall forfeit his right to continued employment by the City of Springfield. The contributions hereunder shall be, within the meaning of Section 414(h)(2) of the Internal Revenue Code of 1986, as amended, deemed to be in lieu of contributions by the employee, treated as picked up by the city and therefore treated as employer contributions for purposes of federal income tax. An employee shall not have the option of choosing to receive the contributed amount since the city shall pay the amount directly to the Fund. For purposes of computing pension benefits and all other salary-related benefits, the full amount of the participant's salary (unreduced by the amount treated as the pick-up) shall continue to be used to compute benefit amounts. No benefit payable under this section shall exceed the limitations under Section 415 of the Internal Revenue Code and such limitations are expressly incorporated herein by reference.

These limitations override any other plan provision to the contrary.

Sec. 2-456. Return of participant contributions upon leaving service or death.

(a) Any participant leaving the service, for any cause other than death or service or disability retirement with pension, shall be paid out of the retirement fund, on demand and without interest, the amount of his contribution to any fund of the city. Payment under such circumstances shall terminate the employee's right to any further payment or pension from the retirement fund, subject to, in the event of reemployment of the participant, the provisions of Section 2-461.

(b) (1) Participants commencing employment in the police or fire departments prior to June 1, 2006, and leaving the service of the City for a service or disability retirement with pension, after September 30, 1995, shall be paid only the member's actual contribution, without interest, out of the retirement fund. Said actual contribution shall be paid to the participant at such time as the participant begins receiving service or disability pension benefit payments.

(2) Participants commencing employment in the police or fire departments c or after June 1, 2006, and leaving the service of the City for a service c disability retirement with pension shall receive no return or refund of any member contribution amount paid into the Retirement Fund.

(c) Should a participant die either before or after he or she shall have retired, and at the time of his or her death there shall be no person entitled to draw any survivor's benefits, and, further, should the participant not have drawn out of the pension plan at the time of his or her death through pension payments, disability payments or other payments from the plan at least as much as the contributions made by the participant to the pension plan from his or her wages, so much which is less than the participant's contribution, without interest, as shall not have been drawn out shall be payable to the estate of the deceased participant.

Sec. 2-457. Contributions by city.

(a) *Tax levy authorized.* A tax not to exceed 1.5 mill shall be levied on each dollar of the value of all taxable property annually assessed in the city, as the value appears on the tax books, which sum shall be earmarked in a separate fund and set aside and made a part of the retirement fund by the Director of Finance; provided that such sum shall not be used for or devoted to any purpose other than specified in this division; or,

(b) Alternatively, the City may fund on an actuarial basis, the actual costs of the plan over and above the amount of the participant contributions and the income received from the investments of the fund assets, subject to the discretion of the City Council to set the actual City contribution rate as a part of the budget approval process for a particular budget year.

(c) On and after June 1, 2006, revenue which would otherwise be available for pay and benefit increases for employees employed in positions defined as participants under the Retirement Plan, may, in the discretion of the City Council, be directed in whole or part to meeting the actual costs of the Plan over and above the amount of the participant contributions and the income received from the investments of the Fund assets as described in Subsection (b) above, if the Plan is actuarially determined, based upon the latest actuarial study completed prior to the proposed increase, to be less than seventy-five percent (75%) funded, and, following such actuarial determination, the funded ratio of the Plan does not move in a positive direction for each of three (3) consecutive fiscal years immediately prior to the proposed increase.

(d) On and after June 1, 2006, proposed amendments to the Plan increasing the nature or amount of any benefits under the Plan, or creating any new benefits thereunder, shall not be approved by the City Council, subject to Council's discretion to establish compensation and benefits for City employees, unless the Plan has reached an actuarially determined funded ratio of seventy-five percent (75%) or higher for the fiscal year immediately prior to the proposed amendment, and an actuary study for such a proposed benefit is performed which substantiates that the Plan will continue to maintain the seventy-five percent (75%) funded ratio after the proposed benefit is approved.

Sec. 2-458. Investment of assets of retirement fund.

The board may invest and reinvest the moneys of the system, and may hold, purchase, sell, assign, transfer or dispose of any of the securities and investments in which such moneys shall have been invested, as well as the proceeds of such investments and such moneys as set out in the revised master statement of investment policy and objectives attached hereto and on file with the City Clerk; provided, however, that not to exceed seventy-five percent (75%) of the funds of the system, at book or market value, whichever is higher, may be invested in equities described within the revised master statement of investment policy and objectives. Fixed income assets shall constitute not less than twenty-five percent (25%) of the total assets of the fund. Alternative investments, as defined in the revised master statement of investment policy and objectives, shall not exceed fifteen percent (15%) of the total assets of the fund. The Director of Finance shall approve such investments and shall assist the board in developing an investment plan.

Sec. 2-459. Authority of board to delegate investment power.

(a) Notwithstanding any other provision of law or ordinance to the contrary, the board of trustees may delegate to its duly appointed investment counselors, authority to act in place of the board in the investment and reinvestment of up to 100 percent (100%) of the moneys of the system, and may also delegate to such counselors the authority to act in place of the board in the holding, purchasing, selling, assigning, transferring or disposing of any or all of the securities and investments in which such moneys shall have been invested, as well as the proceeds of such investments and such moneys, provided, however, that such investments are consistent with and in accordance with a master statement of investment policy and objectives approved by resolution of the City Council and the board.

(b) Such investment counselors shall be registered as investment advisors with the United States Securities and Exchange Commission. They shall also meet any and all other criteria and qualifications which may be established by the Board.

(c) In exercising or delegating its investment powers and authority, members of th board shall exercise ordinary business care and prudence under the facts an circumstances prevailing at the time of the action or decision, as described in Sections 105.687, .688, and .689 RSMo 2005, and may require the investment counselor to be bonded in a sum sufficient to protect the fund from any misfeasance or malfeasance. In so doing, the board shall consider the long-term and short-term needs of the system in carrying out its purposes, the system's present and anticipated financial requirements, the expected total return on the system's investment, general economic conditions, income, growth, long-term net appreciate, and probable safety of funds.

(d) No member of the board shall be liable for any action taken or omitted with respect to the exercise of or delegation of these powers and authority if such member shall have discharged the duties of his position in good faith and with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims as described in Sections 105.687, .688, and .689 RSMo 2005.

Sec. 2-460. Employees subject to retirement plan participation.

All persons who are employees of the police department and fire department o October 9, 1958, and are covered by the terms of any previous pension plan of the city.

all persons who are employees on November 15, 1982, and all persons who are or may in the future be within the scope of the definition of "participant," as set out in Subsection (2) of the definition of that term as contained in Section 2-441, shall be subject to the provisions of the ordinances governing the retirement plan as a condition of their employment. Also, any member of the police department or fire department who has been in the service of the police department or fire department at least five (5) years on May 2, 1946, shall be subject to the ordinances governing the retirement plan.

Sec. 2-461. Credit for previous service upon reentering service.

(a) When a participant leaves the service of his department for more than two (2) successive years, he shall not be entitled to credit for his previous service with the police department or fire department if he should reenter the service of either department; provided that this shall not apply to any participant leaving the service of his department for any disability or for time spent as a result of service in the armed forces of the United States.

(b) Should any participant leave the service of his respective department for less than two (2) successive years and be reemployed, at the option of the city, in either department, within two (2) years from his separation therefrom, he shall be entitled to credit for his previous service in his respective department; provided that, if such participant has withdrawn his contribution to the retirement fund, as provided by Section 2-456, he shall be entitled to such previous service credit only upon tender to the board of trustees of an amount equal to the amount he has previously withdrawn under Section 2-456, which tender must occur within six (6) months from the date of reemployment.

(c) If such participant separating from employment as described in Subsection (b) above originally commenced employment in the police or fire departments prior to June 1, 2006, and said participant's reemployment after separation commenced on or after June 1, 2006, but within the two (2) year window described above, said participant's retirement benefit and/or survivor benefit shall be a combined or blended benefit, with the benefit for the participant's years of service from the original commencement of employment to the date of separation to be calculated in the same manner as for participants commencing employment in the police or fire departments prior to June 1, 2006, and with the benefit for the years of service from the participant's date of reemployment to the end of the participant's employment to be calculated in the same manner as for participants commencing employment in the police or fire departments on or after June 1, 2006. Any prior service credit purchased on or after June 1, 2006, pursuant to Sections 2-462 or 2-463 by such a participant shall also be calculated as years of service earned after June 1, 2006.

Sec. 2-462. Credit for prior military service.

Any participant entitled to a pension under this division who had served in the armed forces of the United States prior to becoming a plan participant and who became a participant after discharge under honorable conditions may elect, prior to retirement, to purchase prior service credit equivalent to such service in the armed forces, not to exceed four years, provided the participant is not receiving and is not eligible to receive retirement credits or benefits from any other public or private retirement plan for the service to be purchased, and an affidavit so stating shall be filed by the participant with the board. However, if the participant is eligible to receive retirement credits in a United States military service retirement system, he shall be permitted to purchase creditable prior service equivalent to his service in the armed services, but not to exceed four (4) years, any other provision of law to the contrary notwithstanding. Provided that, the total combined sum of the amount of prior military service under this section and prior law enforcement or fire protection service under Section 2-463 a participant may purchase shall not exceed four (4) years. The purchase shall be effected by the participant's paying to the retirement system an amount equal to the present value, on the date of payment, of the amount of the additional retirement allowance that would be obtained by virtue of the purchase of the additional service credit, using the interest rat specified by the board and the applicable mortality table adopted by the board anc assuming continuous future service in the retirement system until, and retirement at, the age which is the minimum requirement of the retirement system for normal retirement or retirement with an allowance unreduced for retirement at an early age. The payment shall be made in a lump sum, and at the present value determined as of that date. For participants commencing employment in the police or fire departments prior to June 1, 2006, and for participants commencing employment in the police or fire departments on or after June 1, 2006, subject to the provisions contained in Section 2-461(c) governing such participants, service time purchased shall be considered and calculated in the same manner for benefit purposes as other service time earned by such respective employees. Payments made for such creditable prior service under this section shall be treated by the retirement system as would contributions made by the participant; provided that, notwithstanding any provisions in the ordinances governing this plan providing for the return or refund of participant contributions, such payments shall not be refundable or returnable to the participant or any survivor, beneficiary or other person or entity, but shall remain with the retirement system.

Sec. 2-463. Credit for prior law enforcement or fire protection service.

Any participant entitled to a pension under this division who had service prior to becoming a participant as either:

(1) a paid full time commissioned officer of a law enforcement agency possessing law enforcement authority, including powers of arrest, as a part of the primary duties of the position held, for a governmental jurisdiction or public entity; and/or,

(2) as a paid full time employee engaged in fire protection activities, as defined under the federal Fair Labor Standards Act, as part of the primary duties of the position held, for a fire department of a governmental jurisdiction or public entity; may elect, prior to retirement, to purchase prior service credit equivalent to such service time, not to exceed four (4) years, provided the member is not receiving and is not eligible to receive retirement credits or benefits from any other public or private retirement plan for the service to be purchased, and an affidavit so stating shall be filed by the participant with the board. Provided that, the total combined sum of the amount of prior military service under Section 2-462 and prior law enforcement or fire protection service under this section a participant may purchase shall not exceed four years. The purchase shall be effected by the participant's paying to the retirement system an amount equal to the present value, on the date of payment, of the amount of the additional retirement allowance that would be obtained by virtue of the purchase of the additional service credit, using the interest rate specified by the board and the applicable mortality table adopted by the board and assuming continuous future service in the retirement system until, and retirement at, the age which is the minimum requirement of the retirement system for normal retirement or retirement with an allowance unreduced for retirement at an early age. The payment shall be made in a lump sum, and at the present value determined as of that date. For participants commencing employment in the police or fire departments prior to June 1, 2006, and for participants commencing employment in the police or fire departments on or after June 1, 2006, subject to the provisions contained in Section 2-461(c) governing such participants, service time purchased shall be considered and calculated in the same manner for benefit purposes as other service time earned by such respective employees. Payments made for such creditable prior service under this section shall be treated by the retirement system as would contributions made by the participant; provided that, notwithstanding any provisions in the ordinances governing this plan providing for the return or refund of participant contributions, such payments shall not be refundable or returnable to the participant or any survivor, beneficiary or other person or entity, but shall remain with the retirement system.

Sec. 2-464. Computation of average salary.

The normal service pension, the early retirement service pension, the non-duty disability pension and the survivor's pension shall be based upon the average salary for the highest three (3) years, which years may be but are not required to be consecutive, within the last ten (10) years of service, calculated backward from the last day of employment. For participants commencing employment in the police or fire departments prior to June 1, 2006, actual salary before deductions, plus payments for unused floating holidays, unused compensatory time, scheduled holidays, Kelly days, pin days and accrued vacation time shall be used in all cases. For participants commencing employment in the police or fire departments on or after June 1, 2006, actual salary before deductions paid for hours worked or amounts paid for leave time taken in lieu of hours worked within the said three-year period shall be used in the calculation, and payments for unused floating holidays, unused compensatory time, unused leave granted in lieu of scheduled holidays, unused Kelly days, unused pin days, unused accrued vacation time, vacation buy out amounts, or any other nonrecurring lump sum monetary amounts for unused leave time of any kind paid out at time of separation of employment, shall not be included in the average salary computation. For such participants commencing employment in the police or fire departments on or after June 1, 2006, no participant contributions for the Plan shall be deducted from any lump sum monetary amounts paid any such participant for the unused leave time amounts described above.

Sec. 2-465. Normal service retirement benefits.

(a) Any participant in service and having:

(1) In the case of a participant who commenced employment in the police or fire departments prior to June 1, 2006, more than twenty (20) years of service in his department, or in both departments, and having reached the age of fifty (50) years, or any such participant in service and having twenty-five (25) years or more in one (1) or both departments; or

(2) in the case of a participant who commenced employment in the police or fire departments on or after June 1, 2006, more than twenty-five (25) years of service in his department or in both departments and having reached the age of fifty-five (55) years; or

(3) any such participant in service, regardless of their hire date, and having reached the age of sixty (60) years, may file with the board an application for normal retirement pension, setting forth a time not less than thirty (30) days and not more than ninety (90) days after the filing of the application at which he wishes to be retired; and though his services have bee' discontinued during such period of notification, if found entitled

retirement under the terms of this division, he shall be permitted to retire by the board as of the time specified in his application, and shall be paid (his "pension," for purposes of this section) for life out of the retirement fund a percent (the "percentage multiplier") of his average salary for each full year of service, and fractions thereof for periods of less than a full year, subject to, in the case of a participant who commenced employment in the police or fire departments prior to June 1, 2006, a maximum of seventy percent (70%) of such participant's defined average annual salary, or, in the case of a participant who commenced employment in the police or fire departments on or after June 1, 2006, a maximum of seventy-five percent (75%) of such participant's defined average annual salary, in accordance with the following schedule.

(1) Participants retiring prior to July 15, 1991 shall be paid a pension based on a percentage multiplier of two percent (2%).

(2) Participants retiring from July 15, 1991 until July 11, 1992 shall be paid a pension based on a percentage multiplier of two and one-sixth percent (2 1/6%).

(3) Participants retiring from July 11, 1992 to July 10, 1993 shall be paid a pension based on a percentage multiplier of two and one-third percent (2 1/3%).

(4) Participants retiring from July 11, 1993 until May 20, 2000, shall be paid a pension based on a percentage multiplier of two and one-half percent (2½%).

(5) Participants retiring on or after May 21, 2000, who commenced employment in the police or fire departments prior to June 1, 2006, shall be paid a pension based on a percentage multiplier of two and one-half percent (2½%) plus an additional three-tenths of one percent (0.3%), called the additional three-tenths percent multiplier.

(6) Participants who commenced employment in the police or fire departments on or after June 1, 2006, shall upon retirement be paid a pension based upon a Percentage Multiplier of two and one-half percent (2½%), without the said "Additional Three-Tenths Percent (0.3%) Multiplier" referenced above.

(b) Any participant retiring after July 1, 1980, shall also be entitled under the terms specified in Sections 2-468 and 2-469 to the annual pension adjustments provided therein according to the terms of those sections. Pension payments shall be paid monthly and shall be at the rate of 1/12, rounded to the nearest

dollar, of the annual pension rate.

(c) The right to a service retirement pension as set forth in this section shall vest upon completion of five (5) years of service notwithstanding age. Any participant who commenced employment in the police or fire departments prior to June 1, 2006, withdrawing from service after twenty (20) years of service, and prior to age fifty (50), shall have a vested right in the pension which he can exercise on or after age fifty (50), according to the provisions of this section as to the amount of pension. Any participant who commenced employment in the police or fire departments on or after June 1, 2006, withdrawing from service after twenty-five (25) years or more shall have a vested right in the pension which he can exercise after age fifty-five (55), according to the provisions of this section as to the amount of pension. Any participant withdrawing from service after five (5) years of service, and, in the case of a participant who commenced employment in the police or fire departments prior to June 1, 2006, with less than twenty (20) years of service, or, in the case of a participant who commenced employment in the police or fire departments on or after June 1, 2006, with less than twenty-five (25) years of service, shall have a vested right in the pension which he can exercise at age 60, according to the provisions of this section as to the amount of pension.

(d) The increase in benefits shall apply only to those participants who retire after th effective date of this ordinance. A participant at the time of the passage of th ordinance who earned pension benefits at the rate of two percent (2%) per year prior to July 15, 1991, or who earned pension benefits at the rate of two and one-sixth percent (2 1/6%) per year from July 15, 1991 to July 11, 1992, or who earned pension benefits at the rate of two and one-third percent (2 1/3%) per year from July 11, 1992 to July 10, 1993, or who earned pension benefits at the rate of two and one-half percent (2½%) per year from July 11, 1993 to May 20, 2000, shall be deemed not to have a vested right to be paid at the higher rate as set forth in Section 2-465 for those years of service prior to the effective date of this ordinance until the employee retires. Nothing contained herein shall be construed to limit the authority of the City Council to make future changes to the plan.

Sec. 2-466. Early service retirement.

(a) Any participant who commenced employment in the police or fire departments prior to June 1, 2006, in service and having more than five years of service but less than twenty (20) years of service in his department or in both departments, and having reached the age of fifty-five (55), or any participant who commenced employment in the police or fire departments on or after June 1, 2006, in service and having five (5) years of service with less than twenty-five (25) years r service and having reached the age of fifty-five (55) but being less than sixty (6U

years of age, may file with the board of trustees an application for early service retirement pension setting forth a time not less than thirty (30) days and not more than ninety (90) days after the filing of the application at which he wishes to be retired; and, though his services have been discontinued during such period of notification, if found entitled to retirement under the terms of this division, he shall be permitted to retire by the board of trustees as of the time specified in his application and shall be paid for life out of the retirement fund at a rate calculated in the same manner as the normal service retirement benefit under Section 2-465 (based on average annual earnings and service as of early retirement), but reduced by one two-hundredth (1/200) for each month by which the date of commencement of benefits precedes the date under which normal service retirement benefits would commence under Section 2-465. The participant shall also be entitled under the terms specified in Section 2-468 or Section 2-469 to the annual pension adjustments provided therein according to the terms of such section. With respect to participants commencing employment prior to January 1, 2005, if such a participant who has twenty (20) or more years of service becomes eligible and commences receiving a pension under Section 2-473 or 2-474 prior to his service retirement date, the participant shall not receive a benefit that is less than that which he would have received had he been able to exercise his rights under this section to receive a service retirement benefit. The minimum pension amount set out in Section 2-467 shall not apply to limit the application of the early service retirement reduction factor set out in this subsection.

(b) Any participant who commenced employment in the police or fire departments prior to June 1, 2006, withdrawing from service after five (5) years of service with less than twenty (20) years of service and prior to age fifty-five (55) shall have a vested right in the pension benefits as set forth in Subsection (a) of this section which he can exercise on or after age fifty-five (55) according to the provisions of Subsection (a) of this section as to the amount of pension. Any participant who commenced employment in the police or fire departments on or after June 1, 2006, withdrawing from service after five (5) years of service with less than twenty-five (25) years of service and prior to age fifty-five (55) shall have a vested right in the pension benefits as set forth in Subsection (a) of this Section which he can exercise on or after age fifty-five (55) according to the provisions of Subsection (a) of this Section as to the amount of pension.

Sec. 2-467. Minimum pension for retirees and surviving spouses.

Notwithstanding any other provision of this Code to the contrary, any participant entitled to a pension under this division who has retired prior to the effective date of the ordinance from which this section is derived shall be paid a non-duty disability pension

which is not less than Five Hundred Twenty-Four Dollars ($524.00) per month or not less than Seven Hundred Fifty Dollars ($750.00) per month for any duty disability or normal service retirement pension. The minimum pension for a surviving spouse of such participant shall be not less than Five Hundred Twenty-Four Dollars ($524.00) per month. Effective with the pension payment for August, 2002, and thereafter, the minimum pension payment for any eligible current or future surviving spouse of a participant or retired participant in the case of a duty or non-duty connected death under Sections 2-478 or 2-479 shall be not less than One Thousand Dollars ($1,000.00) per month. The minimum pension payment set forth in this section is intended to offset the effect of economic inflation and shall not be construed to limit the application of any adjustment factor, whether resulting in an increase or a decrease in the benefit amount, authorized by any provision of this division.

Sec. 2-468. Cost of living benefits for pensions authorized prior to August 8, 1983.

(a) In order to provide appropriate and desirable cost of living benefits to those persons receiving pensions under the retirement plan authorized prior to August 8, 1983, each pension authorized prior to August 8, 1983, is hereby adjusted so that each recipient's monthly pension payment shall be, as of the month of January 1985, either Two Hundred Fifty Dollars ($250.00) or that monthly payment amount which each would have received in January 1985 if since the time each recipient's pension payment was authorized it had been affected by the provisions contained in Section 2-469, whichever amount shall be greater; except the payment for surviving children of deceased members shall not be subject to the minimum Two Hundred Fifty Dollar ($250.00) payment.

(b) In addition, each such pension shall be affected hereafter by the provisions of Section 2-469; except the requirement of Section 2-469(a)(1) is waived for each such pension in the year 1985 only.

(c) As used in this Section or Sections 2-469 and 2-470, a particular pension for a particular recipient was "authorized" when approved for payment by the board of trustees for the retirement fund.

Sec. 2-469. Cost of living benefits for pensions authorized on or after August 8, 1983.

(a) After any pension payment shall commence to any person under the provisions of this division, it shall, unless otherwise provided, be increased with the payment due in each July of each year by a factor of 3.0 percent over the amount paid in the month of June immediately preceding, provided that:

(1) The particular pension payment has been paid at least twelve (12) consecutive months prior to the July change;

(2) If the pension payment is made under Section 2-465, or Section 2-479 as a non-duty death survivor benefit, the retired participant must be at least of the age of fifty-six (56), or in the case of a payment under said Section 2-479, the participant would have reached the age of fifty-six (56), in the calendar year when the change is to occur;

(3) If the pension payment is paid under Section 2-473, relating to non-duty disability pensions, Section 2-474, pertaining to duty disability, or Section 2-478 as a line of duty death survivor benefit, the member receiving the duty or non-duty related disability pension or line of duty death survivor benefit shall receive the 3.0 percent as provided for in this section without regard to age; and

(4) In applying the 3.0 percent factor to pensions of surviving spouses and surviving children, the 3.0 percent shall be applied and calculated separately upon the payment authorized for the surviving spouse and for each minor child.

(b) No maximum limitation of pension amount set forth in any other section of this division, except for the provisions contained in Subsection (c) below, shall be construed to prohibit or limit in any way the application of the 3.0 percent adjustment factor authorized in this section. The factor is intended to assist in offsetting the effect of economic inflation upon the pensions provided by this division.

(c) With respect to participants who commenced employment in the police or fire departments on or after June 1, 2006, no such automatic three percent (3%) factor shall be paid. Provided that; the Board may in its discretion authorize the payment of an annual additional factor for such participants who meet the requirements set out in the preceding Subsection (a) above, in an amount as may be determined by the Board but not to exceed three percent (3%), if, for any such twelve-month period commencing July 1 in which such an increase is authorized, as of that commencement date:

(1) based upon the latest actuarial study completed prior to the proposed July 1 commencement date, the Fund's invested assets have cumulatively earned for the immediately preceding twelve-month period reported on in the study a rate of return net of fees equal to or greater than the actuarially

assumed rate of return approved by the Board for the Fund's invested assets; and

(2) based upon the latest actuarial study completed prior to the proposed July 1 commencement date, and taking into account the adjustment described in Subsection (c)(3) below, the Fund is actuarially determined to be seventy-five percent (75%) or more funded; or, if the Fund is actuarially determined to be less than seventy-five percent (75%) funded, the funded ratio of the Plan has moved in a positive direction for each of three (3) consecutive fiscal years immediately prior to any such July 1 commencement date.

(3) In calculating the annual funded ratio described in Subsection (c)(2) above, the said funded ratio shall be adjusted by the amount of the City's net pension obligation determined from the latest actuarial study by adding such amount to the asset value in the ratio formula.

(4) However, notwithstanding any of the above provisions of Subsection (c)(1), (c)(2), and (c)(3) no such factor shall be paid if as of such July 1 commencement date the Fund is actuarially determined to be less than sixty percent (60%) funded.

Sec. 2-470. Cost of living benefits with regard to certain surviving spouses and surviving children.

Whenever there shall be a surviving spouse or surviving child or children of a participant who had previously retired and had drawn pension payments from the system, the basic calculation made under other provisions of this division of the amount payable to the surviving spouse or surviving child or children shall be modified in order to provide for the effects of the cost of living as provided by Subsection (1) or (2) of this section as follows:

(1) If the deceased spouse's or parent's pension payments were authorized after August 8, 1983, increase the value of the basic monthly pension payment by three percent (3%) compounded for each increase of three percent (3%) which had been applied to the monthly pension payment of the deceased spouse or parent; or

(2) If the deceased spouse's or parent's pension payment was authorized before August 8, 1983, increase the value of the basic monthly pension payment: first, by the same percentage that the deceased spouse's or parent's monthly pension payment was increased by the provisions Section 2-468 as of January 1985 as compared to December 1984, an

second, by increasing this new amount by three percent (3%) compounded for each increase of three percent (3%) which had been applied to the January 1985 monthly pension payment of the deceased spouse or parent.

Sec. 2-471. Repealed by G.O. 5435, December 13, 2004.

Sec. 2-472. Compulsory retirement at age 60.

Any participant having twenty (20) years or more service in the retirement system, and who has attained or attains the age of sixty (60) years, shall be retired forthwith by the board, except such a participant who qualifies under the terms of this division, in which case he shall be allowed to complete his twenty (20) years, regardless of his retirement age. On the request of the chief officer of his department, the board may permit such a participant who has been in the service twenty (20) years and who has attained the age of sixty (60) years to remain in the service for a period to be determined by the board; provided that such participant must be in good health and there must be a case of emergency. On such retirement, the participant shall be paid out of the retirement fund the benefit provided for voluntary retirement of other participants.

Sec. 2-473. Non-duty disability pension.

(a) Any participant having at least three (3) years of service who disabled from non-duty causes shall be entitled to a non-duty disability pension. This pension shall be payable during the lifetime of the member, provided the disability, as defined in Section 2-441, continues. For participants who have retired under this section prior to January 1, 2005, the rate of pension shall be 1.75 percent of average salary for each year of service. For participants who are current employees of the police or fire departments on and before January 1, 2005, the rate of pension shall be equal to seven-eighths (7/8) of the percentage multiplier rate for the normal service retirement benefit in effect at the time of the granting of the non-duty disability pension, including the additional three-tenths (0.3%) percent multiplier amount referenced in Section 2-455(d), times the as defined in Section 2-464, for each year of service. In either case, the benefit amount shall be subject to a minimum benefit of twenty-five percent (25%) of average salary and a maximum benefit of fifty percent (50%) of average salary.

(b) With respect to any participant commencing employment on or after (the effective date of the ordinance amending this section), such participant having at least five (5) years of service who becomes totally and permanently disabled from non-

duty causes shall be entitled to a non-duty disability pension. This pension shall be payable during the lifetime of the participant, provided the disability, as defined in Section 2-441, continues.

The pension under this Subsection (b) shall be equal to seven-eighths (7/8) of the percentage multiplier rate for the normal service retirement benefit in effect at the time of the granting of the non-duty disability pension, including the additional three-tenths percent (0.3%) multiplier amount referenced in Section 2-455(d), times the average salary, as defined in Section 2-464, for each year of service, subject to a minimum benefit of twenty-five percent (25%) of average salary and a maximum benefit of fifty percent (50%) of average salary.

(c) With respect to any participant commencing employment on or after June 1, 2006, said participant's entitlement to a non-duty disability pension shall be as described in Subsection (b) above, except that the pension benefit for such participant shall be equal to seven-eighths (7/8) of the percentage multiplier rate for the normal service retirement benefit for such a participant in effect at the time of the granting of the non-duty disability pension, times the average salary, as defined in Section 2-464 for such participant, for each year of service, subject to a minimum benefit of twenty-five percent (25%) of average salary and a maximum benefit of fifty percent (50%) of average salary.

(d) Payments under this section shall be subject to offset by any amounts payable by the city under any plan of workmen's compensation established by the laws of the state.

Sec. 2-474. Duty disability pension.

(a) Any participant, irrespective of length of service, who becomes disabled as the direct result of occupational duties, including but not limited to accidents and or hazards peculiar to the employment, shall be entitled to a duty disability pension. Pension credit shall be granted in such a case during disability towards the service retirement pension and the survivors' pension.

(b) The duty disability pension shall be payable during the lifetime of the participant, if the disability continues for that period of time. The rate of pension for duty disability shall be sixty-six and two-thirds percent (66 2/3%) of the rate of salary of the participant in effect on the date of disability.

(c) Payments under this section shall be subject to offset by any amounts payable by the city under any plan of workmen's compensation established by the laws of the state.

(d) With respect to participants who commenced employment in the police or fire departments on or after June 1, 2006, and become disabled pursuant to the provisions of Subsection (a) above, said participants shall be evaluated by the medical board as to the degree and extent of their disabling condition in terms of the permanent partial impairment to the body as a whole, using criteria for injuries and conditions compensable under the workers compensation law, Chapter 287, RSMo. Participants with a degree of permanent partial impairment caused by their duty-related disabling condition determined by the Board after review of the medical information to be twenty-five percent (25%) or more of the body as a whole shall receive a rate of pension for such duty disability in the amount of sixty-six and two-thirds percent (66 2/3%) of the rate of salary of the participant in effect on the date of disability. Participants with a degree of such permanent partial impairment caused by their duty-related disabling condition determined by the Board after review of the medical information to be less than twenty-five percent (25%) of the body as a whole shall receive a rate of pension for such duty disability in the amount of fifty percent (50%) of the rate of salary of the participant in effect on the date of disability.

Sec. 2-475. Annual medical examination of persons receiving disability pension.

Once each year following the retirement of a participant on a disability pension, as provided in Section 2-473 or 2-474, the board may require any such participant who has not attained the age of fifty (50) years, or, for participants commencing employment on or after January 1, 2005, on such a disability pension, who have not attained eligibility for a normal service retirement benefit, to undergo a medical examination at a place designated by the medical group. Such examination shall be made by the medical group or, in special cases, by an additional physician designated by the board. If two (2) or more of the doctors of the medical group shall certify to the board that the disability of the beneficiary has terminated, the board shall take such disability beneficiary off the disability pension and thereafter pay him no longer out of the retirement fund. Should any disability beneficiary refuse or fail to submit to such examination, his pension allowance shall be discontinued until the withdrawal of such refusal; and should his refusal or failure continue for over one (1) year, all rights in and to his retirement, including his disability pension, shall be revoked by the board.

Sec. 2-476. Cessation of disability pension upon return of beneficiary to service; credit for service while on pension.

Should a disability beneficiary who has not reached the age of fifty (50) years or, for a participant commencing employment on or after January 1, 2005, receiving such disability benefits who has not reached eligibility for a normal service retirement benefit, be found to be again able to carry out the performance of his duties and be restored to

active service, his disability pension shall cease; and he shall again become an employee of the police department or fire department; and he shall contribute thereafter at the same rate he paid prior to his disability; or, for such participants commencing employment on or after January 1, 2005, at the current rate in effect at the time of his reinstatement, and upon his subsequent retirement, he shall be credited with all his service as an employee and for the time he was a disability beneficiary. Provided that, such participant return any contribution previously paid him from the retirement plan. The contribution may be paid back in full within ninety (90) days after such restoration of employment without interest, or in installment payments over a period of time not to exceed two (2) years from such restoration of employment, with interest upon the remaining balance at the actuarially established assumed rate of return upon the fund's investments, until fully paid. If the contribution is not fully repaid as provided above, then the returning participant shall not be entitled to any service credit for his prior employment time, and any partial repayment of his contribution shall be refunded to him, including any interest paid by the participant.

Sec. 2-477 Reduction of disability benefits when beneficiary is gainfully employed.

If any member of the police department or fire department in receipt of a disabilit pension, whether for duty or non-duty causes, resumes any type of part-time or regula gainful employment, and his earnings therefrom, together with his pension exceed, at the date of his earnings, the salary then being paid for the same type of job which he held at the time his disability pension began, shall have the disability pension received by him reduced to the extent of such excess during the term of such earnings, and such pension shall be resumed when such earnings no longer cause an excess.

Sec. 2-478. Survivors' pension in cases of duty-connected death.

A pension equal to fifty percent (50%) of the salary of the participant in effect at the date of death shall be payable to a surviving spouse of a participant whose death occurs as the direct result of the performance of an act of duty. If minor children under the age of eighteen (18) years also survive the participant, additional allowance shall be made on account of each child, equal to ten percent (10%) of final salary, subject to a maximum payment to a surviving spouse and children equal to seventy-five percent (75%) of final salary. If no spouse survives the participant, the allowance for each minor child shall be fifteen percent (15%) of final salary, subject to a maximum payment to all children combined equal to fifty percent (50%) of such salary. Payments on account of minor children shall terminate upon their death or the end of their status as minor children, as defined in the ordinances governing this plan. Should a minor child's attendance at a school or institution as described in the minor child definition in th

ordinances governing the plan be interrupted for purposes of a military draft or extended illness of the child, then the interruption in attendance shall not serve to disqualify the child from receiving the pension upon readmission to such institution or school. Pension payments under this section shall be subject to offset by any amounts payable by the city under any plan of workmen's compensation established by the laws of the state.

Sec. 2-479. Survivors' pension in cases of non-duty-connected death.

(a) Upon the death of any participant, from any cause other than duty-connected causes, occurring while in service or after retirement, if the participant has rendered at least five (5) years of service, his surviving spouse shall be entitled to a pension equal to twenty-five percent (25%) of the participant's average salary, increased one and one-eighth (1 1/8) percentage point for each year of service above five (5) years, subject to a maximum of fifty percent (50%) of his average salary. If a minor child exists, the pension shall be increased ten percent (10%) of the participant's average salary for each minor child, subject to a combined payment to the surviving spouse and children of sixty percent (60%) of such average salary. Provided that, for participants commencing employment on or after January 1, 2005, the surviving spouse benefit for such participants shall in no case be greater than the amount of any retirement benefit the participant may have been receiving at the time of death. In order that a surviving spouse may qualify for the pension, marriage to the participant must have been in effect at least one (1) year prior to the date of death of the participant. Pension payments under this section shall be subject to offset by any amounts payable by the city under any plan of workmen's compensation established by the laws of the state.

(b) If the surviving spouse dies after surviving the participant, and minor children exist, the payment to a minor child shall be fifteen percent (15%) of the participant's average salary, subject to a limitation on combined payments to all children of fifty percent (50%) of such average salary. The pension payments on account of a minor child shall terminate when the child dies or upon the end of the child's status as a minor child, as defined in the ordinances governing this plan, Should attendance at a school or institution as described in the minor child definition in the ordinances governing the plan be interrupted for purposes of a military draft or extended illness of the child, then the interruption in attendance shall not serve to disqualify the child from receiving the pension upon readmission to such institution or school.

(c) With respect to any surviving spouse benefit payable under this section, or any minor child benefit payable under this section, and notwithstanding the minimum retirement benefit provisions contained in Section 2-467, in the event the

deceased participant of the surviving spouse or minor child at the time of his death was receiving an early service retirement benefit under Section 2-466, any such surviving spouse and/or minor child benefit payable under this section shall be reduced by 1/200 for each month by which the date of commencement of benefits precedes the date under which normal service retirement benefits would have commenced for the deceased participant under Section 2-465.

Sec. 2-480. Assignment or garnishment of benefits.

All pensions, refunds or death benefits provided by the retirement fund, whether before or after ordered paid by the board, shall not be assignable or subject to counterclaim, recoupment or setoff, except as provided in this division, nor shall they be subject to assessment, garnishment, execution, injunction or any other decree, order, process or proceeding in any court for the payment of any debt of any beneficiary, and the sum shall be held and distributed for purpose of this division and for no other purpose whatever.

Sec. 2-481. Appropriation of necessary funds from retirement fund.

The board shall present properly authenticated documentation to the proper ci officers, who shall disburse the necessary funds out of the retirement fund.

Sec. 2-482. Falsifying records; false statements.

(a) No person shall knowingly or willfully make any false statement in regard to applying for or securing a pension under the retirement fund or shall falsify or permit to be falsified any record of such retirement system in any attempt to defraud such retirement system. Any person found guilty of violating this section shall, in addition to any penalty imposed under Section 1-7, have all his rights, interests and privileges under the retirement system canceled and revoked.

(b) In addition to the above, with respect to participants who commenced employment in the police or fire departments on or after June 1, 2006, the following provisions shall apply to said participants' eligibility for benefits under the Retirement Plan:

1. Any participant who is convicted of any of the following offenses committed during their employment with the City, or whose employment is terminated by reason of his admitted commission, aid or abetment of any of the following specified offenses, shall forfeit all rights and benefits und

the Retirement System, except for the return of his accumulated employee contributions, but without interest, as of the date of termination.

Specified offenses are as follows:

A. The committing, aiding or abetting of an embezzlement of public funds; or,
B. The committing, aiding or abetting of any theft by a public officer or public employee from their public employer; or,
C. Bribery in connection with the employment of a public officer or employee.

2. Conviction shall be defined for purposes of this section as an adjudication of guilt by a court of competent jurisdiction, a jury verdict of guilty, a plea of guilty, trial on the record with a finding of guilt by the court, plea of no contest to the charge, or an Alford plea with a finding of guilt by the court; whether or not a sentence or other punishment or sanction following the said plea, finding of guilt, or adjudication of guilt was suspended or imposed, including an imposition of sentence with the execution of such sentence suspended in whole or part by the court.

3. Offense shall be defined for purposes of this section as the breach or violation of any federal statute or any statute of any state punishable as either a felony or a misdemeanor under the respective federal or state laws.

4. Court shall be defined as any state or federal court of competent jurisdiction which is exercising its jurisdiction to consider a proceeding involving the alleged commission of a specified offense.

5. Prior to forfeiture, the Board shall provide advance notice to the participant whose benefits are being considered for forfeiture, and shall allow the participant to present his position regarding the proposed forfeiture at a meeting before the Board. The participant shall be afforded the right to have an attorney present at this meeting. Any decision by the Board forfeiting the participant's benefits shall be subject to appeal by the affected participant and review under the appeal and hearing procedures contained in Section 2-449. If the affected participant wishes to appeal, he shall initiate the appeal and formal hearing process by filing such a request for hearing in writing with the Board President or Secretary, within ten (10) days following the effective date of any such decision of forfeiture. In the event of such appeal, the hearing officer shall hear and decide the issue as provided under Section 2-449(c), with the Board to review such decision and issue a final decision, as set out in Sections 2-449(c), (d) and

(e). Provided that, in the event the Springfield Merit System Rules governing appeals from employee disciplinary action may be applicable to such an action, any final decision regarding the termination from employment of a participant for the reasons set out in Subsection (b)(1) above, either not appealed under the Springfield Merit System Rules governing appeals from employee disciplinary action, or a final decision following such a disciplinary action appeal process, shall be final and binding upon the question of the causation of the participant's termination of employment for purposes of this Subsection (b).

6. Any participant who has received benefits from the System in excess of his accumulated contributions, without interest, after the participant's rights were forfeited, shall be required to pay back to the Fund the amount of the benefits received in excess of his accumulated contributions without interest. The Board may implement all legal action necessary to recover such funds.

Sec. 2-483. Repealed by G.O. 5435, December 13, 2004.

City of Springfield
Police Officers and Fire Fighters' Retirement Fund

Actuarial Valuation as of June 30, 2008

Prepared October 2008

City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Introduction and Purpose

In this report, we present the results of the June 30, 2008 actuarial valuation for the City of Springfield Police Officers and Fire Fighters' Retirement Fund. The report has been prepared at the request of the Fund's Board for the sole use of the Board and the City of Springfield as the contributing plan sponsor.

PURPOSES OF THE VALUATION

The actuarial valuation of the Plan is intended to accomplish several purposes:

- The determination of the recommended level of employer contributions for the City's July 1, 2009 – June 30, 2010 fiscal year;
- provide information required under applicable governmental accounting standards;
- assessment of the relative funded position of the plan on an ongoing basis, i.e., through a comparison of plan assets and projected plan liabilities.

This work product was prepared solely for the City of Springfield for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Actuarial Certification

In accordance with your request, we have completed an Actuarial Valuation of the City of Springfield Police Officers and Fire Fighters' Retirement Fund as of June 30, 2008 for determining contributions for the fiscal year ending June 30, 2010. The major findings of the valuation are contained in this report. This report reflects the benefit provisions and contribution rates in effect as of June 30, 2008.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest, and other factors for the Fund have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Fund and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Fund.

Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

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Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the Fund. Actuarial computations under GASB Statements No. 25 and 27 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Fund's funding requirements and goals, and of GASB Statements No. 25 and 27. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for the City of Springfield for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the City of Springfield's operations, and uses the City of Springfield's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We respectfully submit the following report, and we look forward to discussing it with you. We are consulting actuaries for Milliman, Inc. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Michael J. Zwiener, FSA
Consulting Actuary

Michael A. Sudduth, FSA
Actuary

MJZ/MAS/vlh

City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Discussion of Valuation Results

1. Contribution Recommendation and Plan Experience

The results of this valuation are used to determine recommended contribution rates to the Fund for the July 1, 2009-June 30, 2010 fiscal year. A comparison of recommended contribution rates (presented as a percentage of pay) for the current and immediately preceding valuations is shown below:

	Actuarial Valuation as of	
	June 30, 2007	June 30, 2008
Applies to Fiscal Year	07/01/08-06/30/09	07/01/09-06/30/10
Member Contribution Rate	11.26%	11.16%
City Contribution Rate	50.21%	52.36%
Total	61.47%	63.52%

There was an increase in the recommended contribution rate as compared to the preceding year. The primary reasons for the increase are actuarial losses due to poor investment return and the contribution shortfall. A reconciliation of the recommended contribution rate from last year to this year is provided below:

June 30, 2007 valuation		61.47%
Experience (Gain)/Loss		
Investments	0.88%	
Prior Year Contribution Shortfall	1.11%	
Salary Scale/Active Data	0.66%	
Average Salary at Retirement	0.25%	
Retirement	-0.09%	
Withdrawal	0.11%	
Disability	-0.11%	
Inactive Mortality	0.38%	
Other	-1.14%	
June 30, 2008 valuation		63.52%

Pension Plan Section 2-457 provides that the source of City contributions is a tax levy not to exceed 1.5 mill on all taxable property in the City. The statue further provides that the City may alternatively fund on an actuarial basis subject to the discretion of the City Council.

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2. Plan Assets

The market value of plan assets decreased from $138,890,814 at June 30, 2007 to $128,297,956 at June 30, 2008. A balance sheet and statement of income and disbursements are presented on pages 8 and 9, respectively. The net market rate of return was -4.7% for the period.

The actuarial value of assets increased from $138,890,814 at June 30, 2007 to $140,780,239 at June 30, 2008. The net actuarial rate of return for the period was 4.5% vs. the assumed rate of 7.5%.

3. Actuarial Assumptions, Methods and Plan Provisions

All actuarial assumptions, methods and plan provisions remained the same as the prior year. Descriptions of these can be found on pages 16-23. Assumptions were revised significantly with the June 30, 2004 actuarial valuation as a result of a comprehensive experience study.

4. Plan Population

The number of active participants decreased from 514 in the previous valuation to 505 in the current valuation. The number of retirees/beneficiaries increased from 449 to 462. The number of deferred vested participants increased from 6 to 7.

5. Funded Status

Methods of measuring a Plan's funded status are prescribed in paragraph 37 of Statement 25 of the Governmental Accounting Standards Board.

The GASB rules provide a couple of bases for assessing the funded status of the plan on an ongoing basis (see page 14 for detailed calculations). One basis is to divide the actuarial value of assets by the Accrued Liability. Page 14 shows this ratio to be 47.6% for the current year. An upward trend in this ratio over the years is considered a favorable indicator of the plan's funding progress. This ratio has decreased from almost 80% in the mid-1990's to 47.6% as of the current valuation date. This trend is primarily a result of consistent actuarial losses and contributions below the Annual Required Contribution for the past four years.

Another measure displayed on page 14 is the Unfunded Accrued Liability as a percentage of covered payroll. A downward trend in this ratio over time is considered favorable. The increase in the ratio this year is sizable and is also primarily due to actuarial losses and contributions below the recommended amount for the past four years.

The Fund experienced a non-zero Net Pension Obligation for the fourth consecutive year. The $10,225,065 is roughly equal to the amount by which actual employer contributions

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for the past four years were less than the Annual Required Contributions (ARC) under GASB 25/27.

The Plan's funded status is steadily eroding. The items below could help improve the Plan's funded status:

1. Increase contributions;
2. Improve investment returns;
3. Reduce future benefit liabilities, or
4. Some combination thereof.

The plan provision changes were a step in the right direction but since these changes only apply to post June 1, 2006 hires, it will take many years before these changes have an appreciable impact on the Plan's funding requirements. We will continue to monitor the effect of the new plan provisions on the funded status.

6. Missouri Pension Reform Legislation

In 2007 the Missouri legislature passed legislation aimed at the state's public pension plans. The legislation was based on private pension reform instituted at the federal level. Many of the provisions are applicable to the Springfield Police Officers and Fire Fighters' Retirement Fund, including:

- Plans less than 60% funded are required to have an accelerated contribution schedule prepared by their actuary. We have prepared this schedule, and it is presented on page 13.
- Plans less than 60% funded that have contributed less than 100% of the required contribution for 5 consecutive years and have a declining funded ratio shall have state funds withheld.
- Plans less than 80% are prohibited from providing benefit enhancements, and plans over 80% funded may only provide benefit increases that allow the funded ratio to remain over 75%.
- Benefit increases must be amortized over 20 years.
- Increased fiduciary responsibility and education requirements.

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Summary of Valuation Results

	Valuation Date June 30, 2005	Valuation Date June 30, 2006	Valuation Date June 30, 2007	Valuation Date June 30, 2008
Participant Counts				
Police				
Actives	338	318	310	299
Receiving Payments	193	196	201	215
Terminated Vesteds	4	4	5	6
Total	535	518	516	520
Fire				
Actives	210	202	204	206
Receiving Payments	241	245	248	247
Terminated Vesteds	1	1	1	1
Total	452	448	453	454
Market Value of Assets	126,845,429	129,093,308	138,890,814	128,297,956
Actuarial Value of Assets	130,496,305	133,494,217	138,890,814	140,780,239
Present Value of Future Benefits	312,156,369	326,126,907	338,482,187	355,905,093
Entry Age Normal Accrued Liability	250,849,523	263,813,767	277,861,524	295,579,925
Unfunded Entry Age Normal Accrued Liability	120,353,218	130,319,550	138,970,710	154,799,686
Recommended Contribution (Employer and Employee)	12,261,260	13,558,711	14,670,072	15,685,749
Covered Payroll	23,866,496	23,746,840	23,863,923	24,695,779
Recommended Contribution as a Percentage of Covered Payroll				
Member Portion	11.35%	11.35%	11.26%	11.16%
City Portion	40.02%	45.75%	50.21%	52.36%
Total	51.37%	57.10%	61.47%	63.52%
Present Value of Accrued Benefits	237,022,531	252,125,932	264,697,122	279,478,115

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Statement of Assets as of June 30, 2008

Assets	Market Value
1. Cash and Short-Term Investments	$962,180
2. Investments at Fair Market Value	127,135,328
3. Accrued Interest Receivable	212,817
4. Total Assets	128,310,325
Liabilities	
1. Accounts Payable	12,369
Net Assets	128,297,956

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Statement of Income and Disbursements

1. Market Value of Assets as of July 1, 2007	$138,890,814
2. Income:	
a. Employer Contributions	8,794,259
b. Employee Contributions	2,964,381
c. Other Contributions	51,893
d. Interest and Dividends	5,206
e. Realized/Unrealized Gain/(Loss)	(5,531,207)
f. Total Income	6,284,532
3. Expenses:	
a. Employee Benefit Distributions	14,195,490
b. Refund of Employee Contributions	1,823,838
c. Administrative Expenses	150,532
d. Investment Expenses	707,530
e. Total Expenses	16,877,390
4. Net Increase (Decrease) = (2f) - (3e)	(10,592,858)
5. Market Value of Assets as of June 30, 2008 = (1) + (4)	$128,297,956
6. Net Rate of Return	-4.7%

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Development of Actuarial Value of Assets

		Valuation Date June 30, 2008
1.	Actuarial Value Beginning of Year	$138,890,814
2.	Market Value End of Year	128,297,956
3.	Market Value Beginning of Year	138,890,814
4.	Non-Investment Cash Flows [1]	(4,208,795)
5.	Investment Income	
	a. Market Total: (2) - (3) - (4)	(6,384,063)
	b. Assumed Rate of Return	7.50%
	c. Amount for Immediate Recognition [2]	10,258,981
	d. Amount for Phased-In Recognition: (5a) - (5c)	(16,643,044)
6.	Phased-In Recognition of Investment Income	
	a. Current Year: .25 x (5d)	(4,160,761)
	b. First Prior Year	N/A
	c. Second Prior Year	N/A
	d. Third Prior Year	N/A
	e. Phased-In Investment Gain Recognized	(4,160,761)
7.	Funding Value End of Year: (1) + (4) + (5c) + (6e)	140,780,239
8.	Excess of Market Value over Funding Value: (2) - (7)	(12,482,283)
9.	Approximate Rate of Return on Actuarial Value	4.5%

[1] Contributions less benefit payments

[2] Assumed Rate times (3) + Assumed Rate/2 times (4)

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Actuarial Balance Sheet

The key elements of the actuarial funding process are illustrated in the Actuarial Balance Sheet. The format of the balance sheet captures the essential purpose of an actuarial cost method - the determination of assets sufficient to provide for pension benefits.

The Actuarial Present Value of Current and Prospective Plan Benefits is the liability that must be balanced by Current and Prospective assets. The Present Value of Future Normal Cost Contributions represents the prospective assets from contributions that will be made for costs allocated to the future.

	June 30, 2008
Liabilities	
1. Actuarial Present Value of Future Benefits	
a. Active Participants	$158,398,998
b. Terminated Vested Participants	430,432
c. Retired Participants	197,075,663
d. Total	355,905,093
Assets	
1. Current Valuation Assets	
a. Actuarial Value of Assets	140,780,239
2. Prospective Valuation Assets	
a. Unfunded Actuarial Liability	154,799,686
b. Present Value of Future Normal Cost Contributions	60,325,168
3. Total	355,905,093

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Development of Recommended Contribution

	June 30, 2008
1. Present Value of Future Benefits	
a. Active Participants	$158,398,998
b. Terminated Vested Participants	430,432
c. Retired Participants	197,075,663
d. Total	355,905,093
2. Present Value of Future Normal Costs	60,325,168
3. Actuarial Value of Assets	140,780,239
4. Entry Age Unfunded Accrued Liability: (1d) - (2) -(3)	154,799,686
5. Entry Age Normal Cost	7,100,113
6. Present Value of Future Earnings	223,330,615
7. Payroll	24,695,779
8. Amortization Payment (30 Years in 2008)	8,585,636
9. Recommended Contribution: (5) + (8)	15,685,749
10. Recommended Contribution as a Percentage of Payroll	
Normal Cost	28.75%
Amortization Payment	34.77%
Total	63.52%
11. Member Portion	11.16%
12. City Portion	52.36%

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Accelerated Contribution Schedule Required by Missouri Revised Statute 105.684

			Current Methodology Schedule			Accelerated Schedule		
Valuation Date	Fiscal Year End	Entry Age Normal Cost *	Expected Unfunded Accrued Liability	Amortization Payment	Recommended Contribution	Expected Unfunded Accrued Liability	Amortization Payment	Recommended Contribution
6/30/2008	6/30/2010	7,100,113	154,799,686	8,585,636	15,685,749	154,799,686	8,585,636	15,685,749
6/30/2009	6/30/2011	7,384,118	158,832,030	8,809,281	16,193,399	158,832,030	8,987,268	16,371,386
6/30/2010	6/30/2012	7,679,483	162,419,028	9,008,226	16,687,709	162,419,028	9,386,260	17,065,743
6/30/2011	6/30/2013	7,986,662	166,066,226	9,210,510	17,197,172	165,881,685	9,802,491	17,789,153
6/30/2012	6/30/2014	8,306,128	169,804,670	9,417,855	17,723,983	169,214,334	10,238,010	18,544,138
6/30/2013	6/30/2015	8,638,373	173,638,700	9,630,502	18,268,875	172,390,310	10,693,905	19,332,278
6/30/2014	6/30/2016	8,983,908	177,571,237	9,848,611	18,832,519	175,378,863	11,171,279	20,155,187
6/30/2015	6/30/2017	9,343,264	181,605,208	10,072,347	19,415,611	178,145,846	11,671,313	21,014,577
6/30/2016	6/30/2018	9,716,995	185,743,636	10,301,876	20,018,871	180,653,451	12,195,283	21,912,278
6/30/2017	6/30/2019	10,105,675	189,989,644	10,537,372	20,643,047	182,859,852	12,744,570	22,850,245
6/30/2018	6/30/2020	10,509,902	194,346,461	10,779,014	21,288,916	184,718,808	13,320,679	23,830,581
6/30/2019	6/30/2021	10,930,298	198,817,424	11,026,986	21,957,284	186,179,225	13,925,256	24,855,554
6/30/2020	6/30/2022	11,367,510	203,405,983	11,281,481	22,648,991	187,184,665	14,560,113	25,927,623
6/30/2021	6/30/2023	11,822,210	208,115,708	11,542,696	23,364,906	187,672,801	15,227,265	27,049,475
6/30/2022	6/30/2024	12,295,098	212,950,288	11,810,835	24,105,933	187,574,805	15,928,961	28,224,059

* The Entry Age Normal Cost is assumed to increase by 4% each year.

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

GASB 25 and 27 Disclosure Information

Schedule of Funding Progress

Date of Valuation	Actuarial Asset Value	Entry Age Normal Accrued Liability	Unfunded Accrued Liability (UAL)	Funded Ratio	Covered Payroll	UAL as a Percentage of Covered Payroll
June 30, 1994	81,735,481	96,269,283	14,533,802	84.9%	13,017,803	111.6%
June 30, 1995	87,113,039	111,261,338	24,148,299	78.3%	14,816,363	163.0%
June 30, 1996	92,005,064	120,470,362	28,465,298	76.4%	15,205,892	187.2%
June 30, 1997	98,471,537	129,131,343	30,659,806	76.3%	16,616,974	184.5%
June 30, 1998	107,955,272	136,533,065	28,577,793	79.1%	17,893,509	159.7%
June 30, 1999	116,424,865	150,252,731	33,827,866	77.5%	18,448,343	183.4%
June 30, 2000	124,461,663	155,782,143	31,320,480	79.9%	19,046,000	164.4%
June 30, 2001	129,479,927	168,344,798	38,864,871	76.9%	20,222,061	192.2%
June 30, 2002	129,854,216	179,125,555	49,271,339	72.5%	22,142,466	222.5%
June 30, 2003	129,848,871	195,974,774	66,125,903	66.3%	22,816,675	289.8%
June 30, 2004	130,419,433	238,755,058	108,335,625	54.6%	24,104,871	449.4%
June 30, 2005	130,496,305	250,849,523	120,353,218	52.0%	23,866,496	504.3%
June 30, 2006	133,494,217	263,813,767	130,319,550	50.6%	23,746,840	548.8%
June 30, 2007	138,890,814	277,861,524	138,970,710	50.0%	23,863,923	582.3%
June 30, 2008	140,780,239	295,579,925	154,799,686	47.6%	24,695,779	626.8%

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

GASB 25 and 27 Disclosure Information

Schedule of Employer Contributions and Development of Net Pension Obligation

Fiscal Year Ending	Annual Required Contribution (ARC)	Interest on NPO	ARC Adjustment	Amort. Factor	Annual Pension Cost	Actual Employer Contributions	Change in NPO	NPO Balance
(1)	(2)	(3)	(4)	(5)	(6)=(2)+(3)-(4)			
June 30, 1994	2,098,927	---	---	---	2,098,927	2,098,927	0	0
June 30, 1995	1,998,834	---	---	---	1,998,834	1,998,834	0	0
June 30, 1996	2,578,429	---	---	---	2,578,429	2,578,429	0	0
June 30, 1997	3,111,237	---	---	---	3,111,237	3,111,237	0	0
June 30, 1998	3,686,008	---	---	---	3,686,008	3,686,008	0	0
June 30, 1999	3,945,188	---	---	---	3,945,188	3,945,188	0	0
June 30, 2000	4,049,600	---	---	---	4,049,600	4,049,600	0	0
June 30, 2001	4,497,049	---	---	---	4,497,049	4,497,049	0	0
June 30, 2002	4,493,908	---	---	---	4,493,908	4,493,908	0	0
June 30, 2003	5,196,810	---	---	---	5,196,810	5,196,810	0	0
June 30, 2004	5,891,663	---	---	---	5,891,663	5,891,663	0	0
June 30, 2005	7,318,828	---	---	---	7,318,828	6,795,690	523,138	523,138
June 30, 2006	9,834,917	39,235	23,334	22.420	9,850,818	6,831,086	3,019,732	3,542,870
June 30, 2007	10,237,825	265,715	158,023	22.420	10,345,517	7,388,016	2,957,501	6,500,371
June 30, 2008	12,347,207	487,528	315,782	20.585	12,518,953	8,794,259	3,724,694	10,225,065

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Actuarial Methods

Following are brief descriptions of the actuarial cost and asset valuation methods used in the valuation.

Actuarial Cost Method

The Entry Age Normal Cost Method on an individual basis is used. Normal costs are computed as a level percentage of pay. The Unfunded Entry Age Accrued Liability is amortized over 30 years as a level percent of covered payroll. For this purpose, covered payroll is assumed to increase 4% per year.

Each year, the amortization payment on the Unfunded Entry Age Accrued Liability is recalculated, using a new 30 year amortization period.

Asset Valuation Method

An asset valuation method is used to help smooth short term fluctuations in market value.

The actuarial value of assets is equal to the prior years actuarial value of assets adjusted as follows:

1. increased with actual contributions for the year;
2. reduced by actual benefit payments and expenses for the year;
3. increased by investment income equal to the assumed rate of return multiplied by the beginning market value;
4. increased by phased in investment gains /(losses)

Each year, the amount of investment income to be phased in is equal to the excess of the plan's actual investment performance in excess of the amount credited under item 3) above. 25% of this amount plus 25% of the similar amounts calculated in each of the three preceding years are summed and recognized as the amount of phased-in gains recognized in the current year. There is no specific corridor around market value in which the resulting value must fall.

The actuarial value of assets was reset to the market value of assets for the June 30, 2007 valuation.

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Actuarial Assumptions

Following are the primary actuarial assumptions used in performing the valuation.

Interest Rate — 7.50% per annum, net of investment expenses.

Annual Pay Increases

Years of Service	Fire	Police
1	7.5%	7.5%
2	7.5%	7.5%
3	7.5%	7.5%
4	7.5%	7.5%
5	7.5%	7.5%
6	7.5%	7.5%
7	4.5%	7.5%
8	4.5%	7.5%
9	4.5%	4.5%
10	4.5%	4.5%
11	3.0%	4.5%
12	3.0%	4.5%
13 and later	3.0%	3.0%

Final Average Salary Adjustment — For Fire, the Average Salary at retirement is increased by a factor of 1.03.

For Police, the Average Salary at retirement is increased to reflect the assumption that each participant will have the maximum accrual paid out from their continuous operating holiday balance.

Mortality — 110% of 1983 Group Annuity Mortality Table rates for participants, beneficiaries and spouses. Disabled life mortality uses healthy mortality set forward ten years.

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Turnover

Separation from service for reasons other than disability, death, or age/service retirement. Rates at selected ages:

Age	Percentage Terminating in the next Year	
	Police	Fire
25	5.27%	1.75%
30	4.83%	1.61%
35	4.47%	1.49%
40	3.84%	1.28%
45	3.21%	1.07%
50	1.52%	0.51%
55	0.33%	0.11%

Forfeiture of City Provided Benefit

A vested member who terminates employment may elect to receive a return of his/her own contributions and forfeit any City-provided benefit. The portion of members making such election at selected ages:

Age	Percentage Electing ROC
35 and under	100%
36 - 54	50%
55 and over	0%

Rate of Disability

Probability of becoming disabled during the next year. Rates at selected ages:

Age	Percentage Becoming Disabled in the Next Year
20	0.24%
25	0.29%
30	0.33%
35	0.42%
40	0.59%
45	0.81%
50	1.54%
55	3.03%

100% of all disabilities are assumed to be duty related.

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Workers Compensation offset to the plan disability benefit is assumed to be zero.

Rates of Retirement

Probability of an eligible member retiring under the age/service provisions during the next year. Rates are as follows:

Age	Percentage Retiring In the Next Year
45	15%
46	15%
47	20%
48	20%
49	20%
50	30%
51	20%
52	20%
53	25%
54	35%
55	60%
56	60%
57	60%
58	60%
59	60%
60	100%

Dependent Information

For retired members, actual marital status and spouse birth date are used. For active members, 90% are assumed married, with males assumed three years older than their spouses. Members are assumed to have no dependent children.

Cost-of-Living Adjustment (COLA):

Employees hired before June 1, 2006: Automatic 3% COLA reflected.

Employees hired on or after June 1, 2006: No COLA assumed.

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Summary of Plan Provisions

A summary of the current primary provisions of the Fund are described below. A complete description of the provisions can be found in Sections 2-441 through 2-482 of the Springfield City Code as restated effective May 15, 2006.

Average Salary

Average of the highest three years salary within the last 10 Years of Service.

Employees hired before June 1, 2006: Salary for this calculation is equal to actual salary before deductions, plus payments for unused floating holidays, unused compensatory time, scheduled holidays, Kelly days, pin days and accrued vacation time.

Employees hired on or after June 1, 2006: Salary for this purpose is equal to actual salary before deductions paid for hours worked or amounts paid for leave time taken in lieu of hours worked within the said three-year period. Salary does not include payments for unused floating holidays, unused compensatory time, unused leave granted in lieu of scheduled holidays, unused Kelly days, unused pin days, unused accrued vacation time, vacation buy out amounts, or any other nonrecurring lump sum monetary amounts for unused leave time of any kind paid out at time of separation of employment.

Normal Retirement Age

Eligibility for unreduced benefits upon meeting any of the following:

Employees hired before June 1, 2006:

- Age 50 and 20 Years of Service,
- 25 Years of Service, or
- Age 60.

Employees hired on or after June 1, 2006:

- Age 55 and 25 Years of Service, or
- Age 60.

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Age/Service Benefit

Employees hired before June 1, 2006: A monthly benefit equal to 1/12 of Average Salary times 2.8% times Years of Service. The maximum benefit is 70% of Average Salary.

Employees hired on or after June 1, 2006: A monthly benefit equal to 1/12 of Average Salary times 2.5% times Years of Service. The maximum benefit is 75% of Average Salary.

Normal Form of Payment

The benefit is payable for the member's lifetime. If the member should predecrease his/her spouse, the spouse is entitled to a lifetime survivors benefit. The amount of the benefit is a percentage of the Average Salary. The percentage is equal to 25% plus 1-1/8% for each Year of Service over five years, not to exceed 50% in total.

Cost of Living Adjustment (COLA)

Employees hired before June 1, 2006: Every July 1st, the monthly pension is increased by 3% for the following groups of retirees provided pension payment has been paid at least 12 months prior to July 1:

- Age/service retirees age 56 or greater,
- Disability retirees of any age.

Employees hired on or after June 1, 2006: There is no automatic COLA. However, under certain conditions and at the Board's discretion, a COLA of no more than 3% may be granted to retirees who meet the above criteria.

Early Retirement Age

Eligibility for early retirement is satisfied upon attainment of age 55 and completion of five Years of Service.

Early Retirement Benefit

Determined using regular formula and reducing the result 1/200 for each month by which the benefit start date precedes age 60.

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Member Contributions

Employees hired before June 1, 2006: 11.35% of pay.

Employees hired on or after June 1, 2006: 8.50% of pay.

Duty Disability

All members are eligible.

Employees hired before June 1, 2006: A monthly benefit equal to 2/3 of the salary in effect at the time of retirement.

Employees hired on or after June 1, 2006: If the member is at least 25% disabled, the monthly benefit is equal to 2/3 of the salary in effect at the time of retirement.

If the member is less than 25% disabled, the monthly benefit is equal to 50% of the salary in effect at the time of retirement.

Non-Duty Disability

Employees hired on or before January 1, 2005: A monthly benefit equal to 2.45% of Average Salary times Years of Service. A member must have three Years of Service to be eligible.

Employees hired after January 1, 2005 and before June 1, 2006: A monthly benefit equal to 2.45% of Average Salary times Years of Service. A member must have five Years of Service to be eligible.

Employees hired on or after June 1, 2006: A monthly benefit equal to 2.1875% of Average Salary times Years of Service. A member must have five Years of Service to be eligible.

In all cases, the minimum/maximum benefits are 25%/50% of Average Salary.

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Duty Death in Service

All members are eligible. A monthly benefit to the spouse equal to 50% of salary in effect at time of death. Additional benefits to unmarried children under age 18, but total cannot exceed 75% of pre-death salary.

Non-Duty Death in Service

A member is eligible after completing five Years of Service. The benefit is 25% of Average Salary plus 1 1/8% of Average Salary for each Year of Service in excess of five, not to exceed 50%. Additional benefits to unmarried children under 18 but total benefit cannot exceed 60% of Average Salary.

Return of Contributions

Employees hired before June 1, 2006: Member contributions are returned to age/service retirees and disability retirees upon commencement of monthly benefits, without interest.

Vested members who terminate before eligible for retirement may elect to receive a return of their own contributions without interest. Election of this benefit results in a forfeiture of any City provided benefit.

Employees hired on or after June 1, 2006: Member contributions are not returned to retirees.

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Summary of Participant Data

	Police June 30, 2008	Fire June 30, 2008
1. Active Participants		
a. Count	299	206
b. Plan Compensation	14,670,317	10,025,462
c. Average Compensation	49,065	48,667
d. Average Age	36.8	39.5
e. Average Service	10.2	10.9
2. Retired Participants (including Beneficiaries)		
a. Count	215	247
b. Total Monthly Benefits	$581,192	$663,448
c. Average Monthly Benefits	$2,703	$2,686
d. Average Age at Onset of Disability Retirements	41.2	44.9
3. Terminated Vested Participants		
a. Count	6	1
b. Total Monthly Benefits	$5,027	$1,327
c. Average Monthly Benefits	$838	$1,327

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Retiree and Beneficiary Distributions

Fire
Distribution of Service Retirees

Age	Number	Total Monthly Pension	Average Monthly Pension
Under 45	0	$0	$0
45 – 49	1	4,578	4,578
50 – 54	10	32,656	3,266
55 – 59	23	87,372	3,799
60 – 64	29	90,652	3,126
65 – 69	35	99,908	2,855
70 – 74	15	43,419	2,895
75 – 79	17	43,989	2,588
80 +	11	21,616	1,965
Totals	141	$424,189	$3,008

Police
Distribution of Service Retirees

Age	Number	Total Monthly Pension	Average Monthly Pension
Under 45	0	$0	$0
45 – 49	7	28,559	4,080
50 – 54	16	62,305	3,894
55 – 59	26	83,400	3,208
60 – 64	27	82,669	3,062
65 – 69	20	53,121	2,656
70 – 74	18	45,459	2,525
75 – 79	6	13,539	2,256
80 +	0	0	0
Totals	120	$369,051	$3,075

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Retiree and Beneficiary Distributions

Fire
Distribution of Disability Retirees

Age	Number	Total Monthly Pension	Average Monthly Pension
Under 45	4	$10,727	$2,682
45 – 49	6	16,645	2,774
50 – 54	8	23,599	2,950
55 – 59	9	26,591	2,955
60 – 64	16	44,185	2,762
65 – 69	9	23,291	2,588
70 – 74	5	12,034	2,407
75 – 79	3	6,207	2,069
80 +	1	1,240	1,240
Totals	61	$164,519	$2,697

Police
Distribution of Disability Retirees

Age	Number	Total Monthly Pension	Average Monthly Pension
Under 45	9	$19,081	$2,120
45 – 49	15	40,565	2,704
50 – 54	10	27,508	2,751
55 – 59	9	24,857	2,762
60 – 64	8	19,133	2,392
65 – 69	4	10,053	2,513
70 – 74	3	8,612	2,871
75 – 79	2	5,122	2,561
80 +	0	0	0
Totals	60	$154,932	$2,582

This work product was prepared solely for the City of Springfield for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Retiree and Beneficiary Distributions

Fire
Distribution of Beneficiaries

Age	Number	Total Monthly Pension	Average Monthly Pension
Under 45	1	$617	$617
45 – 49	0	0	0
50 – 54	2	3,317	1,659
55 – 59	4	9,095	2,274
60 – 64	4	6,674	1,668
65 – 69	2	3,402	1,701
70 – 74	10	19,421	1,942
75 – 79	7	11,978	1,711
80 +	15	20,237	1,349
Totals	45	$74,740	$1,661

Police
Distribution of Beneficiaries

Age	Number	Total Monthly Pension	Average Monthly Pension
Under 45	3	$2,125	$708
45 – 49	1	2,054	2,054
50 – 54	2	5,293	2,646
55 – 59	1	1,759	1,759
60 – 64	5	8,170	1,634
65 – 69	5	7,861	1,572
70 – 74	5	7,176	1,435
75 – 79	5	7,794	1,559
80 +	8	14,976	1,872
Totals	35	$57,209	$1,635

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Distribution of Active Police Participants by Age and by Years of Service
(as of June 30, 2008)

	YEARS OF CREDITED SERVICE										
Attained Age	Under 1 No.	1 to 4 No.	5 to 9 No.	10 to 14 No.	15 to 19 No.	20 to 24 No.	25 to 29 No.	30 to 34 No.	35 to 39 No.	40 and up No.	Total
Under 25	0	7	0	0	0	0	0	0	0	0	7
25 to 29	1	36	11	0	0	0	0	0	0	0	48
30 to 34	0	8	55	11	0	0	0	0	0	0	74
35 to 39	0	7	30	35	2	0	0	0	0	0	74
40 to 44	0	1	4	20	17	1	0	0	0	0	43
45 to 49	0	0	4	9	13	10	0	0	0	0	36
50 to 54	0	0	0	2	6	1	0	0	0	0	9
55 to 59	0	0	0	1	4	1	0	0	0	0	6
60 to 64	0	0	0	1	0	0	0	0	0	1	2
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 and up	0	0	0	0	0	0	0	0	0	0	0
Total	1	59	104	79	42	13	0	0	0	1	299

This work product was prepared solely for the City of Springfield for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Distribution of Active Fire Participants by Age and by Years of Service
(as of June 30, 2008)

	YEARS OF CREDITED SERVICE										
Attained Age	Under 1 No.	1 to 4 No.	5 to 9 No.	10 to 14 No.	15 to 19 No.	20 to 24 No.	25 to 29 No.	30 to 34 No.	35 to 39 No.	40 and up No.	Total
Under 25	0	1	0	0	0	0	0	0	0	0	1
25 to 29	0	19	2	0	0	0	0	0	0	0	21
30 to 34	0	13	11	9	0	0	0	0	0	0	33
35 to 39	0	12	15	23	0	0	0	0	0	0	50
40 to 44	0	5	7	21	12	1	0	0	0	0	46
45 to 49	0	0	1	10	15	7	0	0	0	0	33
50 to 54	0	0	0	2	3	10	0	0	0	0	15
55 to 59	0	0	0	2	3	2	0	0	0	0	7
60 to 64	0	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 and up	0	0	0	0	0	0	0	0	0	0	0
Total	0	50	36	67	33	20	0	0	0	0	206

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City of Springfield
Police Officers and Fire Fighters' Retirement Fund

June 30, 2008 Actuarial Valuation

Summary of Changes in Participant Data

	Active Participants	Retired Participants	Terminated Vested Participants	Total
Count as of July 1, 2007	514	449	6	969
New Entrants	26	0	0	26
Age and Service Retirements	(13)	14	(1)	0
Duty Disability Retirements	(3)	3	0	0
Non-Duty Disability Retirements	(1)	1	0	0
Duty Related Deaths	0	0	0	0
Non-Duty Related Deaths	0	0	0	0
Vested Terminations - Received Refund	(13)	0	0	(13)
Vested Terminations - No Refund	(1)	0	1	0
Nonvested Terminations - Received Refund	(3)	0	0	(3)
Nonvested Terminations - No Refund	(1)	0	0	(1)
Deceased with Beneficiary	0	(6)	0	(6)
New Beneficiaries	0	6	0	6
Deceased without Beneficiary	0	(6)	0	(6)
Received Refund	0	0	0	0
Show-ups	0	0	1	1
Data Corrections	0	1	0	1
Total Changes	(9)	13	1	5
Count as of June 30, 2008	505	462	7	974

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CITY OF SPRINGFIELD, MISSOURI

POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT FUND

FINANCIAL STATEMENTS AND SUPPLEMENTAL INFORMATION

June 30, 2008

DAVIS, LYNN & MOOTS, P.C.
Certified Public Accountants

CITY OF SPRINGFIELD, MISSOURI

POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT FUND

FINANCIAL STATEMENTS AND SUPPLEMENTAL INFORMATION

June 30, 2008

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DAVIS, LYNN & MOOTS, P.C.
Certified Public Accountants

LARRY M. BROWN, CPA
LAWRENCE W. DAVIS, CPA
ANTHONY D. LYNN, CPA
RANDALL G. MOOTS, CPA
ANGELA M. PATRICK, CPA
ANDREW A. MARMOUGE[illegible]

3828 SOUTH AVENUE
SPRINGFIELD, MO 65807
(417) 882-0904
FAX (417) 882-4343
www.dlmcpa.com
e-mail: cpa@dlmcpa.com

INDEPENDENT AUDITORS' REPORT

The Board of Trustees
City of Springfield, Missouri
Police Officers' and Fire Fighters' Retirement Fund
Springfield, Missouri

We have audited the accompanying statement of plan net assets of the City of Springfield, Missouri (the City) Police Officers' and Fire Fighters' Retirement Fund (the Plan), a pension trust fund component unit of the City of Springfield, Missouri, as of June 30, 2008, and the related statement of changes in plan net assets for the year then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets of the Plan as of June 30, 2008, and the changes in plan net assets for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

In accordance with *Government Auditing Standards*, we have also issued our report dated September 26, 2008, on our consideration of the District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

The Board of Trustees
City of Springfield, Missouri
Police Officers' and Fire Fighters' Retirement Fund
Springfield, Missouri

Management's Discussion and Analysis on pages 6 through 10 is not a required part of the financial statements, but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the method of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

The schedules of funding progress, employer contributions, and actuarial valuation on pages 22, 23, and 24 are presented for additional analysis and are not a required part of the financial statements but are supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the schedules. However, we did not audit the information, and express no opinion on it.

Davis, Lynn & Moots, P.C.

DAVIS, LYNN & MOOTS, P.C.
September 26, 2008

MANAGEMENT'S DISCUSSION AND ANALYSIS

MANAGEMENT'S DISCUSSION AND ANALYSIS

We are pleased to present a narrative overview and analysis of the financial activities of the City of Springfield Police Officers' and Firefighters' Retirement System for the fiscal year ending June 30, 2008. We believe this information, in conjunction with the financial statements and the notes to the financial statements provides the reader with a clear assessment of the Plan's overall financial status.

FINANCIAL HIGHLIGHTS

- Plan net assets, which represent funds available to pay current and future benefits were $128.1 million as of the end of the fiscal year. This is a decrease of $10.8 million, or 8.0% from the prior year.

- Total Additions to Plan Net Assets, as reflected in the Statement of Changes in Plan Net Assets are $5.3 million. This is a decrease of $ 19.3 million from 2007. This decrease is primarily a result of a decrease in net investment income of $20.8 million and an increase in employer contributions of $1.4 million.

- Total deductions to Net Assets totaled $16.2 million, an 8.7% increase over last year. Retirement benefit payments totaled $14.2 million and refunds of employee contributions totaled $1.8 million.

- During the fiscal year the return on investments was a negative 4.8%, on a market value basis, net of fees.

- As of June 30, 2008 the funded status of the plan (the ratio of plan assets to plan liabilities) was 48%.

OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis is intended to help the reader understand the purpose of the key components within the financial statements of the City of Springfield Police Officers' and Firefighters' Retirement System. The financial statements are comprised of the following:

The Statement of Plan Net Assets presents assets and liabilities by major categories as of the end of the fiscal year. The difference between assets and liabilities is the net assets held in trust for pension payments. Over time, increases or decreases in net assets can be monitored to determine whether the Plan's financial condition is improving or deteriorating.

The Statement of Changes to Plan Net Assets provides information on the increases and decreases that caused the change in net assets during the fiscal year.

The Notes to the Basic Financial Statements are an integral part of the financial statements. The notes provide important detailed and background information that is essential to the full understanding of the data provided in the financial statements.

Required Supplementary Information contains information and supporting schedules pertaining to the Plan's actuarial methods and assumptions including data on the funded status of the plan. The Schedule of Funding Progress includes historical trend information about the actuarially funded status of the Plan, and the progress made in accumulation of sufficient assets to pay benefits when due. The Schedule of Employer Contributions provides historical information about the annual required contributions of the City of Springfield. Both of these schedules help promote understanding of the changes in the funded status of the plan over time.

FINANCIAL ANALYSIS

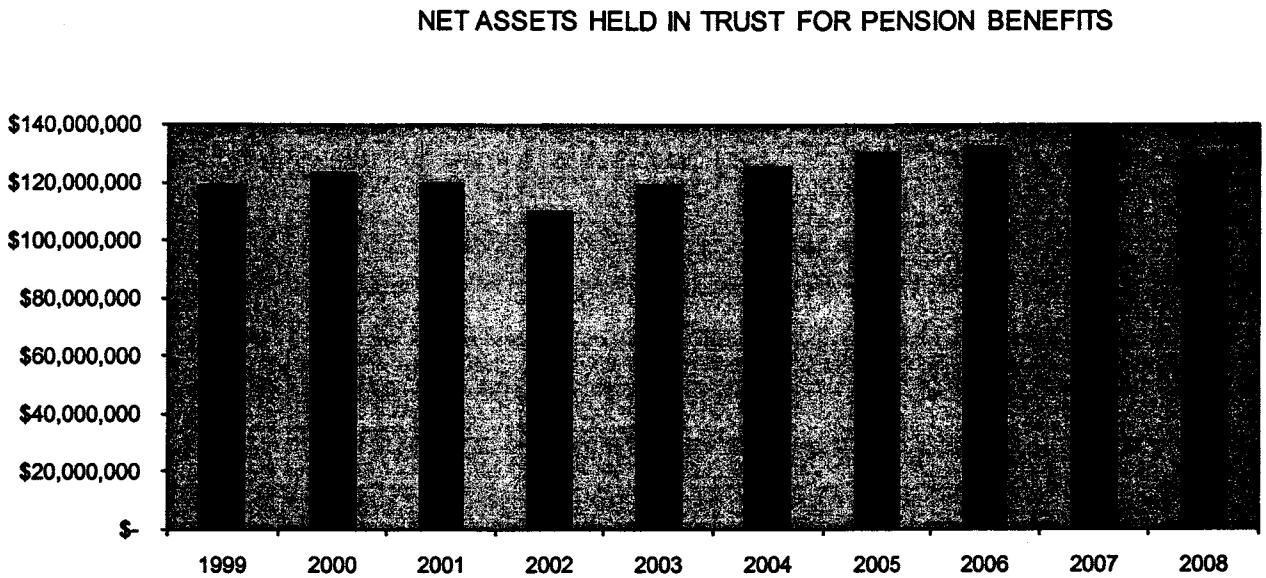
PLAN NET ASSETS

Table 1 is the condensed comparative Statement of Plan Net Assets for the fiscal years ended June 30, 2008 and June 30, 2007.

TABLE 1 – NET ASSETS

	6/30/2008	6/30/2007	Increase/ (Decrease)
ASSETS			
Cash and interest bearing deposits	$ 2,570,824	$ 226,015	$ 2,344,809
Investments	125,310,626	138,380,542	(13,069,916)
Other assets	216,061	308,676	(92,615)
TOTAL ASSETS	128,097,511	138,915,233	(10,817,722)
LIABILITIES			
Accounts payable and other liabilities	12,369	3,270	9,099
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	$ 128,085,142	$ 138,911,963	$ (10,826,821)

Plan net assets decreased $10.8 million or 7.8% over the prior fiscal year. The decrease is primarily a result of a decrease in the market value of assets.



DITIONS TO PLAN NET ASSETS

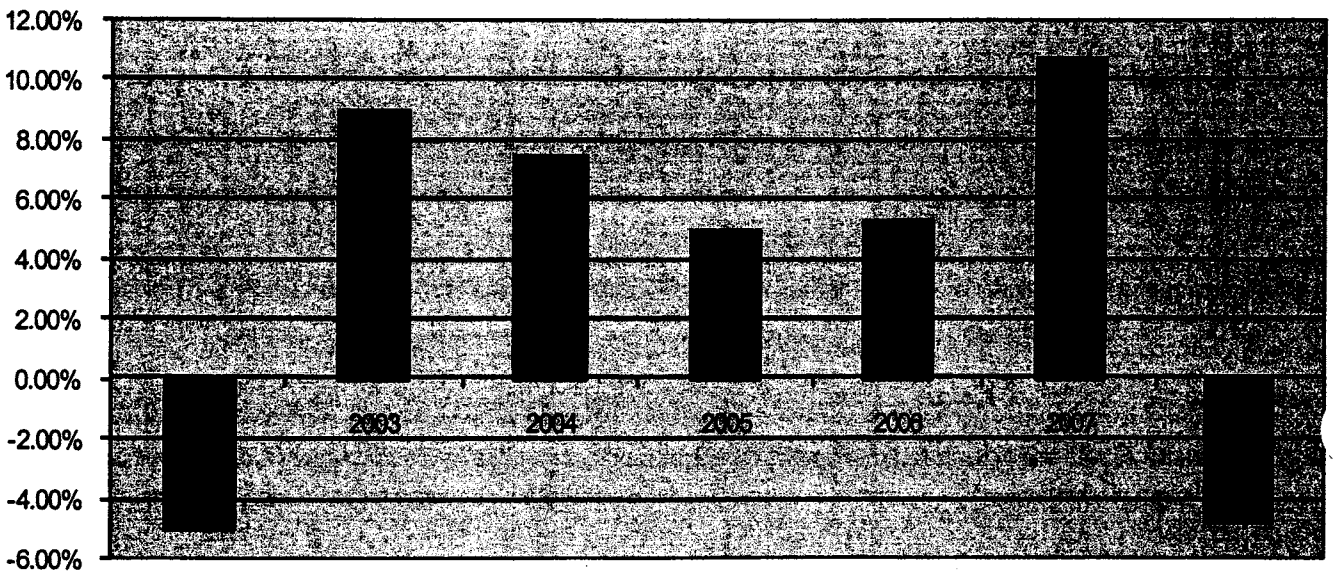
ble 2 is the condensed comparative Statement of Changes in Plan Net Assets for the fiscal years ending June 30, 2008 and June 30, 2007.

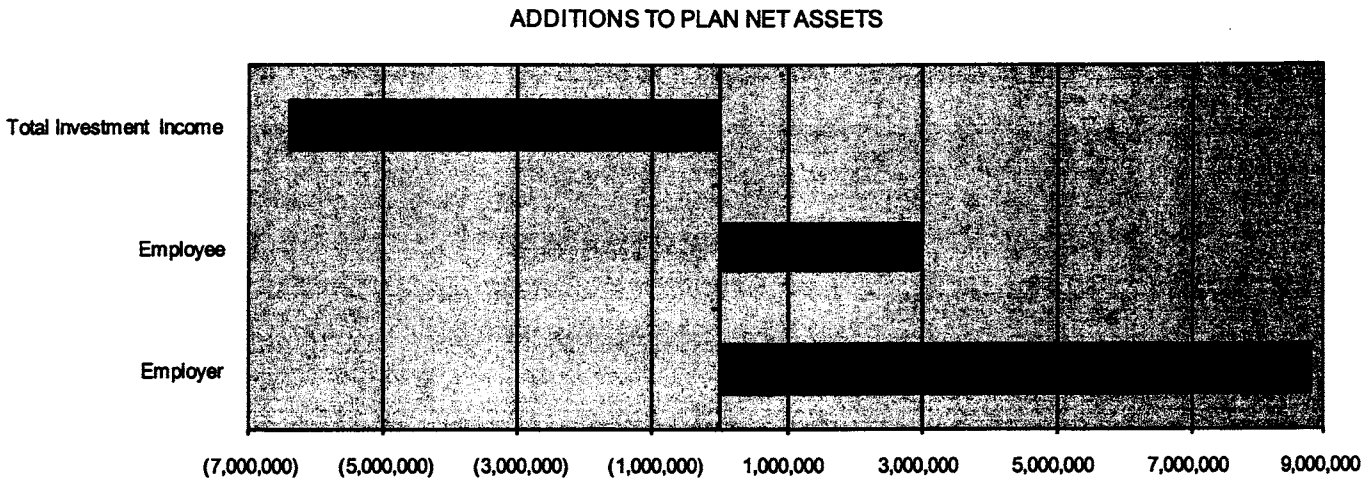
TABLE 2 – CHANGES IN PLAN NET ASSETS

	6/30/2008	6/30/2007	Increase/ (Decrease)
ADDITIONS			
Employer Contributions	$ 8,794,259	$ 7,388,016	$ 1,406,243
Member Contributions	2,964,383	2,888,469	75,914
Net Investment Income (Loss)	(6,415,598)	14,395,158	(20,810,756)
TOTAL ADDITIONS	5,343,044	24,671,643	(19,328,599)
DEDUCTIONS			
Benefit Payments	14,195,490	13,255,004	940,486
Pension Refunds	1,823,839	1,447,441	376,398
Administrative Expenses	150,536	150,613	(77)
TOTAL DEDUCTIONS	16,169,865	14,853,058	1,316,807
INCREASE (DECREASE) IN NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	$ (10,826,821)	$ 9,818,585	$ (20,645,406)

For the fiscal year ending June 30, 2008 contributions to the Plan net assets were $11.8 million. This is an increase of $1.5 million from the prior year. The increase is a result of employer contributions increasing $1.4 million. The return on investments, net of fees, was a negative 4.8% compared to 10.7% and 5.31% in 2007 and 2006 respectively.

NET INVESTMENT RETURNS





DEDUCTIONS TO NET PLAN ASSETS

ductions to net plan assets were $16.2 million. This is an increase of $1.3 million over the prior fiscal year. nsion benefits increased $940,486 as members received a 3% cost of living adjustment on July 1, 2007. Administrative expenses decreased $77 while pension contribution refunds increased $376,398.

Requests for Additional Information

This financial report is designed to provide a general overview of the City of Springfield Police Officers' and Firefighters' Retirement System to all parties with an interest, and to demonstrate accountability to the community. Questions regarding any information provided in this report or requests for additional financial information should be directed to Director of Finance, City of Springfield Finance Department, 840 Boonville Avenue, Springfield, Missouri 65802.

Mary Mannix Decker

Mary Mannix Decker
Director of Finance

FINANCIAL INFORMATION

CITY OF SPRINGFIELD, MISSOURI
POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT FUND
STATEMENT OF PLAN NET ASSETS
ne 30, 2008

ASSETS		
Investments		
Debt securities		$ 32,009,845
Equity securities		85,402,830
Government securities		7,897,951
	TOTAL INVESTMENTS	125,310,626
Cash and interest-bearing deposits		2,570,824
Accrued interest		216,061
	TOTAL ASSETS	128,097,511
LIABILITIES		
Accounts payable and other liabilities		12,369
	NET ASSETS	$ 128,085,142

See accompanying notes.

CITY OF SPRINGFIELD, MISSOURI
POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT FUND
STATEMENT OF CHANGES IN PLAN NET ASSETS
Year Ended June 30, 2008

ADDITIONS		
Employer contributions - plan 1		$ 8,264,640
Employer contributions - plan 2		529,619
Member contributions - plan 1		2,809,482
Member contributions - plan 2		154,901
	TOTAL CONTRIBUTIONS	11,758,642
Net investment income:		
Net depreciation of investments		(7,502,994)
Interest and dividend income		1,794,926
Investment expenses		(707,530)
	TOTAL INVESTMENT (LOSS)	(6,415,598)
	TOTAL ADDITIONS	5,343,044
DEDUCTIONS		
Benefit payments		14,195,490
Pension refunds		1,823,839
Administrative expenses		150,53[illegible]
	TOTAL DEDUCTIONS	16,169,865
	DECREASE IN NET ASSETS	(10,826,821)
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS, July 1, 2007		138,911,963
NET ASSET HELD IN TRUST FOR PENSION BENEFITS, June 30, 2008		$ 128,085,142

See accompanying notes.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The Plan's financial statements are prepared using the accrual basis of accounting. Plan participant contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits are recognized when due and payable under terms of the Plan.

Method Used to Value Investments

Investments are recorded at fair value, based on quoted market prices at the valuation date. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. There were no individual investments in excess of 5% of net assets as of June 30, 2008.

t Investment Income

Security transactions are accounted for on the date the securities are purchased or sold. Dividend income is recorded on the ex-dividend date. Income from other investments is recorded as earned on an accrual basis.

Risks and Uncertainties

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

NOTE B – CASH AND INVESTMENTS

The Trustees will recommend the appropriate assets types to City Council for their approval. The Board of Trustees may add, delete or change asset classes within those asset types at their discretion at any time within the parameters established by the City Council. In selecting asset classes, the Trustees will choose asset classes reasonably designed to further the purposes of the Plan, taking into account the risk of loss and opportunity for gain associated with the asset classes, the composition of the available asset classes with regard to the Plan's opportunity to meet its objectives without exceeding the risk tolerance permitted and still achieving diversification of the Plan's investment portfolio. Also, the Trustees will take into account the liquidity, current, and projected return with respect to the asset classes, relative to the objectives of the Plan.

NOTE B – CASH AND INVESTMENTS (continued)

The asset classes, target asset allocation and ranges to be used in the Plan are shown below. The Trustees may change the asset classes and target at any time within the parameters established by the City Council. All percentages are based on market values. The portfolios will be rebalanced any time they are not within the appropriate ranges. Each investment manager may hold cash under the guidelines set out below, but that cash shall be considered invested in the asset class assigned. The asset classes and targets established are as follows:

Asset Type and Class	Range	Target
Equities:	45% - 75%	
Large Cap		30.00%
Small Cap		10.00%
International Equities		15.00%
Emerging Markets		5.00%
Fixed Income:	25% - 40%	
Domestic		21.75%
International		10.75%
Alternatives:	0% - 15%	
Real Estate		7.50%
Hedge Funds		0.00%
Commodities		0.00%

At June 30, 2008, the bank balances of the Plan's deposits totaled $2,570,824. Of this amount $200,000 was covered by FDIC insurance and $2,370,824 was supported by collateral, held by banks in the Plan's name that do not hold the collateralized deposits.

The Plan's investment policies are governed by the City Charter and management policies. The Plan purchases investments from SEC-registered broker-dealers and banks. Plan investments also include investments in external investment pools and mutual funds that cannot be categorized because the entity is not issued securities but rather is a registered shareholder.

The Plan's investments at June 30, 2008 mature as follows:

NOTE B – CASH AND INVESTMENTS (continued)

		Investment Maturities			
		Less Than			More Than
Investment Type	Fair Value	1 Year	5 Years	10 Years	10 Years
U.S. Treasury Obligations	$ 7,289,615	$ -	$ 682,910	$ 710,251	$ 5,896,454
Domestic:					
Corporate Debt Obligations	15,601,661	717,913	3,899,952	5,094,637	5,889,159
Municipal Debt Obligations	608,336	-	113,961	391,043	103,332
Foreign:					
Corporate Debt Obligations	150,717	-	-	150,717	-
Index Funds:					
US Total Market Index SL Fund	46,098,980	46,098,980	-	-	-
Prudential - PRISA	12,317,651	12,317,651			
Pictet International Equity Fund	26,986,199	26,986,199	-	-	-
Brandywine International	16,257,467	16,257,467	-	-	-
TOTAL	$ 125,310,626	$ 102,378,210	$ 4,696,823	$ 6,346,648	$ 11,888,945

Interest Rate Risk: As a means of limiting its exposure to interest rate risk, the Plan diversifies its investments by security type and institution, and limits holdings in any one type of investment with any one issuer. The Plan coordinates its investment maturities to closely match cash flow needs.

Credit Risk: The Plan policy limits investments to those authorized by State statutes for purchase by life insurance or casualty companies in the state so that no more than two percent of the admitted assets of the system may be invested in the common stock of any one corporation. The Plan also limits the amount available for investment in small capital stocks.

Investment Type	Rating	Percentage
Domestic:		
Corporate Debt Obligations	BBB or higher	13%
Municipal Debt Obligations	AA or higher	1%
Foreign:		
Corporate Debt Obligations	BBB or higher	0%
Index Funds:		
US Total Market Index SL Fund	N/A	39%
Prudential - PRISA	N/A	10%
Pictet International Equity Fund		23%
Brandywine	BBB or higher	14%

NOTE B – CASH AND INVESTMENTS (continued)

All investments shown in the preceding schedule have a rating as shown or higher for each given category. The Plan avoids a concentration of credit risk by diversifying its investments by security type and institution. In addition, as of June 30, 2008 the Plan had not invested over five percent of its assets in any one entity.

NOTE C – PLAN DESCRIPTION AND PROVISIONS

The City of Springfield, Missouri's police officers and fire fighters become participants in the Police Officers' and Fire Fighters' Retirement Fund, a single-employer, defined benefit pension plan, as a condition of their employment. Operations of the Plan are governed by City ordinance and are administered by the Plan's Board of Trustees. The Board of Trustees consists of a member of the City Council designated by the Mayor to act as a liaison, two current members of the police department, two current members of the fire department, the Director of Finance, the Director of Human Resources, a designee of the City Manager, one former employee who is currently receiving benefits from the system, and three citizens recommended by the City Manager approved by the City Council. The Plan is not subject to the provisions of the Employee Retirement Income Security Act of 1974. The Plan is considered part of the City financial reporting entity and is included in the City's basic financial statements as a pension trust fund.

Membership in the Plan as of June 30, 2008 is comprised of the following:

Retirees and beneficiaries currently receiving benefits and terminated vested members	470
Active members:	
Fully vested	397
Nonvested	108
TOTAL ACTIVE MEMBERS	505

The following description of the Plan provides only general information. The Plan was amended effective June 1, 2006. This amendment establishes changes that will affect Plan participants joining after June 1, 2006. Participants should refer to the plan document and the pamphlet, *City of Springfield Police Officers' and Fire Fighters' Retirement Fund Summary Plan Description*, for a more complete description of the Plan's provisions. Copies of the pamphlet are available from the City's Finance Department.

NOTE C – PLAN DESCRIPTION AND PROVISIONS (continued)

Retirement Benefits

Participants become vested in the Plan after five years of service. Participants are entitled to retirement benefits after 25 years of service, at age 50 after 20 years of service, or at age 60. Participants with at least 5 years of service may elect to receive early retirement at reduced benefits at age 55. Normal retirement benefits are 2.8% of the average of a participant's highest 3 years of salary within the last 10 years for each year of credited service, limited to 70% of average annual salary.

Disability Benefits

Non-duty disability benefits are available to participants having at least three years of service who become totally and permanently disabled from non-duty causes. These benefits are 1 ¾% of the participant's average salary if the participant retired prior to January 1, 2005 and 7/8 of the percentage multiplier rate for the normal service retirement benefit, including the additional 3/10% multiplier if the participant retires after June 30, 2004 each year of service, subject to a minimum of 25% and a maximum of 50%.

With respect to any participant commencing employment on or after January 1, 2005, and having at least five years of service who becomes totally and permanently disabled from non-duty causes shall be entitled to a non-duty disability pension. This pension shall be payable during the lifetime of the participant, provided the disability continues. The pension for participants commencing employment on or after January 1, 2005, shall be equal to seven-eights (7/8) of the percentage multiplier rate for the normal service retirement benefit in effect at the time of the granting of the non-duty disability pension, including the additional three-tenths percent (0.3%) multiplier amount referenced in Section 2-455(d), times the average salary for each year of service, subject to a minimum benefit of twenty-five percent (25%) of average salary and a maximum benefit of fifty percent (50%) of average salary.

With respect to any participant commencing employment on or after June 1, 2006, said participant's entitlement to a non-duty disability pension shall be the same except that the pension benefit for such participant shall be equal to seven-eighths (7/8) of the percentage multiplier rate for the normal service retirement benefit for such a participant in effect at the time of the granting of the non-duty disability pension, times the average salary, for each year of service, subject to a minimum benefit of twenty-five percent (25%) of average salary and a maximum benefit of fifty percent (50%) of average salary.

Duty disability benefits are available to participants, irrespective of the length of service, who become disabled as a direct result of occupational duties. Duty disability benefits are 66 2/3% of the participant's salary in effect at the date of the disability, with an offset for any amounts payable under worker's compensation.

NOTE C – PLAN DESCRIPTION AND PROVISIONS (continued)

Survivor's Benefits

A pension equal to 50% of the participant's average salary in effect at the date of death is payable to the surviving spouse until the spouse remarries if death occurs as a direct result of an act of duty. A pension of 10% of the participant's salary is payable to each surviving child under the age of 18, subject to a maximum payment to a surviving spouse and children of 75% of the participant's salary, with an offset for any amounts payable under workers' compensation. Survivor's pensions for non-duty connected deaths are 25% of average salary plus 1 and 1/8% of average salary for each year of service, provided the participant had at least five years of service, subject to a maximum of 50% of average salary paid to the surviving spouse. 10% of the participant's salary is payable to each surviving child under the age of 18, subject to a maximum payment of 60% of the participant's salary to a surviving spouse and children for a non-duty death.

Termination

A participant who terminates employment with the City and is not eligible for benefits from the Plan is pai demand and without interest, the participant's contributions into the Plan. If the participant has five years of service, the participant may remain vested and elect to receive benefits payable commencing at the participant's normal retirement date.

Annual Adjustments

Plan participants entering the Plan prior to June 1, 2006, will have pension benefits increased 3% each July over the amount paid in the preceding month of June, provided that the pension has been paid at least 12 months prior to the July change. For age and service retirement pensions, the 3% increase does not begin until the calendar year of the employee's 56th birthday. Surviving spouses and dependent children receiving benefits are also eligible for the increase.

Plan participants entering the Plan on or after June 1, 2006, will upon retirement be paid a pension based on a percentage multiplier of 2.5%, with increases for cost of living occurring subject to the provisions set out in Section 2-469 of the Plan document.

NOTE D – EMPLOYER AND EMPLOYEE CONTRIBUTIONS

The City's funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are designed to accumulate sufficient assets to pay benefits when due.

Participants entering the Plan prior to June 1, 2006, were required to contribute 11.35% of their annual salary to the Plan for the year ended June 30, 2008. Participants entering the Plan on or after June 1, 2006, were required to contribute 8.5% of their annual salary to the Plan for the year ended June 30, 2007. The City may, at their discretion, contribute the remaining amounts necessary to fund the Plan using the entry age normal actuarial method as specified by ordinance.

During the year ended June 30, 2008, contributions totaling $11,758,642 were made to the Plan. The employer's actual contribution of $8,794,259 did not meet the annual required employer's contributions of $12,347,207 as determined by the Plan's actuary, increasing the net pension obligation by $3,724,694. The net pension obligation totaled $10,225,065 with the current year's increase along with interest added and other tuarial adjustments. Employer contributions represented 35.61% and employee contributions represented 00% of covered payroll for the fiscal year. Administrative costs of the Plan are funded by investment income.

NOTE E – SUBSEQUENT EVENTS

Between June 30, 2008, and the report date, financial markets experienced steep and unexpected declines. These declines have resulted in the market value of plan assets decreasing and thus generating unrealized losses on various assets within the portfolios of each asset manager. The total estimated unrealized loss for the Plan at September 26, 2008, was $10.6 million dollars.

REQUIRED SUPPLEMENTARY INFORMATION

CITY OF SPRINGFIELD, MISSOURI
POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT FUND
SCHEDULE OF FUNDING PROGRESS (IN THOUSANDS)
ne 30, 2008

Actuarial Valuation Date	(a) Actuarial Value of Assets	(b) Entry Age Actuarial Accrued Liability	(a/b) Funded Ratio	(b-a) Unfunded Accrued Liability (UAL)	(c) Annual Covered Payroll	[(b-a)/c] UAL as a Percentage of Covered Payroll
6/30/99	$ 116,425	$ 150,253	77%	$ 33,828	$ 18,448	183%
6/30/00	124,462	155,782	80%	31,320	19,046	164%
6/30/01	129,480	168,345	77%	38,865	20,222	192%
6/30/02	129,854	179,126	72%	49,271	22,142	223%
6/30/03	129,849	195,975	66%	66,126	22,817	290%
6/30/04	130,419	238,755	55%	108,336	24,105	449%
6/30/05	130,496	250,850	52%	120,353	23,866	504%
6/30/06	133,494	263,814	51%	130,320	23,747	549%
6/30/07	138,891	277,862	50%	138,971	23,864	582%
6/30/08	140,780	295,580	48%	154,800	24,696	627%

CITY OF SPRINGFIELD, MISSOURI
POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT FUND
SCHEDULE OF EMPLOYER CONTRIBUTIONS (IN THOUSANDS)
June 30, 2008

Year Ended June 30,	Annual Pension Cost	Actual Employer Contribution	Net Pension Obligation
1999	$ 3,945	$ 3,945	$ -
2000	4,050	4,050	-
2001	4,497	4,497	-
2002	4,494	4,494	-
2003	5,197	5,197	-
2004	5,892	5,892	-
2005	7,319	6,796	523
2006	9,851	6,831	3,020
2007	10,345	7,388	2,957
2008	12,519	8,794	3,725

CITY OF SPRINGFIELD, MISSOURI
POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT FUND
ACTUARIAL VALUATION
June 30, 2008

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information from the prior year's actuarial valuation follows:

Valuation date	June 30, 2008
Actuarial cost method	Entry age
Amortization method	Level percent; closed
Remaining amortization period	30 years
Asset valuation method	Four-year smoothed market
Actuarial assumptions:	
Investment rate of return	7.5%
Projected salary increases, depending on age, attributable to seniority/merit	7.5% per year, decreasing to 4.5% after six years for fire and eight years for police, then 3.0% after ten years for fire and twelve years for police.
Projected salary increases, attributable to inflation	3.0%
Increase in benefits per year after retirement	3.0% (0.0% for members hired after June 1, 2006)
Average salary at retirement	Increased by a factor of 1.03 for fire and for police, an individual adjustment based on operating holiday balance

OTHER FINANCIAL INFORMATION

DAVIS, LYNN & MOOTS, P.C.
Certified Public Accountants

LARRY M. BROWN, CPA
LAWRENCE W. DAVIS, CPA
ANTHONY D. LYNN, CPA
RANDALL G. MOOTS, CPA
ANGELA M. PATRICK, CPA
ANDREW A. MARMOUGET, CPA

3828 SOUTH AVENUE
SPRINGFIELD, MO 65807
(417) 882-0904
FAX (417) 882-4343
www.dlmcpa.com
e-mail: cpa@dlmcpa.com

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

The Board of Trustees
City of Springfield, Missouri
Police Officers' and Fire Fighters' Retirement Fund
Springfield, Missouri

We have audited the financial statements of City of Springfield, Missouri Police Officers' and Fire Fighters' Retirement Fund as of and for the year ended June 30, 2008, and have issued our report thereon dated September 26, 2008. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered City of Springfield, Missouri Police Officers' and Fire Fighters' Retirement Fund's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide an opinion on the internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the Plan's internal control over financial reporting.

A control deficiency exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to initiate, authorize, record, process, or report financial data reliably in accordance with accounting principles generally accepted in the United States of America such that there is more than a remote likelihood that a misstatement of the entity's financial statements that is more than inconsequential will not be prevented or detected by the entity's internal control.

The Board of Trustees
City of Springfield, Missouri
Police Officers' and Fire Fighters' Retirement Fund
Springfield, Missouri

A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected by the entity's internal control.

Our consideration of the internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in the internal control that might be significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control over financial reporting that we considered to be significant deficiencies or material weaknesses, as defined above.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether City of Springfield, Missouri Police Officers' and Fire Fighters' Retirement Fund's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or ot' matters that are required to be reported under *Government Auditing Standards*.

We noted a certain other matter that we have reported to management of City of Springfield, Missouri Police Officers' and Fire Fighters' Retirement Fund in a separate letter dated September 26, 2008.

This report is intended solely for the information and use of the Board of Trustees and management and is not intended to be and should not be used by anyone other than these specified parties.

Davis, Lynn & Moots, P.C.

DAVIS, LYNN & MOOTS, P.C.
September 26, 2008

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION FUND
STATEMENT OF PLAN NET ASSETS

	FEBRUARY 2009	JUNE 2008	AMOUNT OF CHANGE
Assets:			
Current Assets:			
Cash and short term investments	$ 335,894	$ 962,183	$ (626,289.00)
Investment, at fair market value:			
Brandywine	13,011,136	16,257,467	(3,246,331.00)
Galliard Investment Management	25,450,346	25,258,970	191,376.00
Pictet Comingled	12,054,671	26,986,199	(14,931,528.00)
Prudential Financial	10,526,070	12,317,651	(1,791,581.36)
Wilshire 5000	27,836,379	46,098,980	(18,262,601.00)
Accrued interest receivable	218,029	216,061	1,968.00
Due from other funds	-	-	-
Total Current Assets	89,432,525	128,097,511	(38,664,986.36)
Liabilities:			
Accounts payable	2,854	12,369	(9,515.00)
Total Liabilities	2,854	12,369	(9,515.00)
Net Assets Held in Trust for Pension Benefits	$ 89,429,671	$ 128,085,142	$ (38,655,471.36)

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION FUND
STATEMENT OF CHANGES IN PLAN NET ASSETS

	FEBRUARY	YEAR TO DATE BALANCE
Additions:		
Contributions:		
Employee Plan 1	$ 204,753	$ 1,726,829
Employer Plan 1	905,784	7,639,125
Employee Plan 2	14,244	118,517
Employer Plan 2	84,138	700,086
Total Contributions	1,208,919	10,184,557
Other Revenue	127,134	137,371
Net Investment Income:		
Interest and dividends	-	8,937
Gain/Loss in market value	(5,224,799)	(38,043,912)
Managers' fees and trading costs	(2,854)	(41,199)
Net Investment Income	(5,227,653)	(38,076,174)
Total Additions	(3,891,600)	(27,754,246)
Deductions:		
Retirement benefit payments	1,257,984	9,971,624
Refunds of employee contributions	275,227	795,998
Administrative expenses	995	133,603
Total Deductions	1,534,206	10,901,225
Net Increase in Plan Net Assets	(5,425,806)	(38,655,471)
Net Assets Held in Trust for Pension Benefits:		
Beginning of fiscal year 2008		128,085,142
Beginning February, 2009	94,855,477	
Ending February, 2009	$ 89,429,671	$ 89,429,671

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION FUND
INVESTMENT MARKET VALUE SUMMARY AND INDEX PERFORMANCE

GALLIARD INVESTMENT MANAGEMENT	JANUARY, 2009 VALUE AT MONTH END	FEBRUARY, 2009 VALUE AT MONTH END	AMOUNT OF CHANGE
GOVERNMENT BONDS	$ 8,609,911	$ 8,861,121	$ 251,210
CORPORATE BONDS	12,236,461	12,343,384	$ 106,923
FOREIGN ISSUES	214,085	217,284	$ 3,199
MUNICIPAL ISSUES	1,119,927	1,207,695	$ 87,768
TEMPORARY INVESTMENTS	3,271,086	2,820,862	$ (450,224)
TOTAL GALLIARD	$ 25,451,470	$ 25,450,346	$ (1,124)

INDEX PERFORMANCE	
GALLIARD PORTFOLIO	-0.22%
BARCLAYS CAPITAL AGGREGATE	-0.38%

BRANDYWINE GLOBAL INVESTMENT	SHARES OWNED	PRICE PER SHARE	VALUE AT MONTH END
FEBRUARY, 2009		10.850	$ 13,011,136
JANUARY, 2009	1,230,655	10.850	13,358,677
AMOUNT OF CHANGE	#VALUE!	$ -	$ (347,541)

INDEX PERFORMANCE	
BRANDYWINE	-2.49%
CITIGROUP WORLD GOVT EX-US	-3.64%

PICTET ASSET MANAGEMENT	SHARES OWNED	PRICE PER SHARE	VALUE AT MONTH END
FEBRUARY, 2009	1,666,834	$ 7.23	$ 12,054,671
JANUARY, 2009	1,666,834	$ 8.21	13,680,153
AMOUNT OF CHANGE	0.280	$ (0.98)	$ (1,625,482)

INDEX PERFORMANCE	
PIC TET	-8.46%
MSCI EAFE INDEX	-9.25%

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION FUND
INVESTMENT MARKET VALUE SUMMARY AND INDEX PERFORMANCE

PRUDENTIAL FINANCIAL	SHARES OWNED	PRICE PER SHARE	VALUE AT MONTH END
FEBRUARY, 2009	312.008	$ 33,736.51	$ 10,526,070
JANUARY, 2009	312.008	$ 33,736.51	$ 10,526,070
AMOUNT OF CHANGE	$ -	$ -	$ -

INDEX PERFORMANCE	
PRUDENTIAL REAL ESTATE	-14.47%
NCREIF PROPERTY INDEX	-14.47%

STATE STREET GLOBAL	VALUE AT MONTH END
FEBRUARY, 2009	$ 27,836,379
JANUARY, 2009	31,087,031
AMOUNT OF CHANGE	$ (3,250,652)

INDEX PERFORMANCE	
WHILSHIRE 5000	-10.48%
US TOTAL MARKET INDEX SL FUNDS	-10.46%

TOTAL VALUE OF ALL INVESTMENTS	**JANUARY, 2008**	**$ 94,103,401**
TOTAL VALUE OF ALL INVESTMENTS	**FEBRUARY, 2008**	**88,878,602**
AMOUNT OF CHANGE		**$ (5,224,799)**
LESS CASH TRANSFER & MANAGEMENT FEES		**-**
ADJ AMOUNT OF CHANGE		**(5,224,799)**

CITY OF SPRINGFIELD POLICE OFFICERS' AND FIRE FIGHTERS' RETIREMENT SYSTEM

INVESTMENT POLICY STATEMENT

SEPTEMBER, 2006

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I. INTRODUCTION

This document, as amended from time to time, will serve as the Investment Policy Statement (Policy) for the City of Springfield Police Officers' and Fire Fighters' Pension Plan (Plan), a defined benefit pension plan qualified under Section 401(a) of the Internal Revenue Code. The Plan was established to provide retirement benefits to Police Officers' and Fire Fighters' employed by the City of Springfield (City) and their beneficiaries. The City of Springfield has delegated the authority to manage the Plan's investments to the Board of Trustees (Trustees).

II. PURPOSE OF INVESTMENT POLICY STATEMENT

A. Oversight of Plan's Investments

The Trustees have the responsibility to make decisions and delegate responsibility related to the management of the investment of the Plan's assets. The purpose of this Policy is to formalize the Trustees' guidelines and objectives related to the investment of the Plan's assets, including the standards for selecting and monitoring the Plan's investments, and the persons or entities (if any) to whom the authority and responsibility for management of those investments is delegated by the Trustees. This Policy presents the Trustees' general investment philosophy and identifies specific guidelines and objectives related to investment return and risk with respect to management of the Plan's assets. The Trustees will use these guidelines and objectives to monitor, evaluate and make decisions about the suitability (and continued suitability) of the Plan's investments, and the management of these assets, in light of the Plan's contribution source, accrued benefit liabilities, benefit payment stream, and other relevant factors.

The City Council approves the investment guidelines and objectives for the Plan. The Council has delegated the authority to manage the Plan's investments to the Board of Trustees.

B. The Plan's Contribution Source, Benefit Liabilities and Benefit Payments

Contributions to the Plan are made by the City of Springfield pursuant to Sec. 2-457 (b) of the Retirement Plan Provisions for the Police Officers and Firefighters Retirement System (the plan) which reads as follows: Alternatively, ***the City may fund on an actuarial basis, the actual costs of the plan over and above the amount of the participant contributions and the income received from the investments of the fund assets, subject to the discretion of the City Council to set the actual City contribution rate as a part of the budget approval process for a particular budget year.***

Contributions to the Plan are made by the participants of the plan under Section 2-455 and returned to the participant upon leaving service or death as provided in Section 2-456 of the plan. The funding of the Plan depends on some of the following factors:

a) the number of persons employed during any given period of time;

b) the number of years of service of work by the covered employees;

c) the salary of the covered employees;

d) the timing and amount of the City of Springfield and plan participant's contributions to the Plan; and
e) the performance of the investment of the Plan's assets.

The contribution rate is determined upon consideration of many factors, including but not necessarily limited to, the Plan's benefit accrual formula, the projected benefit accruals under the Plan, benefit payment obligations, and performance of the Plan's investments over extended time horizons.

Benefits are paid by the Plan upon a distributable event, such as death, disability or retirement of a covered employee. Benefits obligations are paid monthly to eligible retirees and beneficiaries. Significantly for purposes of the Plan's liquidity needs, the Plan also makes lump sum payments for return of contributions to plan participants hired prior to June 1, 2006.

C. Review and Modification of Investment Policy Statement

The objectives and standards set forth in this Policy will be reviewed by the Trustees as needed to ensure it remains prudent and consistent with the best interests of the Plan's participants. This Policy may be amended or modified by the Trustees at any time.

III. INVESTMENT GUIDELINES

A. General Fiduciary Obligation

In establishing, monitoring and modifying this Policy, and in complying with the guidelines and standards established in this Policy, the Trustees will endeavor to act prudently, and exclusively in the best interests of the Plan's participants and beneficiaries. "Prudence" is defined as outlined in the Missouri Statutes sections 105.687-105.689. The Trustees will diversify the investments of the Plan's assets so as to minimize the risk of large losses, unless under the circumstances then prevailing it is clearly prudent not to do so.

B. Long Term Risk and Reward

This Policy reflects consideration of the long-term funding requirements of the Plan. The Trustees recognize that expectations for the returns to be earned on the different classes of Plan assets in the future may not be realized. However, the expectations reflected in this Policy are considered by the Trustees to be reasonable, given the historical experience covering long-term periods and the belief that the capital markets will remain viable. Long-term is defined as over 10 years. If the assumptions are not realized, the Trustees recognize that a shortfall of actual investment returns from those expected could require increased contributions or a reduction in future benefit accruals, or other Plan modifications.

C. Preservation of Assets and Purchasing Power

The fundamental objective of the Plan's investments is to preserve capital, to avoid a diminution in the purchasing power of the Plan's assets (relative to inflation), and to assure satisfaction of the Plan's long-term liquidity needs. The Trustees believe it is appropriate for the Plan to assume a

moderate degree of investment risk, with diversification of Plan assets among different classes of investments as a means of reducing risk. The Plan can and will tolerate some variability in market value and rates of return in order to achieve a greater long-term rate of return.

While neither the City nor the Trustees guarantee the continued viability of the Plan, their intent is to continue the Plan indefinitely. Consequently, the Trustees endorse a long-term approach to managing the investment portfolio, but believe this should not be viewed as justification for exposing the portfolio to levels of volatility that might adversely affect the value of the Plan's assets.

The Trustees believe that the level of risk assumed in the fund is a function, in large part, of the fund's risk posture as stated above. The proportion of assets allocated to equity investments is the most important determinant of volatility of future returns. As indicated by long-term historical data, the risk of equity ownership has been rewarded with a higher rate of return.

D. Selection of Investment Managers

The Trustees may retain an Investment Manager(s) (Manager) to assist them in their responsibility to manage the Plan's assets. Any Manager retained will construct and manage investment portfolios within the guidelines of this Policy. The Manager will select specific securities, buy and sell such securities, and manage any assets assigned to them within the guidelines in this Policy. The Policy is intended to allow enough flexibility for the Manager to respond to changing economic conditions and securities markets within the guidelines set out in this Policy.

In selecting a Manager, the following criteria may be taken into account but not necessarily limited to:

- Investment Performance
- Risk assessments, such as standard deviation, tracking error, information ratio and sharpe ratio
- Background of Investment Professionals
- Investment Philosophy
- Investment Process, including buy and sell discipline
- Portfolio Diversification and Risk Controls
- Investment Management fees
- Quality of manager reports and communications
- Comparison of Manager's results to appropriate market indices and universes
- Compliance with regulatory agencies and all duties as required by an Investment Manager as defined by ERISA

All separate account managers retained will be required to specifically assume fiduciary liability for investment results. The Trustees may replace a Manager at any time. The Manager is required to acknowledge the guidelines and objectives in this Policy and agrees to manage Plan assets in accordance with this Policy. The Trustees may select more than one Manager for any asset class. The Trustees may choose to use separate account Managers or pooled funds, such as mutual funds or collective trust funds, to satisfy management of any asset class based on criteria as determined by the Trustees. Both active and passive managers can be considered. Where pooled funds are used, they should substantially comply with this Policy.

E. Portfolio Restrictions and Diversification

Investment in the following types of marketable securities is not permissible: derivatives (except with mortgaged backed securities used in conservative manner), options, warrants, (except in the case of warrants distributed as a result of stock holdings) collectibles, all securities issued by any affiliate of each of the Plan's investment managers.

The Manager may not engage in the following types of transactions: short sales or any other marginable transactions, option writing, or any other transaction that unduly increases risk in the portfolio.

The diversification of equity and fixed income securities held in each portfolio among sectors and issuers is the responsibility of the Manager for their respective portfolios. The Managers are expected to diversify their respective portfolios sufficiently to minimize the risk of a large loss from a single security.

IV. ASSET ALLOCATION

The Trustees will recommend the appropriate asset types to City Council for their approval. The Board of Trustees may add, delete or change asset classes within those asset types at their discretion at any time within the parameters established by the City Council. In selecting the asset classes, the Trustees will choose asset classes reasonably designed to further the purposes of the Plan, taking into account:

a) The risk of loss and opportunity for gain associated with the asset classes, both objectively and in light of the acceptable risk permitted by this Policy, taking into account the correlation of the various asset classes and the time horizon over which the Plan is likely to have assets invested in the asset classes;

b) The composition of the available asset classes with regard to the Plan's opportunity to meet its objectives without exceeding the risk tolerance permitted by this Policy;

c) The composition of the available asset classes with regard to the Plan's opportunity to achieve diversification of its investment portfolio;

d) The liquidity and current return with respect to the asset classes, relative to the specific cash flow requirements of the Plan; and

e) The projected return available with respect to the asset classes, relative to the funding objectives of the Plan.

The asset classes, target asset allocation and ranges to be used in the Plan are shown below. The Trustees may change the asset classes and target at any time within the parameters established by the City Council. All percentages are based on market values. The portfolios will be rebalanced any time they are not within the appropriate ranges. Each Investment Manager may hold cash under the guidelines set out below, but that cash shall be considered invested in the asset class assigned.

Asset Type and Class	Range	Target
Equities:	**45% - 75%**	
Large Cap		30%
Small Cap		10%
International Equities		15%
Emerging Markets		5%
Fixed Income:	**25% - 40%**	
Domestic		21.75%
International		10.75%
Alternatives:	**0% - 15%**	
Real Estate		7.5%
Hedge Funds		0%
Commodities		0%

Equities: The 45% to 75% ranges would include both domestic and international equities with a limit of 1/3 in international equities. The domestic and international equity allocation should consider stocks across all capitalizations, (large, mid, small and micro) and styles (value and growth). Any investment in ADR's should be considered as domestic equities. International equities should give consideration to large cap, small cap and emerging markets stocks. The goal would be to allocate among these styles with as much efficiency as possible.

Fixed: The 25% - 40% range would include both domestic and international fixed income with a limit of 1/3 in international investment grade fixed income only. Of the domestic fixed income portion, a maximum of 25% may be invested in non-investment grade fixed income securities.

Alternatives: The 0% to 15% ranges would be limited to Hedge Funds, Real Estate, and Commodities. At the present time, Hedge Funds and Commodities would be limited to zero until further study of these asset classes is accomplished by the Board. Investment in any sector of this class shall not exceed 10% of the portfolio's value.

Based on asset allocation studies using long-term historical returns from the various capital markets, the Trustees believe there is a reasonable likelihood the Plan will meet the overall investment objectives using the above asset allocation.

A separate sub-account will be used to receive contributions and pay benefits and expenses. As this sub-account is not intended for long-term investment, it will not be subject to performance measurement criteria and asset allocation as stated in this Policy. However, if expenses of the Plan are paid from this account, such amounts will be reflected in the performance reports as determined by the Trustees.

V. STANDARDS OF INVESTMENT PERFORMANCE

A. Actuarial Objective

The Plan's investment objective is to realize an investment return that, at a minimum, equals the Plan's actuarial long-term rate of return assumption on an ongoing basis. Currently, this actuarial interest assumption is seven and one-half percent (7½%) net of all expenses of the Plan. Other strategies such as securities lending and commission recapture programs may be considered by the Trustees to offset the Plans expenses as well.

B. Market Related Objectives

The Plan's investment objectives should be pursued as long-term goals designed to maximize return while reducing exposure to undue risk as set out in this Policy. All returns will be measured in terms of total return based on market value. Total returns will be defined as all income paid or accrued plus realized and unrealized capital gains and losses net of plan expenses.

1. Overall Portfolio Investment Performance Standard

The market objective for measurement of the Plan's overall investment performance is a blended index in proportion to the targets in existence at the time of measurement for each of the respective asset classes. The indexes shall consist of the return and risk of the Standard and Poor's 500 Index, the Russell 2000 Index, the Morgan Stanley/Capital International (MSCI) Europe, Australasia, and Far East (EAFE) International Equity Index, the Citigroup World Government Bond Index Non-US Unhedged, the CRIEF Index, and the Lehman Aggregate Bond Index (benchmark). Risk will be measured by variability of returns (standard deviation). Emphasis will be placed on measurement over a full market cycle, usually three to five years. The Trustees will determine appropriate style benchmarks and risk criteria for each Manager.

2. Domestic Equity Performance Standards

Guidelines

a. Large Capitalization (Cap) Equities

The market objective for the Large Cap portion of the portfolio is to exceed the return of the S&P 500 Index (benchmark), at a risk adjusted rate of return above the index, as measured by variability of returns (standard deviation), net of investment management fees. Emphasis will be placed on measurement over a full market cycle, usually three to five years.

1. The Manager may select from marketable equity securities traded on any of the major U. S. exchanges or through NASDAQ. Securities for this portfolio may include common stocks, preferred stocks and convertible securities.

2. Securities with a market capitalization of less than $2 billion at the time of purchase will not be considered.

3. Diversification must be maintained at all times. No single equity position shall exceed 5% of the market value of the Large Cap portfolio. No sector (as determined by the S&P 500 Index) shall exceed 30% of the market value of the Large Cap portfolio.

4. The selection of individual securities by separate account Managers will be at the discretion of the Manager hired for their respective portfolio, within the guidelines stated in this Policy.

5. The Manager should stay fully invested in Large Cap securities. Cash positions in excess of 10% are not permitted.

6. The portfolio will be invested in marketable securities. Private placements, restricted or letter stock, and other non-marketable securities are not permissible. Investment in the following types of marketable securities is not permissible: financial futures, derivatives, options, warrants (except in the case of warrants distributed as a result of stock holdings) and commodities.

7. The Manager may not engage in the following types of transactions: short sales or any other marginable transactions, option writing, hedging strategies, or any other transaction that unduly increases risk in the portfolio.

8. If pooled funds are used, the Consultant will review the composition of the funds as needed to assure that the portfolio substantially complies with these guidelines.

b. Small Capitalization (Cap) Equities

The market objective for the Small Cap portion of the portfolio is to exceed the return of the Russell 2000 Index (benchmark), at a risk adjusted rate of return above the index, as measured by variability of returns (standard deviation), net of investment management fees. Emphasis will be placed on measurement over a full market cycle, usually three to five years.

Guidelines

1. The Manager may select from marketable equity securities traded on any of the major U. S. exchanges or through NASDAQ. Securities for this portfolio may include common stocks, preferred stocks and convertible securities.

2. Securities with a market capitalization of less than $100 million at the time of purchase will not be used. Securities with a market capitalization in excess of $2.0 billion at the time of purchase will not be used. Securities exceeding $2.0 billion after purchase will be limited to maintain diversification.

3. Diversification must be maintained at all times. No single equity position shall exceed 5% of the market value of the Small Cap portfolio. No sector shall exceed 30% of the market value of the Small Cap portfolio.

4. The selection of individual securities by separate account Managers will be at the discretion of the Manager for their respective portfolio, within the guidelines stated in this Policy.

5. The Manager should stay fully invested in Small Cap securities. Cash positions in excess of 10% are not permitted.

6. The portfolio will be invested in marketable securities. Private placements, restricted or letter stock, and other non-marketable securities are not permissible. Investment in the following types of marketable securities is not permissible: financial futures, derivatives, options, warrants (except in the case of warrants distributed as a result of stock holdings) and commodities.

7. The Manager may not engage in the following types of transactions: short sales or any other marginable transactions, option writing, hedging strategies, or any other transaction that unduly increases risk in the portfolio.

8. If pooled funds are used, the Consultant will review the composition of the funds as needed to assure that the portfolio substantially complies with these guidelines.

3. International Equity Performance Standards

The market objective for the International Equity portion of the portfolio is to exceed the return of the MSCI EAFE Index (benchmark), at a risk adjusted rate of return above the index, as measured by variability of returns (standard deviation), net of investment management fees. Emphasis will be placed on measurement over a full market cycle, usually three to five years.

Guidelines

1. The Manager may select from marketable international securities traded on any of the major international exchanges. Securities for this portfolio may include common stocks, preferred stocks and convertible securities.

2. Securities with a market capitalization of less than $100 million at the time of purchase will not be used.

3. Diversification must be maintained at all times. No single equity position shall exceed 5% of the market value of the International Equity portfolio. No sector shall exceed 30% of the market value of the International Equity portfolio. The Manager should also be diversified in at least three capital markets whose assets and currencies are not closely correlated to each other.

4. The selection of individual securities by separate account managers will be at the discretion of the Manager for their respective portfolios, within the guidelines stated in this Policy.

5. The Manager should stay fully invested in International Equity securities. Cash positions in excess of 10% are not permitted.

6. The Manager may use discretion regarding hedging currencies where they may be fluctuating adversely relative to the dollar.

7. The portfolio will be invested in marketable securities. Private placements, restricted or letter stock, and other non-marketable securities are not permissible. Investment in the following types of marketable securities is not permissible: financial futures, derivatives, options, warrants (except in the case of warrants distributed as a result of stock holdings) and commodities unless used as a currency hedging technique.

8 The Manager may not engage in the following types of transactions: short sales or any other marginable transactions, option writing, hedging strategies, or any other transaction that unduly increases risk in the portfolio unless used as a currency hedging technique.

4. Emerging Markets

1. The Manager may invest up to a maximum of 25% of the International Equity Portfolio in emerging markets equity securities.

2. If pooled funds are used, the Consultant will review the composition of the funds as needed to assure that the portfolio substantially complies with these guidelines.

5. Domestic Fixed Income Performance Standards

The market objective for the Domestic Fixed Income portion of the Plan is to exceed the return of the Lehman Aggregate Bond Index (benchmark) at a risk adjusted rate of return above the index as measured by variability of returns (standard deviation), net of investment management fees. Emphasis will be placed on measurement over a full market cycle, usually three to five years.

Guidelines

1. The Manager may select from domestic marketable fixed income securities. Securities for this portfolio may include investment grade corporate bonds, mortgage backed securities, and government and agency bonds. A maximum of 25% may be invested in non-investment grade fixed income securities. Exotic derivatives that increase risk in the portfolio are not permissible.

2. Diversification must be maintained at all times. The Manager may not invest more than 5% of the market value of the fixed income portion in any obligation of a single issuer, with the exception of the U.S. government and its agencies.

3. The selection of individual securities by separate account managers will be at the discretion of the Manager for their respective portfolios, within the guidelines stated in this Policy. The allocation between corporate, government, agency and mortgage-backed sectors is in the discretion of the Manager.

4. The Manager should stay fully invested in fixed income securities.

5. The portfolio duration will not vary from the duration of the benchmark by more than plus or minus 20%.

6. The portfolio will be invested in marketable securities. Private placements, restricted or letter stock, and other non-marketable securities are not permissible. Investment in the following types of marketable securities is not permissible: financial futures, derivatives (except for mortgage back securities used in a conservative manner), options, warrants (except in the case of warrants distributed as a result of stock holdings) and commodities.

7. The Manager may not engage in the following types of transactions: short sales or any other marginable transactions, option writing, hedging strategies, or any other transaction that unduly increases risk in the portfolio.

8. If pooled funds are used, the **Consultant** will review the composition of the funds as needed to assure that the portfolio substantially complies with the above guidelines.

6. International Fixed Income Performance Standards

The market objective for the International Fixed Income portion of the Plan is to exceed the return of the Citigroup World Government Bond Index Non-US Unhedged (benchmark) at a risk adjusted rate of return above the index as measured by variability of returns (standard deviation), net of investment management fees. Emphasis will be placed on measurement over a full market cycle, usually three to five years.

Guidelines

1. The portfolio may be invested in any of the following, subject to any restrictions set forth below:
   - (a) Fixed income securities, including, but not limited to,
     - (i) Corporate bonds,
     - (ii) Securities issued or guaranteed by state, local and foreign governments, their related agencies or instrumentalities,
   - (b) Mortgage-backed and asset-backed securities, collateralized mortgage obligations, and REIT debt,
   - (c) Zero coupon securities,
   - (d) Foreign securities (including, but not limited to, corporate issues, sovereign issues, U.S. and non U.S. dollar denominated securities, eurobonds, global bonds, yankee bonds and emerging market debt securities),
   - (e) Foreign currency exchange transactions (including forward foreign currency exchange transactions),
   - (f) Mortgage rolls, dollar rolls and to be announced securities ("TBAs"),
   - (j) Currency linked structured notes and other currency-linked securities, and
   - (k) Commercial paper and other cash equivalents.

2. 100% of the market value of the portfolio must be invested in investment grade securities

rated BBB- or higher by Standard & Poor's, Baa3 or higher by Moody's, or BBB- or higher by Fitch, as determined at the time of purchase, counting cash and cash equivalents toward such percentage. If the ratings assigned to a security by Standard & Poor's, Moody's, and/or Fitch are not the same, the highest rating of these rating agencies will be used.

3. The average quality rating of the portfolio must be at least A- by S&P, A3 by Moody's or A- by Fitch, as determined at the time of purchase.

4. Common stock may only be held if the stock is received as the result of a financial restructuring, bankruptcy or from conversion of a security held in the portfolio. Any such stock must be sold within 30 days of receipt.

5. No security, except securities issued or guaranteed by the Government, its agencies or instrumentalities or government sponsored entities of Canada, United Kingdom, Germany, France, Australia, New Zealand and Japan will comprise more than 5% of the market value of the asset class, as determined at the time of purchase.

6. No industry within Canada, United Kingdom, Germany, France, Australia, New Zealand and Japan will comprise more than 25% of the market value of the asset class, as determined at the time of purchase.

7. The selection of individual securities by separate account managers will be at the discretion of the Manager for their respective portfolios, within the guidelines stated in this Policy. The allocation between corporate, government, agency and mortgage-backed sectors is in the discretion of the Manager.

8. The portfolio duration will not vary from the duration of the benchmark by more than plus or minus 20%.

9. If pooled funds are used, the Consultant will review the composition of the funds as needed to assure that the portfolio substantially complies with the above guidelines.

7. Real Estate Performance Standards

The market objective for the Real Estate portion of the portfolio is to exceed the return of the NCREIF Index (benchmark), at a risk adjusted rate of return above the index, as measured by variability of returns (standard deviation), net of investment management fees. Emphasis will be placed on measurement over a full market cycle, usually three to five years.

Guidelines

The System will utilize a commingled fund for investment in the asset class. The commingled fund guidelines must require diversification across property type and geographically.

VI. RESPONSIBILITIES OF THE INVESTMENT MANAGER

The providers of investment management services (Manager) are expected to undertake dynamic and flexible discretionary management of Plan assets. The investment strategy they apply must be in keeping with their published investment strategy as provided to the Trustees and/or to the consultant to the Trustees, and as set forth in this document. The prohibited transactions and securities guidelines of the Plan shall be observed at all times. The Manager shall not engage in any transaction or practices that violate Securities and Exchange Commission or exchange laws, rules or regulations.

A. Fiduciary Liability

The Manager acknowledges that investment decisions will be made in the sole interest and for the exclusive purpose of providing benefits to participants. All assets must be invested with the care, skill and diligence that a prudent person familiar with such matters acting in a like capacity would use in a similar enterprise. The Manager will assume the responsibility for investment performance and comply with all fiduciary requirements required by law. All investments will be made within the guidelines of quality, marketability and diversification mandated by any controlling statutes. The Managers are granted full discretion to manage their respective portfolios within the constraints and guidelines of this Policy. The Managers will acknowledge and accept this fiduciary responsibility by executing this document. The Manager shall comply with the fiduciary responsibility standards and requirements as stated in the Employee Retirement Income Security Act (ERISA) of 1974, as amended, and rules and regulations thereunto, even though this Plan is not specifically subject to ERISA.

B. Reporting

The Manager shall report investment results to the Trustees and the City through the Finance Director in writing on at least a quarterly basis. They should be available at least annually to report to the Trustees in person. The Trustees and the City should also be informed of any significant changes in the ownership, affiliation, organizational structure, financial condition, or professional personnel staffing of the investment management organization within 48 hours. The Manager will inform the Trustees and the City regarding all significant matters pertaining to the investment of the assets on a timely basis. The Trustees and the City should be kept apprised of major changes in investment strategy, portfolio structure, market value of the assets, and other matters affecting the investment of the assets. The Manager shall also report all the above items to the Plan's Investment Consultant.

C. Trading and Brokerage

Trading activity is in the discretion of the Manager. The Manager is free to execute trades whenever it is in the best interest of the Plan. There are no specific restrictions on portfolio turnover. However, the Trustees anticipate that better long-term investment performance will result from investment strategies, not trading strategies. The Manager will have the discretion to execute transactions with brokerage firms of his or her choosing. This selection should be based on the quality of executions rendered, the financial health of the brokerage firm, and the business integrity of the firm, commission costs, and the firm's overall efficiency in transacting business. It is further acknowledged that commission dollars are a Plan asset and should not be used for

purposes other than that which directly benefits plan participants. The use of "soft dollar" is allowed. However, the use of soft dollar credits is limited to advice, analysis and reports under Section 28(e) of the Securities and Exchange Act of 1934. The amount and the use of soft dollar credits should be disclosed by the investment manager to the trustees semi annually. The Manager will report to the Trustees on the total commissions paid, commission rates charged, and the brokerage firms used by the Manager. Securities lending programs and commission recapture programs may be considered by the Trustees as a way to offset some of the Plan's operating expenses, and the manager will assist as necessary in implementing these programs.

D. Use of Cash

If cash is used, it should be invested in money market instruments. Cash investments can be made in FDIC insured deposits, repurchase agreements, short-term U.S. government and agency obligations, A1/P1 commercial paper, collateralized agreements, bankers acceptances, and money market mutual funds containing the above instruments.

E. Proxy Voting

Managers for equities are required to vote all proxies in the best interest of plan participants by maximizing the value of the securities in the portfolio. The Manager shall maintain proper files documenting the decisions made on each proxy. The Manager will have complete discretion with respect to the voting of the proxies, unless otherwise directed by the Board.

VII. MONITORING OF INVESTMENT PERFORMANCE

A. Monitoring Report

No less frequently than quarterly, the Trustees will review the continued suitability of the asset classes, and the overall performance of the investment funds. As part of this review process, the Trustees will prepare or cause to be prepared a Performance Monitoring Report, which shall review the performance of the investment vehicles in light of the criteria set out in this Investment Policy Statement. The purpose of this report is to satisfy Trustees' obligation to monitor performance of the Plan's investments. A copy of the Report should be sent to the City Manager through the Finance Director as well.

B. Changes in Investment Manager

The Trustees will also review the suitability of a Manager upon a change in personnel or a perceived or announced change in investment style or objectives or a material change in ownership of the firm. The Investment Manager shall notify the Trustees of any such changes. The Trustees have the right to eliminate and, as appropriate, replace any Manager that ceases to be suitable based upon the criteria set out in this Policy. The Trustees may add additional Managers, as they deem appropriate in their discretion.

In the event the Trustees determine that a Manager is no longer suitable, the Trustees shall select another Manager within the same asset class, and direct that amounts then invested with the unsuitable Manager be transferred to the new Manager for management.

C. Consulting

An investment consultant may be hired by the Trustees to assist in issues such as asset allocation, performance monitoring, and manager searches. The consultant shall maintain a policy to avoid any financial interests or transactions that would create a real or potential conflict of interest for work performed for the City of Springfield. The consultant shall be compensated on a hard dollar basis only. The consultant shall refrain from entering into soft dollar arrangements with brokers. The consultant shall not accept payments directly or indirectly from any investment managers. The Consultant will not be compensated in any fashion either directly or indirectly by parties involved, other than the Plan itself.

The consultant shall act in a fiduciary capacity to the extent provided in the Employee Retirement Income Security Act of 1974 ("ERISA") and other applicable law. In performing non-fiduciary services, the consultant shall act in accordance with the highest standards of the investment consulting industry.

The responsibilities of the Investment Consultant shall include the following:

1. Attend Board of Trustee meetings on a quarterly basis and one or more meetings as required related to manager searches, educational seminars, and other matters as may be required from time to time.
2. Prepare and deliver quarterly performance reports and an annual report.
3. Provide quarterly evaluations of investment managers.
4. Consultations as needed with the investment managers to balance fund assets, explain investment policies and guidelines of the fund to the managers and other matters as may be required from time to time.
5. Monitor activities of investment managers and advise Board of Trustees if an investment manager is not operating within contract terms.
6. Coordinate presentations by individual investment managers to Board of Trustees.

VIII. CUSTODIAN

Assets may be held by a Custodian as determined by the Trustees in the name of the City of Springfield Police Officers' and Fire Fighters' Retirement system. The Custodian will regularly summarize these holdings in an acceptable format for the Trustees' review. The Custodian will allocate funds to the various Managers at the direction of the Trustees. All indicia of ownership of any assets of the Plan shall be maintained within the jurisdiction of the courts of the United States.

IX. CONFLICT OF INTEREST

No salaried officer or employee of the City of Springfield and no member of City Council shall have a financial interest direct or indirect with the investment consultant, investment managers of the custodian. Any federal regulations and applicable provisions in RSMo Chapter 105 shall not be violated.

The Trustees hereby adopt this Investment Policy Statement for the City of Springfield Police Officers' and Fire Fighters' Retirement system this _____ day of _____, 2006. This Investment Policy Statement supersedes any previous Investment Policy Statement.

CITY OF SPRINGFIELD POLICE OFFICERS'
AND FIRE FIGHTERS' RETIREMENT SYSTEM

TRUSTEES

Evelyn Honea - Chair	Kenneth Homan	Ron Hoffman
Anthony Gomez	Kevin Austin	David Hall
Jim Edwards	James E. Brown	Gerry Koeneman
Mary Mannix Decker	Sheila Maerz	

X. APPOINTMENT OF INVESTMENT MANAGER AND ACKNOWLEDGMENT

By signing below, the Investment Manager agrees to the terms and conditions of this Policy. Should the Manager believe at any time that changes, additions, or deletions to the Policy are advisable, the Manager should communicate those items in writing for review by the Trustees.

The Manager affirms that they are an Investment Manager and a Fiduciary as defined under ERISA and will comply with all duties required of an Investment Manager as defined in ERISA, although this Plan is not specifically subject to ERISA.

The signatures below affirm and acknowledge that this Investment Policy Statement has been read, understood and accepted by the Manager.

Manager Specific Guidelines

Performance Benchmark:	MSCI EAFE +3.0% annually
Universe Comparison:	International Equity Managers

City of Springfield Police Officers' and Fire Fighters' Retirement system DATE

_____ _____

INVESTMENT MANAGER:
Julius Baer Investment Management LLC International Equity DATE

_____ _____

X. APPOINTMENT OF INVESTMENT MANAGER AND ACKNOWLEDGMENT

By signing below, the Investment Manager agrees to the terms and conditions of this Policy. Should the Manager believe at any time that changes, additions, or deletions to the Policy are advisable, the Manager should communicate those items in writing for review by the Trustees.

The Manager affirms that they are an Investment Manager and a Fiduciary as defined under ERISA and will comply with all duties required of an Investment Manager as defined in ERISA, although this Plan is not specifically subject to ERISA.

The signatures below affirm and acknowledge that this Investment Policy Statement has been read, understood and accepted by the Manager.

Manager Specific Guidelines

Performance Benchmark:	Lehman Aggregate + 1.25% annually
Universe Comparison	Domestic Fixed Income Mangers

City of Springfield Police Officers' and Fire Fighters' Retirement system DATE

_____ _____

INVESTMENT MANAGER: DATE
Delaware Investments
Domestic Fixed Income

_____ _____

X. APPOINTMENT OF INVESTMENT MANAGER AND ACKNOWLEDGMENT

By signing below, the Investment Manager agrees to the terms and conditions of this Policy. Should the Manager believe at any time that changes, additions, or deletions to the Policy are advisable, the Manager should communicate those items in writing for review by the Trustees.

The Manager affirms that they are an Investment Manager and a Fiduciary as defined under ERISA and will comply with all duties required of an Investment Manager as defined in ERISA, although this Plan is not specifically subject to ERISA.

The signatures below affirm and acknowledge that this Investment Policy Statement has been read, understood and accepted by the Manager.

Manager Specific Guidelines

Performance Benchmark:	Citigroup World Government Bond Index + 3.0% annually
Universe Comparison:	International Fixed Income Managers

City of Springfield Police Officers' and Fire Fighters' Retirement system DATE

_____ _____

INVESTMENT MANAGER:
Brandywine Global Investment Management LLC DATE
International Fixed Income

_____ _____

X. APPOINTMENT OF INVESTMENT MANAGER AND ACKNOWLEDGMENT

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The Manager affirms that they are an Investment Manager and a Fiduciary as defined under ERISA and will comply with all duties required of an Investment Manager as defined in ERISA, although this Plan is not specifically subject to ERISA.

The signatures below affirm and acknowledge that this Investment Policy Statement has been read, understood and accepted by the Manager.

City of Springfield Police Officers' and Fire Fighters' Retirement system DATE

_____ _____

INVESTMENT MANAGER:
Cortina Asset Management
Domestic Small Capitalization Equity DATE

_____ _____

X. APPOINTMENT OF INVESTMENT MANAGER AND ACKNOWLEDGMENT

By signing below, the Investment Manager agrees to the terms and conditions of this Policy. Should the Manager believe at any time that changes, additions, or deletions to the Policy are advisable, the Manager should communicate those items in writing for review by the Trustees.

The Manager affirms that they are an Investment Manager and a Fiduciary as defined under ERISA and will comply with all duties required of an Investment Manager as defined in ERISA, although this Plan is not specifically subject to ERISA.

The signatures below affirm and acknowledge that this Investment Policy Statement has been read, understood and accepted by the Manager.

Manager Specific Guidelines

Performance Benchmark:	NCRIEF + 2.0% annually
Universe Comparison	Direct Real Estate Managers

City of Springfield Police Officers' and Fire Fighters' Retirement system DATE

_____ _____

INVESTMENT MANAGER:
Prudential Real Estate Investors
Direct Real Estate DATE

_____ _____

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION SYSTEM
CONTRIBUTION RATES

Fiscal Year	City's Contribution Rate	Employee Contribution Rate	Combined Rate	Percent Increase
2009-10	**52.36%**	**11.16%**	**63.52%**	**3.33%**
2008-09	50.21%	11.26%	61.47%	7.65%
2007-08	45.75%	11.35%	57.10%	11.15%
2006-07	40.02%	11.35%	51.37%	3.38%
2005-06	38.34%	11.35%	49.69%	26.37%
2004-05	28.68%	10.64%	39.32%	14.07%
2003-04	23.83%	10.64%	34.47%	6.75%
2002-03	21.65%	10.64%	32.29%	6.15%
2001-02	19.78%	10.64%	30.42%	-2.37%
2000-01	20.52%	10.64%	31.16%	10.69%
1999-2000	19.65%	8.50%	28.15%	-3.73%
1998-99	20.74%	8.50%	29.24%	0.31%
1997-98	20.65%	8.50%	29.15%	5.27%
1996-97	19.19%	8.50%	27.69%	20.71%
1995-96	14.44%	8.50%	22.94%	

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION SYSTEM
CONTRIBUTION RATE
COMPONANTS

WHAT FACTORS CONTRIBUTE TO THE CONTRIBUTION RATE?

Normal Costs Under the Plan:	
Age and Service Benefits	10.70%
Disability Benefits	3.13%
Death in Service/Inactive Mortality	3.23%
Termination Benefits/Withdrawals	3.00%
Refund of Contributions/25 and Out	4.08%
Amortization payment for Prior Service Costs for Plan Changes	7.67%
Costs Associated with Experience (Gains/Losses):	
Investment Experience	3.55%
Change in Interest Rate Assumption	6.69%
Salary Scale and Active Employee Data	7.15%
Contribution Shortfall during 2005-08	2.26%
Change in Assumptions for Payroll Increases	5.21%
Increases in Average Salary at Retirement	2.21%
Other	1.79%
Change in employee rate from 8.5% to 11.35% due to multiplier change	2.85%
Total Rate	63.52%
Employer Rate	52.36%
Employee Rate	11.16%

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION SYSTEM
CITY CONTRIBUTION AMOUNTS

Fiscal Year	City's Contribution Rate	Covered Payroll*	City Contribution**		Annual Pension Cost***
2009-10	52.36%		$ 13,200,000	Projected	
2008-09	50.21%		$ 12,500,000	Projected	
2007-08	45.75%	$ 24,695,779	$ 8,794,259	Actual	$ 12,518,593
2006-07	40.02%	$ 23,863,923	$ 7,388,016	Actual	$ 10,345,517
2005-06	38.34%	$ 23,746,840	$ 6,831,086	Actual	$ 9,850,818
2004-05	28.68%	$ 24,104,871	$ 6,795,690	Actual	$ 7,318,828
2003-04	23.83%	$ 22,816,675	$ 5,891,663	Actual	$ 5,891,663
2002-03	21.65%	$ 22,142,466	$ 5,196,810	Actual	$ 5,196,810
2001-02	19.78%	$ 20,222,061	$ 4,493,908	Actual	$ 4,493,908
2000-01	20.52%	$ 19,046,000	$ 4,497,049	Actual	$ 4,497,049
1999-2000	19.65%	$ 18,448,343	$ 4,049,600	Actual	$ 4,049,600
1998-99	20.74%	$ 17,893,509	$ 3,945,188	Actual	$ 3,945,188
1997-98	20.65%	$ 16,616,974	$ 3,686,008	Actual	$ 3,686,008
1996-97	19.19%	$ 15,205,892	$ 3,111,237	Actual	$ 3,111,237
1995-96	14.44%	$ 14,816,363	$ 2,578,429	Actual	$ 2,578,429

*The contribution rate is applied to actual payroll each pay period and the resulting contribution is deposited into the fund's account on a biweekly basis. The covered payroll amount shown is the end-of-year payroll amount; thus, the payroll amount multiplied by the contribution rate will not equal the actual contributed amount.

**Actual amounts were taken from Page 14 of the June 30, 2008 Actuarial Report.

***The Annual Pension Cost figures were taken from Page 15 of the June 30, 2008 Actuarial Report and were the same as the City's Contribution amount until 2004-05.

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION SYSTEM
PARTICIPANTS

Participants As of June 30, 2008	Police	Fire	Total	Percent of Total
Active Employees	299	206	505	51.85%
Age and Service Retirees	120	141	261	26.80%
Disability Retirees	60	61	121	12.42%
Beneficiaries	35	45	80	8.21%
Vested	6	1	7	0.72%
Total Retirees	221	248	469	48.15%
Total	741	702	974	100%

Approximately 61 of the 505 active employees were hired after June 1, 2006; thus, their benefit plan is different from those hired prior to June 1, 2006. We refer to this group of employees as having a TIER II benefit structure under the system.

CITY OF SPRINGFIELD
POLICE AND FIRE PENSION SYSTEM
HISTORY OF FUNDED RATIO
Assets as Percentage of Accrued Liabilities

AS OF	FUNDED RATIO	ACTUARIAL ASSET VALUE	ACCRUED LIABILITY
June 30, 2008	**47.60%**	$ 140,780,239	$ 295,579,925
June 30, 2007	50.00%	$ 138,890,814	$ 277,861,524
June 30, 2006	50.60%	$ 133,494,217	$ 263,813,767
June 30, 2005	52.00%	$ 130,496,305	$ 250,849,523
June 30, 2004	54.60%	$ 130,419,433	$ 238,755,058
June 30, 2003	66.30%	$ 129,848,871	$ 195,974,774
June 30, 2002	72.50%	$ 129,854,216	$ 179,125,555
June 30, 2001	76.90%	$ 129,479,927	$ 168,344,798
June 30, 2000	79.90%	$ 124,461,663	$ 155,782,143
June 30, 1999	77.50%	$ 116,424,865	$ 150,252,731
June 30, 1998	79.10%	$ 107,955,272	$ 136,533,065
June 30, 1997	76.30%	$ 98,471,537	$ 129,131,343
June 30, 1996	76.40%	$ 92,005,064	$ 120,470,362
June 30, 1995	78.30%	$ 87,113,039	$ 111,261,338
June 30, 1994	84.90%	$ 81,735,481	$ 96,269,283

Springfield Area Chamber of Commerce
Local Issues Public Policy Task Force

Evaluation Framework for Election Issues:

Please provide an overview of the proposed ballot issue, highlighting the benefits for the community.

This proposal seeks a 1-cent city sales tax increase solely for the purpose of funding the City's Police/Fire Pension Retirement System for a limited period that would end after either five years or when the system is fully funded, whichever occurs first. This is the specific intent of the language for the Feb. 3 ballot.

The 1-cent sales tax would generate about $40 million a year based on historical sales tax data. The pension system currently holds $101 million in assets as of Oct. 31, 2008. Its funding obligation stands at $295 million currently. That means the current unfunded liability is $194 million.

In addition to that specific ballot issue, the overall proposal includes several other new sources to contribute to restoring a healthy funding level.

• The City would increase its annual contribution rate by 1 percent to 29.88 percent of the Police/Fire payroll. This would be an additional $240,000 per year increase using General Revenue funds. The current 28.88 percent rate represents a $7.3 million City contribution, based on the 2008-09 Police/Fire payroll. (The City contributes 24.7 percent of payroll to LAGERS and Social Security for all other employees.)

For the current FY08-09 budget year, City Council committed to making the full amount recommended by the Actuary - 50 percent of Police/Fire payroll - to ensure the state couldn't withhold 25 percent (about $18 million) of all local sales tax revenue for at least four more years. The state enacted this law to force cities anywhere in Missouri to address police/fire pension plans with funded ratios below 60 percent.

This resulted in the $5.2 million budget cut from the General Fund to make a total contribution of $12.5 million. More details of the budget cut are provided in subsequent responses.

• Police and Fire Tier I employees will increase their contributions to the pension fund in 2010. The fund's actuary adjusts the employee contribution amount every five years. That will be done in 2009 and take effect in 2010. Tier 1 employees currently contribute 11.35 percent of their earnings to the pension plan.

• The City would commit at least $10 million of sufficient net revenue received either through judgment or settlement from several telecommunications companies. They owe the City back taxes on wireless phone receipts based on a series of court rulings in the City's favor, most recently from the 8th Circuit U.S. District Court. The exact amount and timetable of a settlement/judgment is not yet known, but the City Council and City Attorney's office believe the $10 million estimate of potential net revenue is realistic. Putting $10 million into the pension system would, in effect, make the City's contribution whole (in today's dollars) from the $10 million it underfunded in four fiscal years. If the City nets more than

$10 million, City Council could apply additional settlement revenue to the pension fund.

• New Police/Fire employees would be placed in the LAGERS pension system and the City's self-funded system would be closed for new hires if the tax passes. LAGERS has a specific plan for Police/Fire employees that is similar to the City's current Tier II plan. The City is developing a strategy to allow Tier II employees to voluntarily move into LAGERS. The City will still maintain a pension plan for current Police/Fire employees for an estimated 70 years, but this will allow the City to close the self-funded plan for new employees and use the larger, more stable statewide LAGERS system.

Benefits to the community:

We are very proud of our public safety services. With this year's successful accreditation of the Fire Department, Springfield is one of only 52 cities in the world to have both accredited Police and Fire departments. Our Fire Rating is ISO 2, on a scale of 1 to 10, with Class 1 being the best. The Police Department has been reaccredited four times since its first award in 1997.

One concern the City has disclosed is that additional cuts to Fire personnel could result in closing one fire station so that all the remaining stations could maintain industry-standard staffing levels. The Department is due to be re-rated for its ISO in 2009 and a closed station could be detrimental in the re-rating process.

A lower ISO rating may affect homeowner or business insurance rates depending on individual carriers' policies. A one-step decrease in the City's ISO rating would likely result in a 7 percent increase in Springfield business fire insurance premiums.

The qualities of a good community – a community where people want to live and enjoy visiting – include a safe environment, a place where the roads and sidewalks are in good repair, where job opportunities encourage talented people to live and work here, and where there are enough amenities to satisfy the generations that work to live rather than live to work. City government is the logical provider or partner on many of the services that contribute to the qualities of a good community. If the City's General Fund continues to be eroded by cutbacks due to a disproportionately large, and increasing, amount of revenue going into the Police/Fire pension system, the City won't be able to continue providing these types of services at anywhere close to current levels.

Please provide an overview of the financial history and current status of the Police/Firefighters Pension Fund, including a summary that describes the current benefit structure for Tier I and Tier II employees.

On April 2, 1946, Springfield voters approved a property tax of up to 15 mills to finance a self-funded retirement plan for police and firefighters; the employees were required to contribute 5 percent of earnings. After the fund reached $200,000, the City Council was authorized to reduce the millage, which it did to

1.5 mill.

Citizens voted in 1958 to re-set the property tax at 15 mills; the City would make a contribution sufficient to cover all projected liability payments for the next five years, less the employee contribution, which was raised to 7 percent of salary.

Because of periods of underfunding that occurred over the next two decades, City Council in 1977 adopted a minimum funding policy to ensure that the normal cost of benefits and the unfunded past-service liability amortization were made. In the early and mid '80s, the investment returns nearly tripled the assumed rate and the funded ratio rose significantly. It reached its highest funded ratio ever at 92 percent in 1990.

From 1990 to 1999, the fund slightly outperformed its assumed rate of return of 8.5 percent, but benefit increases granted in the 1990s began to affect the system and the funded ratio slowly began declining. Employee contributions were increased to 8.5 percent of salary and City contributions crept up to about 20 percent of salary.

Since 2000, the technology stock "bubble" bust and the Sept. 11, 2001 tragedy contributed to the fund underperforming the actuarial assumptions, which required the assumptions be adjusted lower. With the combination of poor market performance and lower assumptions, the funded ratio declined further. The shrinking asset base resulted in lower total investment income requiring additional City contributions each year. Beginning in 2004, the City failed to make its required contribution amount for the next four years, totaling $10 million in today's dollars, and that further lowered the funded ratio. In July 2007, the funded ratio fell to 50 percent and in FY08-09, the City made its full contribution rate, which equated to about 50 percent of the police/fire payroll.

Benefit Provisions

It is important to note that plan participants do not receive any Social Security benefits through their employment with the City of Springfield. This plan is in lieu of Social Security.

Currently, there are two tiers of employees in the plan. The Tier 1 employees were hired prior to July 1, 2006. A series of changes made to address the underfunding included creation of the Tier II plan for new employees hired after July 1, 2006. The plan changes only affected new employees. Under the City Charter, we cannot reduce or eliminate benefits already earned. It would require a public vote to reduced benefits promised, but not yet earned.

Tier I (974 active and retired employees)

The normal service retirement benefits for Tier I employees include a 2.8 percent multiplier per year of service that is multiplied by their final average salary with a maximum of 70 percent of their final average salary. Employees are eligible for retirement by meeting one of the following criteria: a) age 60; b) 25 years of service; or c) 20 years of service and age 50. Employees must retire at age 60. Employees receive a cost-of-living adjustment after age 56. Employees currently contribute 11.35 percent of their salaries to the plan. The employees

receive a return of actual contributions (without interest) they have made to the plan when they begin receiving benefits.

Tier II (61 active employees)

The primary benefits for Tier II employees include a 2.5 percent multiplier per year of service that is multiplied by their final average salary with a maximum of 75 percent of their final average salary. Employees are eligible for retirement by meeting one of the following criteria: a) after 25 years of service and reaching age 55; b) age 60. Employees must retire at age 60. Employees may receive a cost-of-living adjustment of up to 3 percent if the plan meets certain performance criteria. Tier II employees contribute 8.5 percent of salary to the plan, but do not receive the return of contribution when they retire.

A 2005 study compared the Tier 1 benefits with a survey of 12 comparable Midwestern cities. The study showed the City had the second lowest maximum benefit of the cities surveyed. The full study is available online or a copy can be sent upon request.

If approved by voters, how will this issue impact business and economic development in our area?

As you will see in a later question regarding the sales tax rates, Springfield would no longer have the lowest tax rate in the region or among the City's major metros. We believe, however, that our base sales tax rate would remain competitive and that consumers aren't likely to make a distinction among fractional differences in the sales tax rate.

Where it may impact economic development would be in using tools such as Community Improvement Districts or Transportation Development Districts where participants create a self-imposed tax district to pay for specific improvements within a geographic area. The City's higher base tax rate may make an additional increment in a CID or TDD a less attractive option for some developers.

On the other hand, if the proposed sales tax is not approved, the cuts the City would need to make to fund its increasing pension contribution rate would likely reduce public funds available for economic development. Often, tools such as CIDs and TDDs are associated with cost-share projects and infrastructure improvements that couldn't be funded unless specific projects were included in a future renewal of the capital improvements or transportation programs.

If approved by voters, how will this issue impact our community's quality of life?

Currently, this issue is overshadowing many other priorities that face city government. We are not able to move forward in many areas because of the uncertainty of funding for the Police/Fire pension system.

For the FY08-09 budget year, the City's total $12.5 million contribution to the pension system represented 16 percent of the General Fund budget. The actuarial-recommended contribution level for the FY09-10 budget, without a sales tax, would increase that amount by $530,000. It will continue to increase in

subsequent years. For next year, it would mean sustaining the $5.2 million cut and absorbing the additional $530,000 if City Council decides to make the higher contribution rate again. The General Fund cutbacks resulted in 36 eliminated positions, including Police and Fire positions. It also meant cutting revenue transferred from the General Fund to Transportation, Health and Parks funds, along with modest funding the City provides to outside agencies. For a couple of concrete examples, the street and road maintenance program has been delayed this year and the public swimming pool schedule was reduced last summer. The outside agencies provide valuable community services such as the Community Partnership, the Discovery Center of Springfield, Ozark Greenways, Urban Districts Alliance and the Chamber's Partnership for Prosperity. A portion of this year's $5.2 million contribution was one-time funds that will not be available again next year, which would result in further cuts to services.

If this new revenue stream were approved, the City could maintain its proposed higher contribution level of 29.88 percent with some ongoing cutbacks that wouldn't be as severe as this year's.

Addressing this issue now will give the City Council more flexibility to move forward with its long-term strategic planning process to address issues such as other public safety needs, stormwater needs, sustainability goals, economic development activities to grow Springfield's tax base and attract and retain young professionals, and the many other challenges facing the state's third largest metropolitan area.

If approved, how will the city sales tax compare to surrounding communities?

Springfield currently has the lowest overall tax rate (combined city, county and state) among a number of surrounding communities and the lowest city tax rate among Missouri's major metropolitan areas. (See charts in Powerpoint.) With the 1-cent increase, Springfield would move into the upper third, but would remain competitive with both surrounding communities and the larger metropolitan areas. Over time, other communities may be expected to seek this revenue source authorized by the General Assembly in 2007. By the end of five years, Springfield's tax increase would sunset.

Springfield's current city tax rate of 1.375 cents breaks down as follows: 1 cent General Sales Tax, which provides the basis of the City's General Fund; 1/4-cent sales tax for capital improvements, which sunsets in 2011; and 1/8-cent sales tax for transportation, which sunsets in 2012.

(Sales taxes for other services such as E911 and Parks are countywide taxes included in the 1.250 county sales tax rate. The state collects 4.225 percent to round out the overall 6.850 combined sales tax rate.)

What is the cost to businesses?

The 1-cent increase would equal $1 on every $100 in taxable purchases over the period of five years or the pension fund reaching fully funded status.

What is the cost to residents?

The cost to residents is the same as the cost to business cited above. It is worth noting that visitors to Springfield pay an estimated 50 percent of our sales tax revenue. By "visitors", this includes anyone who lives outside of city limits – people who work and shop in Springfield, but live outside the city along with the tourists and visitors who come to the city. People who live outside of Springfield benefit from many public services when they are in the city.

What is the City of Springfield's record of accountability with previous tax revenues?

The City is proud of its track record of accountability in delivering on commitments made to voters in its two sales tax programs to support capital improvements and transportation infrastructure improvements.

The ¼-cent capital improvements sales tax was initiated in 1989 and has been renewed by voters in 1992 (73 percent approval); 1995 (83 percent approval); 1998 (78 percent approval; 2001 (74 percent approval); 2004 (67 percent approval); and 2007 (78 percent approval). The City has fulfilled its commitment of "Progress as Promised" made in each of those referendums, which included a specific list of projects to be accomplished within the sunset timeframe. These projects range from City road improvements to school sidewalks to neighborhood improvement projects.

The 1/8-cent sales tax for transportation has made Springfield a national leader in its innovative partnership with the Missouri Department of Transportation. Voters first approved this referendum in 1996 with 57 percent approval. The program was renewed in 2000 with 82 percent approval; in 2004 with 81 percent approval and in 2008 with 81 percent approval. This program has delivered more than $100 million in high-priority transportation improvements including dual-left and other intersection improvements across Springfield; interchange improvements and pavement preservation. The City leverages its $20 million in tax revenues into an additional $40 million in county, state, federal and private funds.

In the late '70s, voters approved the 1-cent General Sales Tax. This provides approximately $40 million a year for the City's General Fund. (Other sources of revenue in the General Fund include the gross-receipts tax and other fees.) The General Fund pays for the City's core services and general administration. Approximately 56 percent of the General Fund is dedicated to the Police and Fire departments. It also covers areas such as Building Development Services, portions of basic Public Works services, Finance, City Attorney, City Clerk, City Manager, Planning, Public Information, Human Resources and Information Systems. In

General Fund departments, approximately 70 percent of the funding is for personnel and the remaining 30 percent covers equipment, supplies and services.

Is this proposal specific?

Yes. The state legislation that gave Missouri cities authorization to propose this type of referendum is very specific about how it can be used and how the ballot language can be worded. The enabling legislation allows cities to seek up to a 1-cent sales tax increase specifically for public-safety needs. Our ballot language specifies that the revenue can only be used for the Police/Fire pension fund and that it will sunset in five years or when the system is fully funded, whichever comes first. The ballot language reads as follows:

"Shall the City of Springfield impose a sales tax at a rate of 1 percent solely for the purpose of providing revenues for the Springfield Police and Firefighters Pension System with said tax to sunset upon the earlier of A) Five (5) years from the date of commencement of collection of this tax or B) the Pension System fund reaching a fully funded (100%) status as determined by an independent actuarial study conducted for the Pension System Board of Trustees?"

Does it have a sunset clause or other accountability measures?

Yes. It has the five-year sunset and also provides for an independent actuary to determine the status of the system's funding level.

One question we have received at public presentations on this proposal is whether we can reach a 100-percent funded status within five years if the current economic downturn persists and affects both revenue collections and the investment returns. The fund's actuary believes that if those conditions were to prevail longer than expected, the revenue after five years would still be sufficient to take the fund to a 80- to 90-percent funded status, which would be considered a "healthy" funded level for pension systems. At that level, the system can be expected to sustain itself through the ongoing contributions by the City and employees and the investment returns.

What other alternatives to this proposal have been considered?

This process began several years ago and many other options were either considered or implemented. Those implemented include: increasing the City contribution rate; withholding two pay increases for police and fire employees so that funding would go to the plan; reducing benefits for new hires, including the return of contribution and changing the multiplier, the minimum years of service, the COLA, and disability benefits. The new investment policy gives the Board greater investment flexibility and lowered investment fees. The City also contributed an additional $500,000 from funds realized from an earlier telecommunications settlement; excessive leave accumulation was capped.

Other items that were considered, but not implemented, included requesting the issuance of Pension Obligation Bonds (POBs). POBs are a strategy that

some plans considered to prop up their underfunding: In effect, bonds are issued and the funds then invested. The bonds are then repaid with the investment income. In effect, the system could come out ahead by using the spread between the interest paid on the bonds and the return of the investments. The pension board determined this was not a sound practice for three reasons. First, POBs are taxable, unlike other City-issued bonds. This drives up the cost of interest paid on the bonds, so the spread was relatively small. Second, this adds risk to the portfolio as many of those that have used POBs have found. Recent investment returns have been significantly less than the cost of having borrowed the money. This has increased those plans' unfundedness rather than improving it. Third, the bond market was very tight and many were going unsold, which increased the cost of this strategy.

The pension ordinance approved by the voters in 1958 authorized the City to levy a property tax up to 1.5 mills. This is not currently being collected and was proposed to City Council for consideration during this year's budget discussions even though it would only generate about $350,000 per year. The Pension Board noted that this would not solve the issue without another significant funding source. The Council did not take action on the request. The general consensus was that, although they had the authority to make the change, it would not be a wise move to re-establish it without a public vote. Property taxes are paid only by City property owners so non-residents, who do use public safety and other services when they are in Springfield, would not share in the cost.

A hotel/motel tax was briefly considered, but was also considered insufficient to address the issue. Visitors would bear all of the costs of addressing this issue, and it might negatively affect tourism revenue.

Lastly, a wide variety of sales tax options were considered. This was the funding stream studied the most after the General Assembly created enabling legislation for a public safety sales tax to give the citizens a method of addressing the pension underfunding.

The Board's study looked at sales tax rates of ¼- and ½-cent as well as the 1-cent rate, taking into account a variety of investment return rates, keeping the plan open or closing it, and various levels of asset-allocation risk. The Board very carefully evaluated all of these and concluded that the plan must be at least 90 percent funded to be self-sustaining. It also found that less than a ½-cent sales tax will not ensure it will ever reach 90 percent funding. The 1-percent sales tax level was the least sensitive to poor market returns and took the least amount of time to roll the tax back. The Board's actuary recommended a large infusion of funds as quickly as possible for the highest probability of success in restoring the system's healthy funded ratio.

How have other communities dealt with this issue?

Many communities across the country are dealing with very similar issues for their public-employee pension systems. The City of St. Louis recently faced a court order to address its pension shortfall; in February, voters there approved a sales tax increase for public safety needs, including its pension system. The City

of Vallejo, Calif., recently declared bankrupty over a failing pension system. Springfield's Police and Fire chiefs cite examples of other cities being in denial; they continue to recruit police and firefighters with promises of pensions that are also in underfunded plans. Several larger cities have even suggested that public pension plans be included in the Federal rescue plan for the financial industry. We believe that by addressing this issue now, Springfield will be at a competitive advantage over cities that are not proactively addressing similarly serious problems.

What are the consequences if voters do not approve this proposal?

We have outlined potential consequences in answers to previous questions related the City's ability to provide services and possible impact on fire insurance ratings.

We also would note this figure in explaining why we believe it is important to address this situation sooner than later: $33,000 a day. That is the amount the fund is losing daily on unrealized investment income if the system were at a healthy funding level. We believe it is critical to start infusing the fund with revenue to capture the investment income to help achieve the healthy funded level more quickly.

Beginning in December, the City's Leadership Team and City Council will review the potential impact on programs and services if the ballot issue fails and the City has to sustain the additional budget cuts outlined previously. It is our intent to provide that information for voters prior to the Feb. 3 election date. We believe it is responsible to outline specific anticipated budget cutbacks so voters will have as much information as possible to help them decide this issue.

Another area of concern is the City's bond rating. Springfield currently enjoys an Aa bond rating; if this rating drops to A, the City would pay an estimated $13 million in additional interest expense over a typical 20-year bond issue. This means more revenue going toward interest that could be used for actual projects. The problem exacerbates if the rating dropped to BBB or lower.

Summary

Thank you for your attention to this issue. We appreciate your interest and your service to the community through your volunteer work with the Springfield Area Chamber of Commerce. If you would like any additional information, the following sources are available.

On the Web: www.springfieldmo.gov/elections
E-mail questions or comments to: city@springfieldmo.gov
Request a speaker for a community meeting: Call City Manager's Office, 864-1006
For other questions, call: City Public Information Department, 864-1010

CITY of SPRINGFIELD

CITY CHARTER

City of Springfield, Missouri

February 1997

Section 6.8. Retirement plans

The scope or extent of pension benefits for city employees shall not be reduced by action of the City for those vested or receiving payments under a pension system, or for those who are members of a pension system at the time the reduction is effective, unless the reduction has been submitted to and adopted by the voters of the city.

Frequently Asked Questions

Instead of proposing a sales tax, why doesn't the City cut its budget to address the issue?

The City has indeed cut its budget in order to put more money into the pension fund, but cuts alone simply will not be enough to address the issue. For the current budget year, the City cut $5.2 million in order to pay the full, recommended amount of $12.5 million; for the 2009-10 fiscal year, the recommended amount will be more than $13 million.

The overall liability on the pension fund is about $198 million. The City's General Fund – the source from which this money comes – is about $73 million, with more than 50 percent of that funding public-safety services (police and fire). Even if the City could do away with all General Fund services and personnel for two full years, it still would not be enough to cover the liability. The bottom line is the City cannot just budget cut its way to a solvent pension fund.

Where did the money go in the four years the City's portion wasn't fully funded?

During this period, the City continued the same level of contribution as previous years. The recommended contribution, however, grew substantially faster and exceeded the amounts available in the City's budget to make the recommended contribution in those four years. The funds were not available without cutting the budget to meet the obligation, just as we did for our current year's budget when $5.2 million was cut to make the full contribution.

It was during this time the City began making other changes, such as creating the Tier II plan and other steps, to address the issue. These changes have shown positive results, but they alone are not enough to solve the problem.

If approved, how will the city sales tax compare to surrounding communities?

At 6.85 percent, Springfield currently has the lowest overall tax rate (combined city, county and state) among a number of surrounding communities. With the 1-cent increase, Springfield would move into the upper third of that list, but would remain competitive given that the difference in overall rates would be no more than about six tenths of a percent. Springfield's overall rate would be 7.85 percent. Compare that to: Marshfield at 8.058 percent; Republic, Ozark and Joplin at 7.725 percent; Branson at 7.6 percent; Willard, Rogersville and Bolivar at 7.475 percent; Nixa and Lebanon at 7.225 percent. Kansas City's sales tax rate is 7.975 percent, while St. Louis' rate is 8.241 percent.

Springfield's current city tax rate of 1.375 percent (of the 6.85 percent overall) breaks down as follows: 1 cent General Sales Tax, which provides the basis of the General Fund; 1/4-cent sales tax for capital improvements; and 1/8-cent sales tax for transportation. Sales taxes for other services such as E911 and

Parks are countywide taxes included in the 1.25-cent county sales tax rate. The state collects 4.225 percent to round out the current 6.85 combined rate.

What is the cost to businesses and residents?

The 1-cent increase would equal $1 on every $100 in taxable purchases over the period of five years or until the pension fund becomes fully funded, whichever occurs first. It is worth noting that visitors to Springfield pay an estimated 50 percent of our sales tax revenue. This includes anyone who lives outside of city limits, but who works and shops in Springfield, as well as tourists and visitors who come to the city. People who live outside of Springfield benefit from many public services while they are in the city.

Is this tax proposal specific?

Yes. The state legislation that allows Missouri cities to propose this type of referendum is very specific about how it can be used and how the ballot language can be worded. The state allows cities to seek up to a 1-cent sales tax increase specifically for public-safety needs. Our ballot language specifies that the revenue can only be used for the Police/Fire pension fund and that it will sunset in five years or when the system is fully funded, whichever comes first.

When any Missouri municipality has taxes approved for specified uses, a separate deposit account is created and the state deposits the money directly into that account.

The ballot language reads as follows:

"Shall the City of Springfield impose a sales tax at a rate of 1 percent solely for the purpose of providing revenues for the Springfield Police and Firefighters Pension System with said tax to sunset upon the earlier of A) Five (5) years from the date of commencement of collection of this tax or B) the Pension System fund reaching a fully funded (100%) status as determined by an independent actuarial study conducted for the Pension System Board of Trustees?"

What else has been done combat the problem besides the sales tax proposal?

The city has taken many steps to tackle this problem. They include: increasing the City contribution rate; withholding two pay increases for police and fire employees so that money would go to the plan; reducing benefits for employees hired after July 1, 2006, including the return of contribution and changing the multiplier, the minimum years of service, the COLA, and disability benefits; and leave accumulation was capped. The Pension Board has been restructured and now has greater investment flexibility and has lowered investment fees by 30 percent. The City increased its contribution rate to 50 percent of Police/Fire salaries for fiscal year 2008-09 (resulting in a $5.2 million budget cut). The City

also contributed an additional $500,000 of funds realized from an earlier telecommunications settlement.

Why don't Police and Firefighters pay into Social Security?

In 1946, Springfield citizens voted to create a self-funded pension plan for its police officers and firefighters. It was common then, and remains so today, for certain types of public employees such as police officers, firefighters and teachers to have these types of plans rather than Social Security. The plan replaces Social Security and disability payments for these employees. Under the City Charter, pension benefits earned cannot be reduced and pension benefits promised but not yet earned cannot be changed without a public vote.

One of the reasons municipalities chose pension plans in lieu of Social Security is that public-safety employees don't continue "street duty" to the age at which they would be eligible for Social Security. So, they would experience a long gap in benefits between the normal retirement age for their professions and the eligibility age for Social Security.

Why is the police and firefighters' retirement plan based on defined benefits rather than defined contributions?

This again goes back to the way the pension plan was set up by a public vote in 1946. At the time, defined-benefit plans were much more common, whereas today defined contribution plans, such as 401(k)s, are often used in the private sector. Defined-benefit plans are still the national norm for police and fire personnel, and changing this aspect of the plan would negatively affect recruitment for these positions. The philosophy is that fire and police personnel are taking the risk with their lives and health with the understanding that their pension is guaranteed. Injury is quite likely in these professions; therefore, knowing that an income is guaranteed (again, they receive no Social Security disability) if permanently disabled is an important consideration when applying and working in these careers.

There have been circumstances in which employees have sustained disabling injuries early in their careers. Under a defined-contribution plan, a young employee may walk away with $2,000 for a career-ending disability.

Would Pension Obligation Bonds solve the problem?

Pension Obligation Bonds, or POBs, are a strategy some plans use to prop up their underfunding. Bonds are issued and the funds then invested. The bonds are then repaid with the investment income. In effect, the system could come out ahead by using the spread between the interest paid on the bonds and the return of the investments. The pension board determined this was not a sound practice for

three reasons. First, POBs are taxable, unlike other City-issued bonds, driving up costs and making the spread relatively small. Second, this adds risk to the portfolio, as many of those using POBs have found, and could increase the shortfall rather than improve it. Third, the bond market was very tight and many were going unsold, which increased the cost of this strategy.

Isn't City Council authorized to levy a property tax without a public vote?

The pension ordinance approved by voters in 1958 authorized the City to levy a property tax up to 1.5 mills. This is not currently collected, and was proposed to City Council for consideration. This would not solve the issue without another significant funding source. The Council did not take action on the proposal. The general consensus was that, although they had the authority to make the change, it would not be prudent to re-establish it without a public vote. Property taxes are paid only by city property owners. Non-residents, who use public safety and other services while in Springfield, would not share in the cost.

Why not a ¼ cent or ½ cent sales tax instead of 1 cent?

The Pension Board looked at all of these rates, taking into account a variety of investment return rates and scenarios. The Board very carefully evaluated these and concluded that the plan must be at least 90 percent funded to be self-sustaining. It found that less than a ½-cent sales tax will not ensure 90 percent funding. The 1 percent sales tax level was the least sensitive to poor market returns and took the least amount of time to roll the tax back. The Board's actuary recommended a large infusion of funds as quickly as possible for the highest probability of success in restoring a healthy funded ratio.

How have other communities dealt with this issue?

Many communities across the country are dealing with very similar issues for their public employee pension systems. The City of St. Louis recently faced a court order to address its pension shortfall; in February 2008, voters there approved a sales tax increase for public safety needs, including its pension system. The City of Vallejo, Calif., recently declared bankruptcy over a failing pension system. Springfield's Police and Fire Chiefs cite examples of other cities being in denial; they continue to recruit police and firefighters with promises of pensions that are also in underfunded plans. Several larger cities have even suggested public pension plans be included in the Federal financial rescue package.

By addressing this issue now, we believe Springfield will be at a competitive advantage over cities that are not proactively addressing similarly serious problems.

Did the city make bad investments that lost money?

The City did not make bad financial investments, but a relatively conservative asset portfolio mix prevented investments from achieving maximum possible returns during boom times had the asset allocation been different. However, taking on more risk to achieve the greater returns could have also worked against the fund and made today's scenario even worse. The fund has lost a considerable amount of money since June 30 due to the market downturn. The Pension Board made some changes to the asset allocation two years ago and as a result, we have been told by our investment counselors that our losses since June would have been even greater had we not made these changes.

Was pension money stolen?

There has never been any money stolen from the pension fund. The fund is independently audited every year. Accounting methods for the fund's assets are subject to audit and are maintained under strict standards and rules.

If the City is, in effect, losing $39,000 a day because of the pension shortfall, why wait until July 1 to put the sales tax into effect if voters approve it Feb. 3?

State laws outline when a new sales tax becomes effective. A new tax takes effect the first day of the second quarter following the passage of the tax. In this case that timeline means July 1, 2009 is the earliest the tax could begin. The waiting period is designed to allow businesses to be notified and the Department of Revenue to make necessary changes in its office.

Why is the pension underfunded?

The current underfunding has a number of causes and occurred over a long period of time. The main reasons can be boiled down to the following issues:

The adjustment of actuarial assumptions several years ago created a more realistic assessment of lifespan predictions, anticipated years of retirement, market returns and other variables. As a result of those actuarial changes, the future funding liability increased significantly.

Poor investment returns. As a relatively small, self-funded plan, the City's self-funded pension plan had less flexibility to weather the market downturn following the technology bubble burst and the Sept. 11, 2001 tragedy.

During four fiscal years in this decade, the City did not contribute its full recommended level of funding. This equates to about $10 million in today's dollars for the total of those four years.

The fund was operating with a relatively conservative investment strategy and, therefore, didn't fully capitalize on the boom times in the stock market in the 1990s.

How big is the problem?

As of June 30, 2008, the fund had $128 million in assets. The future funding liability is estimated at $295 million, leaving a shortfall of $167 million. The fund itself has lost about $10 million more in value since June 30 during the recent period of turmoil in world financial markets.

Why a sales tax?

The actuarial firm hired by the Pension Board, Milliman, Inc., an international consulting and actuarial firm, told the Pension Board that the best way to address the shortfall would be to infuse the Pension Fund with as much revenue as possible, as quickly as possible. The proposed 1-cent sales tax could generate about $40 million a year, based on past performance of our sales tax revenue in Springfield. If the system takes in this amount of revenue for several years, along with the ongoing contributions by employees and the City, it is in a better position to sustain itself over the long term by generating investment returns to maintain a healthy funding level.

Why now?

Everyone working on this issue realizes the challenges that the current economic climate poses for this issue. We believe that is offset, however, by the necessity of addressing the issue because the pension fund is, in effect, losing the equivalent of $33,000 a day. That represents the amount of investment returns that the fund would generate if fully funded rather than the current funded level.

When does the tax go into effect, if approved?

If approved in February 2009, the tax would go into effect as of July 1, 2009.

What do the police and firefighters think about this?

Officers for the Police and Fire employee groups have been involved in developing the proposal presented on Oct. 23. The Springfield Firefighters association has endorsed this proposal. The Springfield Police Officers Association has not yet held a full membership meeting to consider it.

What if this tax doesn't get approved?

City staff will begin working before the end of 2008 to develop several scenarios for the 2009-10 annual budget. Budget scenarios will include passage or failure of the sales tax referendum. That outcome also will affect the contribution rate recommended by the actuary firm. All of that information will be used to determine the level of budget cuts that will be necessary to make. In the 2008-09 budget, the City cut an additional $5.2 million from the budget to make the full, recommended contribution to the Police/Fire Pension Fund. City Manager Greg Burris has stated that he does not believe these cuts are sustainable over multiple years without initiating programmatic cuts.

Why wasn't this problem tackled five or 10 years ago?

The worst period for the pension fund has been since 2002. After it became clear through the post 9/11 market drop and the technology stocks drop that market returns were not achieving expectations, the Pension Board and the City began addressing the issues. A number of changes were made, including the Tier II pension plan for new employees hired after July 1, 2006. Other changes that have been made include revising the actuarial assumptions; reducing investment fees by 30 percent; and changing the investment allocation policy. So, actually there have been a number of changes made through the years. It became obvious fairly quickly, however, that those changes would not be enough by themselves to turn the fund around and restore it to a healthy funding level.

Where did the money go in the years the City's portion wasn't fully funded?

The City has not made the contribution recommended by the actuary for the four years prior to the current fiscal year. The total difference between the recommended contribution and the actual amount the City did contribute to the Plan is about $10 million in today's dollars over those four fiscal years. During this period, this General Fund revenue was used to fund other important needs in the City. For example, six new positions were funded to staff new Fire Station No. 12 and new positions were funded for Emergency Communications prior to the passage of a dedicated sales tax for 911. Money also was put toward pay-plan improvements for City employees.

Why is the City still spending money on things like the Square?

The Park Central Square renovation is funded primarily by federal grant money. There is some City match funding in it that was allocated from the ¼-cent sales tax for capital improvements.

This is NOT General Fund money that could be used for the Pension Fund. Capital Improvements Sales Tax revenue cannot legally be moved into the General Fund for the Police/Fire Pension Fund or any other use other than what voters approved.

In the General Fund, there were no budget priorities approved for the 2008-09 budget year.

What about the buildings the City sold at a loss downtown?

The City believes the long-term return on the development of those properties by Missouri State University will more than offset the difference between the City's purchase price for those properties and the sales price to Missouri State. Development of the Jordan Valley Innovation Center/Brick City/IDEA Commons center is creating new jobs, investment by new companies in our community and entrepreneurial opportunities for businesses and services serving the additional population.

From a practical standpoint, the costs the City would have incurred to either raze portions of those properties or secure the facilities to prevent further decay would likely have cost about the difference in the purchase and selling prices.

The sales proceeds do not go into the General Fund, so the revenue could not be applied toward the Police/Fire pension fund.

What about this Commercial Street tax? Are you asking for two taxes?

The proposed Commercial Street Community Improvement District is for a self-imposed sales tax that property and business owners will vote on whether to levy within a specified area on Commercial Street. This will not be on a public election ballot and will only affect a specified area to pay for improvements within that area.

Will there be a legal obligation going forward to keep the fund solvent?

The City has a legal obligation to pay all benefits earned by employees. Under the City Charter, City Council cannot bind future City Councils; however, the pension obligation has traditionally been treated as a debt obligation by the City and therefore receives funding priority similar to other debt obligations.

Can't the City sell some properties, like the Ice Park, to pay for this?

If the City chose to sell assets to raise revenue for the Police/Fire Pension Fund, any debt remaining on those assets would have to be paid before any net revenue would be realized. In the case of Mediacom Ice Park, that facility is only seven years old, so it still has a debt obligation and wouldn't realize much net revenue from a sale. That would be presuming that there are interested buyers. We also believe that the Ice Park is an important community recreation asset and like other community amenities, it is publically owned so that prices can remain reasonable enough for everyone to participate. If a private investor bought it to operate at a profit, prices to participate in Ice Park activities would likely increase.

The City Council recently approved offering a City-owned parcel of property in southwest Springfield for sale because it has potential development interest and is no longer needed for a public purpose. This property, however, is an asset of the Sanitary Services Enterprise Fund so any sales proceeds will stay with this fund.

The City is in the process of reviewing its overall inventory of City properties. If there were others with similar potential, the City Council could consider additional sales. But there are certainly not enough of those types of assets available to sell to make any significant dent in the Police/Fire pension underfunding. The General Fund does not hold very many property parcels that could be sold with revenue returning to the General Fund.

What about selling City Utilities to private investors?

This is another area where we believe it is not in the long-term best interests of our citizens to privatize our municipal utility to solve this problem. A private owner would likely have to raise rates in order to make a profit after paying the operating costs of the utility and repaying the investment. Over the long term that would be much more costly to citizens than a temporary sales tax increase that is proposed to sunset after five years.

What is the formula to calculate the pensions?

The calculation for a normal service retirement is equal to the years of service times the multiplier times the average final salary. The current multiplier is 2.8 percent per year of service. The final average salary is the highest three years out of the last 10. The maximum amount the retiree can receive is 70 percent of his or her final average salary. This is for the Tier 1 part of the system that covers the majority of the current employees and the retirees.

Are any current employees allowed to use sick days or vacation days in the calculation for their pensions?

Sick leave is not used in any pension calculations. Vacation time is included due to a court case the Pension System lost in 1978 (Fraker, et al, vs. City of Springfield, et al).

Is a paid actuary involved in determining the future returns and solvency of the pension plan?

Yes, the City currently uses Milliman, Inc., an international actuarial and consulting firm based in Seattle, as the actuary for the Police/Fire Pension System. You can learn more about the firm at www.milliman.com.

Why try a 1 percent increase now, when all pensions, 401(k)s, IRA's are down due to the market, as opposed to a 1/4 or 1/2 percent increase that was mentioned previously? Based upon the fluctuations of the market, there will be a surplus or deficit at different times.

The actuary did projections based on a number of models, including the 1/4- and ½-cent sales tax rates. Either of those would take the fund significantly longer to reach a healthy funding level. The ½-cent model could take up to 20 years, for instance. That length of time creates an additional level of uncertainty, particularly regarding the stock market's performance. That, in turn, makes it more difficult to project the fund's performance and ability to get to a level that is both healthy and sustainable. He said the quickest way to improve the fund would be to infuse it with as much revenue as possible over the shortest time possible so that it would be in a better position to reach a sustainable, healthy funding level. We also believed that a sunset provision would be a very important factor for voters in considering the ballot measure. With the 1-cent rate, we have more confidence that the healthy funding level can be achieved in 5 years, rather than trying to project an accurate sunset period for a lesser amount of sales tax with a range of 10 to 20 years for a ½-cent level and even higher for a ¼-cent level.

CITY of SPRINGFIELD

Police & Fire Pension Proposal

January 14, 2009

Table of Contents

- Where are we now?
- How did we get here?
- Four criteria we believe the proposal must meet
- What if we don’t address it?
- Proposed ballot language
- Summary
- Questions and comments

Where Are We Now?

Where Are We Now?

- Citizens voted in 1946 to create a self-funded police-fire pension (retirement) plan

- Police and Fire employees . . .
  - do not contribute to Social Security . . .
  - and do not receive Social Security benefits (retirement income or disability benefits) upon retirement as a result of City employment

Where Are We Now?
(continued)

- The Police-Fire pension (retirement) plan is a defined-benefit plan
- Why?
  - National norm for metropolitan police and fire departments
  - Pension plan replaces their Social Security plan, a defined-benefit plan
  - Encourages long-term employment
    - Training is expensive and extensive
    - Experience is valued
  - High-risk profession
    - Pension plan includes disability benefits, too

Where Are We Now?
(continued)

- What is the current fiscal status of the pension plan?

Where Are We Now?
(continued)

- Fiscal status of the police-fire pension plan (as of November 30, 2008)
  - Plan's total assets: $98 million
  - Plan's estimated commitments earned as of June 30, 2008 to provide retirement benefits to current and retired police and fire employees: $295 million *
    - ** [Values from Milliman's Actuarial Valuation as of June 30, 2008]*
  - Plan is currently $197 million under-funded based on actuarial estimates to reach 100% funding level

Where Are We Now?
(continued)

- Who manages the funds in the City's self-funded pension plan?

Where Are We Now?
(continued)

- Pension Board
  - 11-member board, including police, fire, city administrators and citizens
    - Citizens include CPA (with audit expertise), attorney, and investment/financial advisor
  - Responsibilities:
    - Administer plan provisions
    - Develop investment levels (portfolio mix) within Council-approved limits
    - Determine actuarial assumptions
    - Advised by investment consultant, money managers, financial auditor, and actuaries
    - Make recommendations to City Council

Where Are We Now?
(continued)

- Do the police officers and firefighters contribute?

Where Are We Now?
(continued)

- Police and Fire employees contribute a fixed amount
  - Depends on when they were hired . . .
  - Those hired prior to 7/1/06 contribute 11.35% of their earnings (Tier I Plan)
  - Those hired after 7/1/06 contribute 8.5% of their earnings (Tier II Plan – reduced benefits)

Where Are We Now?
(continued)

- Recent legislation requires any City in the State with an under-funded pension plan to make full contribution at least once every five years or the State can withhold 25% of the City's revenues collected by the State

- Springfield made a full contribution this year
- In order to do that . . .

Where Are We Now?
(continued)

- City budget was cut an additional $5.2 million in the current year to fund the full $12.5 million pension contribution
  - City eliminated funding for 36 positions, including a significant number of police and fire positions
  - City cut an additional $3 million from department /agency budgets, including transportation, health, parks, etc. (cut 9 positions)
  - No cost-of-living pay increase for employees in FY09
- An ongoing cut of this magnitude will not allow all existing services to be sustained

Where Are We Now
(continued)

- City Budget Information
  - General Fund: $73 million
    - General Fund includes Police and Fire departments
    - General Fund includes the City's pension contributions
  - Many other City funds are "siloed" for specific approved uses (i.e., Capital Improvements tax, Transportation tax)

Where Are We Now? (continued)

- We are not alone . . .
  - Many other municipal governments nationally are facing this same challenge
  - Many are deferring action
  - Facing a court order, St. Louis City recently passed a sales tax increase to fund their police-fire pension and public safety needs

Where Are We Now?
(continued)

- If you're interested in more information on this topic . . .
  - While America Aged by Roger Lowenstein

CITY of SPRINGFIELD

How Did We Get Here?

How Did We Get Here?

- Many factors contributed . . .
  - City did not fund full amount of actuary -recommended contribution during four budget years (FY05-08)
    - Underfunded by $10 million over four years
  - Actuarial assumptions changed to match actual experience (e.g., longer lifespans, adjusted investment returns, etc)
  - Tier I pension plan benefits were added in lieu of raises over a relatively short timeframe under an assumption of higher (1990s) investment returns

How Did We Get Here?
(continued)

- Many factors contributed . . .
  - Market returns for pension fund have been less than expected since 2000
    - Conservative investment portfolio
    - Poor economic times
      - » 9/11's impact on market
      - » Burst of "technology bubble"
  - Current economic downturn
    - Pension plan assets now at $98 million

How Did We Get Here?
(continued)

- Options have been studied since 2004
  - Sales tax
  - Property tax
  - Other taxes and fees
  - Pension obligation bonds
  - Benefit reduction for new hires (completed in 2006)

However, instead of investing all our time and energies looking backwards…

. . . WE'RE LOOKING AHEAD . . . TOWARD ADDRESSING THE ISSUE

Four Criteria We Believe the Proposal Must Meet

Four Criteria We Believe the Proposal Must Meet

- Address it now
- Stop the bleeding by applying lessons learned
- Everyone is involved
- Unified support by stakeholders

CITY of SPRINGFIELD

SO, LET'S LOOK AT THESE REQUIREMENTS ONE AT A TIME . . .

Address It Now

- Unfunded pension obligation is costing us $39,000 per day in unrealized interest
- Citizens have indicated they prefer this problem be addressed soon – don't drag it out

Stop the Bleeding by Applying Lessons Learned

- Actions already taken
  - Closed Tier I pension plan to new hires
  - Created Tier II pension plan
    - Reduced pension benefit plan instituted 7/1/06
  - Restructured Pension Board to improve communication
  - Hired new investment consultant
  - Revised investment policy to provide more investment flexibility

Stop the Bleeding by Applying Lessons Learned (cont)

- Actions <u>already</u> taken (continued)…
  - Reduced investment fees by 30%
  - Increased City's contribution rate in current year from 28.88% of police-fire salaries to 50% of police-fire salaries in current budget year to reach full $12.5 million contribution
  - Implemented vacation and holiday accumulation caps
    - Vacation and holiday accruals were limited

Stop the Bleeding by Applying Lessons Learned (cont)

- Actions <u>already</u> taken (continued)…
  - Raised retirement age by 5 years for Tier II plan
  - Removed automatic COLA for Tier II plan
  - Not refunding contributions for Tier II plan

Stop the Bleeding by Applying Lessons Learned (cont)

- Actions <u>to be</u> taken . . .
  - Implement safeguards to prevent under-funding or over-funding of pension fund
    - *Mandatory Council liaison as non-voting Pension Board member*
    - *Annual report to City Council*
    - *More oversight over day-to-day fund management*
    - *Coordinate with Internal Auditor and Actuary for best practices*
    - *Maintain City's contribution at actuary -recommended level*

Stop the Bleeding by Applying Lessons Learned (cont)

- Why not just reduce the benefits of police officers and firefighters?
  - Cannot reduce benefits already earned
    - This would be illegal
  - Cannot reduce benefits promised, but not yet earned, without a vote of the citizens
    - City Charter, section 6.8

Everyone is Involved

- Pension fund sources of revenue
  - City contributions
  - Employee contributions
  - Investment returns
  - Additional sources

Everyone is Involved
(continued)

- Proposing that everyone be involved . . .

Everyone is Involved
(continued)

- Proposal to City Council: 1-cent sales tax with sunset provision
  - Proposing a February 2009 vote
  - Generates approx $40 million annually
  - 1-cent sales tax has the potential to fund the plan
    - By comparison, a ½-cent sales tax estimated to take 10-20 years
  - Would sunset (end) when pension plan is funded to 100% level or 5 years, <u>whichever occurs first</u>
  - Equates to additional $1 on a $100 taxable sale
  - Entire 1-cent sales tax revenue would be dedicated to pension shortfall
  - Visitors anticipated to pay approximately 50% of total sales tax revenue

Everyone is Involved
(continued)

- City's contribution increases 1%
  - From 28.88% of police-fire salaries to 29.88% until tax sunsets
    - Yields an additional contribution from City of $240,000 per year
  - City's contribution will need to remain at actuary-recommended level <u>after the tax sunsets</u> to maintain the plan
  - City's un-funded obligation from FY05-08 (approx $10 million in today's dollars) will be covered by future telecommunication settlement (assuming net proceeds are sufficient)

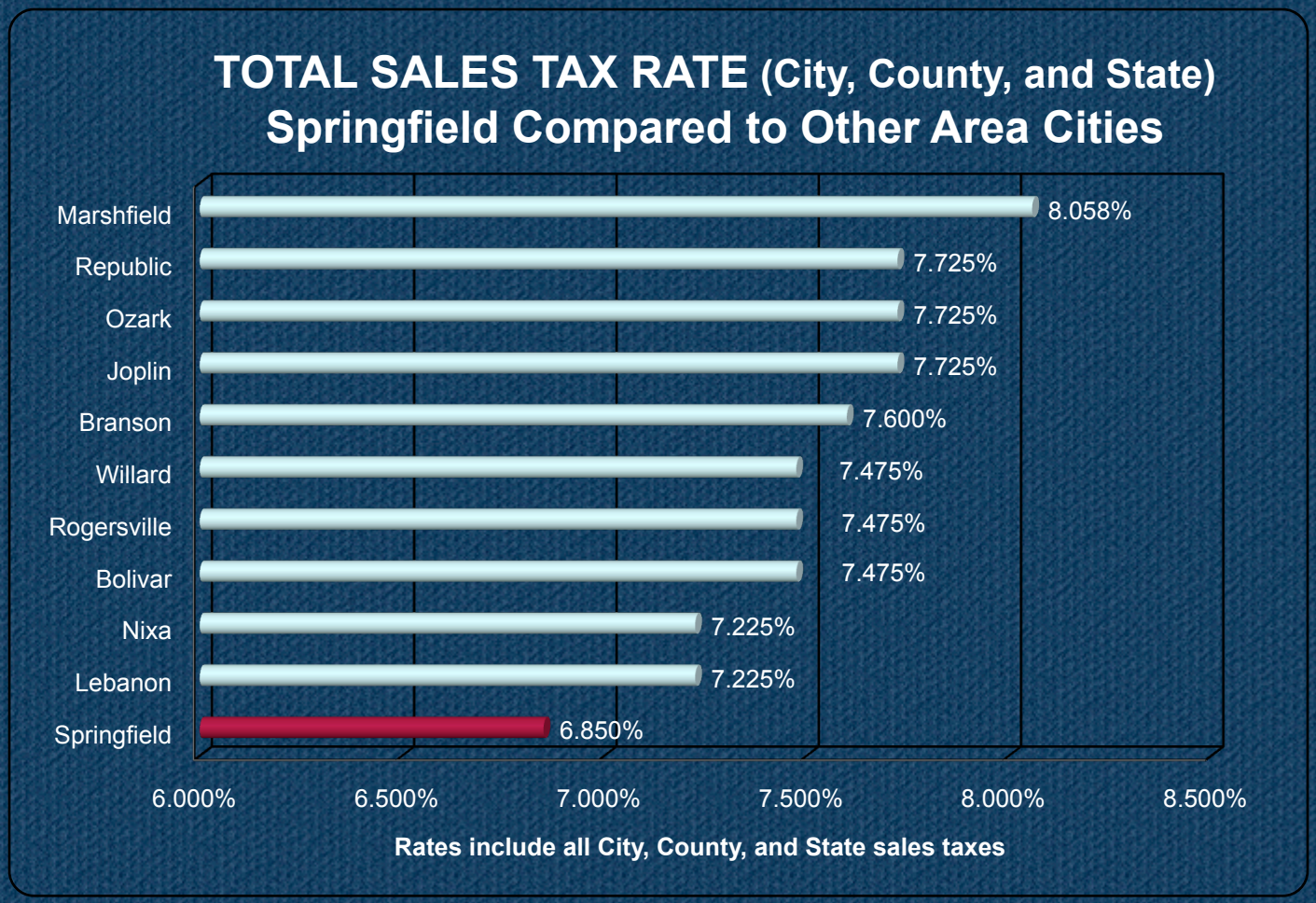
Everyone is Involved
(continued)

- Police and Fire employee contributions
  - Personal contribution percentage for Tier I will increase effective 2010 (based on actuary's estimate in 2009)
  - In prior years, police and fire employees were given reduced or no pay increases in exchange for increased pension contribution by the City
    - 2004, gave up 1% salary increase
    - 2006, gave up 3% salary increase
  - Implemented vacation and holiday accumulation caps

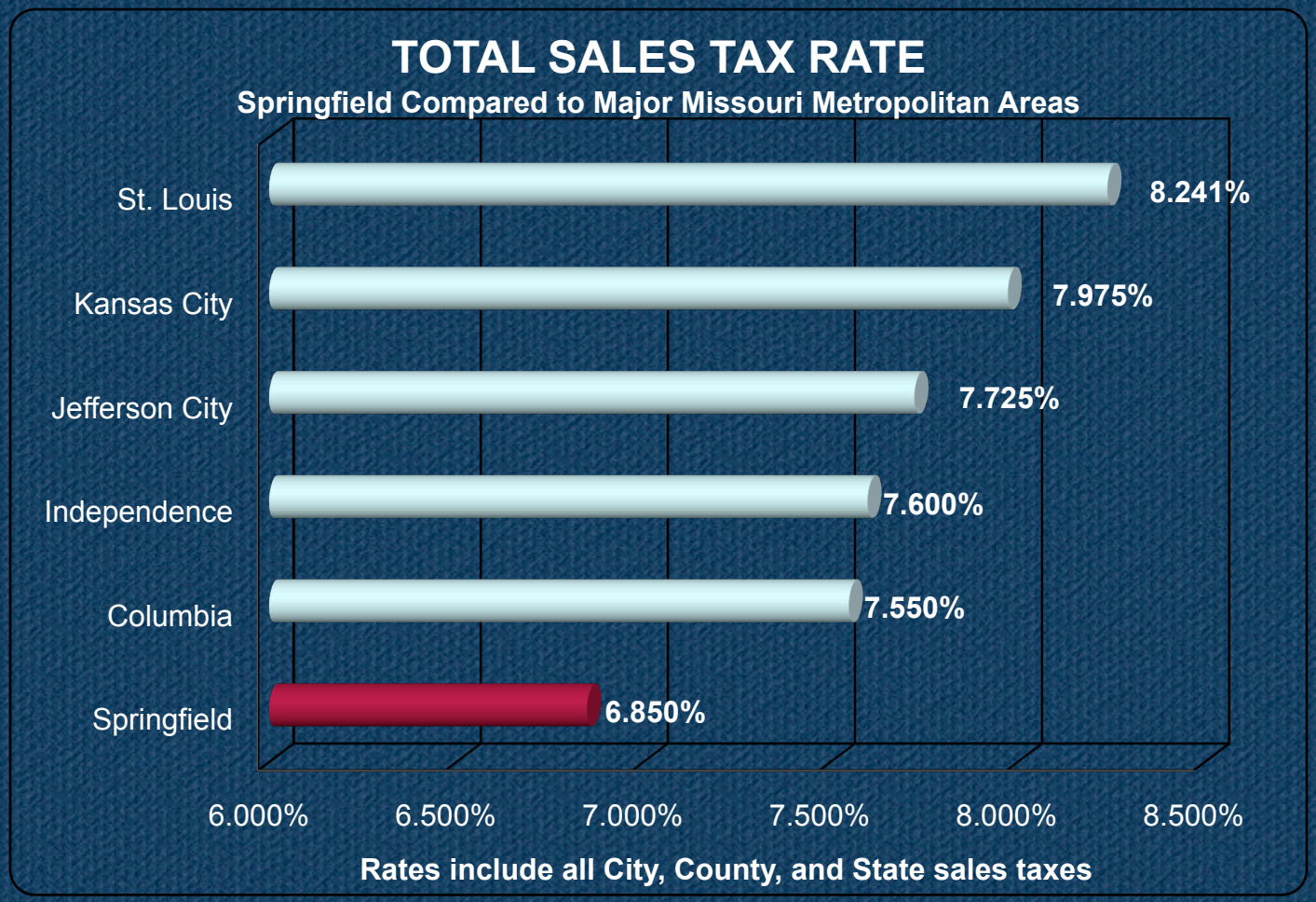
Everyone is Involved
(continued)

- How does Springfield's sales tax rate compare to other Missouri cities?

Everyone is Involved
(continued)



Everyone is Involved
(continued)



Everyone is Involved
(continued)

- Tier II Employees
  - If the sales tax passes, City would give Tier II employees the option of migrating to LAGERS
    - LAGERS is a state-wide public employee pension system
  - Would <u>not</u> reduce or eliminate City's obligation to those retirees that remain in our self-funded plan

Unified Support by Stakeholders

- Solution will require support from:
  - Citizens
  - City Council
  - Pension Board
  - Police Department
  - Fire Department
  - Other City Employees
  - Community Leaders

Unified Support by Stakeholders (continued)

- On December 15, 2008, City Council passed a resolution committing to the following if the tax passes . . .

Unified Support by Stakeholders (continued)

- Increase City's contribution to 29.88% during life of the tax
- Contribute all net funds from telecommunications settlement into the pension fund
- Enroll new police and fire employees into Statewide LAGERS plan
- Offer Tier II employees option of migrating to LAGERS plan

Unified Support by Stakeholders (continued)

- Not seek any new city-wide tax proposals during the life of this sales tax
  - Does not apply to renewals
- Identify City assets purchased by the General Fund that can be sold with proceeds to be contributed into the pension fund

What if We Don't Address It?

- If the City contributes 28.88% of police-fire payroll annually, the pension funds will deplete in 20 years (obligation continues for 50+ years)
- The pension obligation, while underfunded, is a "debt of the City" and must receive funding priority
- We forego $39,000 per day + compounding
- City's contribution rate will continue to grow over time
- Increased contribution rate = deeper cuts elsewhere in the City budget

What If We Don't Address It?
(continued)

- Deeper cuts to City budget = reduced and/or eliminated services
- Current year's budget assumed 3% revenue increase
- If sales tax does <u>not</u> pass and general revenues decline by 1.5% this year and next, City's budget shortfall for fiscal year 2009-10 will be $5,747,813
- So what cuts would be necessary to accommodate a $5.7 million shortfall? . . .

What If We Don't Address It?
(continued)

- Freeze 30 more positions
- Lay off some employees
- No across-the-board pay increase
- No merit increases
- Compensation cut for department heads, City Manager, and others
- Eliminate leadership/supervisory training program
- Reduce travel and professional development
- Eliminate citizen surveys
- Eliminate employee wellness program
- Eliminate a lot more internal programs

What If We Don't Address It?
(continued)

- Reduce Parks budget by $500,000 per year
  - Reduce operations/maintenance
  - Reduce Jordan Valley Park and Mediacom Ice Park programs
  - Reduce exhibits at the Zoo
  - Reduce recreation services
  - Reduce park administration

What If We Don't Address It?
(continued)

- Reduce Transportation budget by $250,000 per year
  - Extend street pavement preservation cycle to 26+ years
  - Goal: Resurface every 12 years
  - Deferred maintenance will be more expensive

What If We Don't Address It?
(continued)

- Reduce Health Department budget by $250,000 per year
  - Implement air permit fees
  - Eliminate house rental registration program
  - Eliminate multi-family housing safety inspections
  - Reduce animal control services
    - Eliminate weekend patrols
    - Eliminate trapping of wild animals

What If We Don't Address It?
(continued)

- Eliminate support for non-profit service partners
  - Community Partnership of the Ozarks
  - Discovery Center of Springfield
  - History Museum of Springfield/Greene County
  - Mayor's Commission on Children
  - Mayor's Commission on Human Rights
  - Ozark Greenways, Inc.

What If We Don't Address It?
(continued)

- Eliminate support for non-profit service partners (continued)
  - Ozarks Fighting Back
  - Partnership for Prosperity
  - Springfield Sister Cities Association
  - Traffic Safety Alliance
  - Urban Districts Alliance
  - Urban Neighborhoods Alliance
  - Watershed Committee of the Ozarks

What If We Don't Address It?
(continued)

- Eliminate security system
- Eliminate support for community and partnership programs
  - Downtown CID
  - Festival of Lights
  - Downtown parking enforcement
  - Downtown Wi-Fi

What If We Don't Address It?
(continued)

- Eliminate summer concerts
- Eliminate Neighborhood Assessment program
- Much more . . .

- All of these cuts don't fix the pension shortfall . . . They just allow us to remain where we are

What If We Don't Address It?
(continued)

- Police and Fire services make up 56% of City's general revenue budget
- Further reduction in Fire staff (closing a station) would likely reduce City's fire insurance rating, which could lead to higher fire insurance premiums paid by citizens and businesses
    - City fire rating scheduled to be re-rated in May 2009
- Negative impact on police/fire recruitment and retention
- Negative impact on recruitment/retention of all other City staff

What If We Don't Address It? (continued)

- Could have a negative impact on City's bond rating
  - City's current Moody's bond rating: Aa
  - If rating dropped to A, each future year's bond issuance would cost the City an additional $13 million in interest expense over the 20-year life of each issuance
    - Assumption is that future year's bond issuance would equal average of prior four years
  - If bond rating drops to A or BBB, City's interest expense increases, leaving fewer funds available for actual services and projects (e.g., transportation improvements)
- Affects Springfield's ability to move forward on other priorities until this issue is resolved
- Decline in quality of life for <u>all</u> our citizens

Proposed Ballot Language for February Vote

- "Shall the City of Springfield impose a sales tax at a rate of 1 percent solely for the purpose of providing revenues for the Springfield Police and Firefighters Pension System with said tax to sunset upon the earlier of A) Five (5) years from the date of the commencement of collection of this tax or B) the Pension System fund reaching a fully-funded (100%) status as determined by an independent actuarial study conducted for the Pension System Board of Trustees?”

SUMMARY

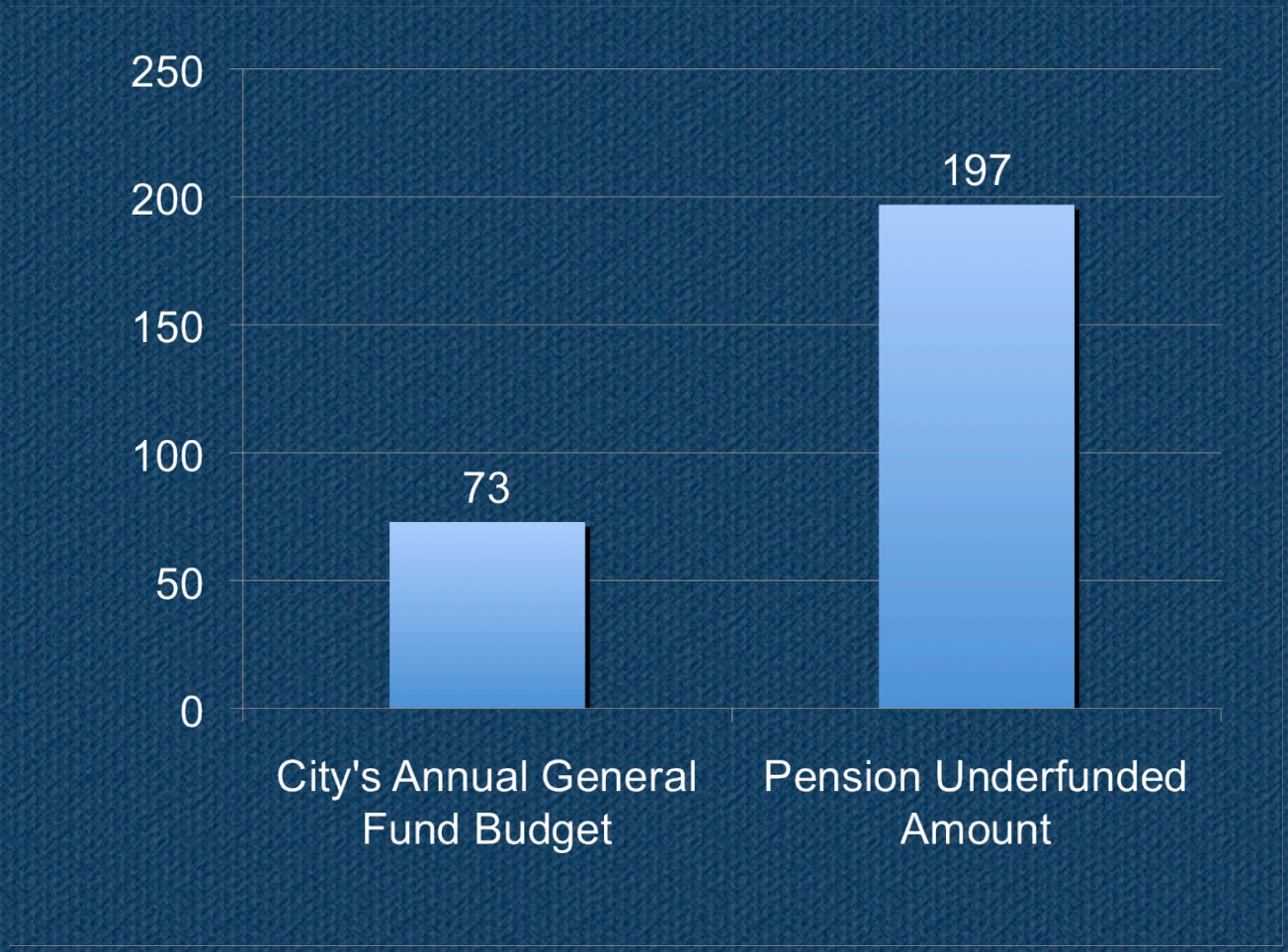
Summary

- Police and Fire employees do not receive Social Security benefits upon retirement as a result of City employment
- This is a commitment made to our Police and Fire employees
  - Police and Fire protection are core services – all citizens benefit
  - Funding their pension is a City Charter requirement
  - A debt we all owe

Summary
(continued)

- Plan is $197 million underfunded
- To put the scope of the challenge into context, the City's general revenue funds totaled $73 million this year
- Police and Fire services make up approximately 56% of City's general revenue budget
- *Thus, we can't "budget cut" ourselves out of this problem*

Summary
(continued)



Summary
(continued)

- City has already taken many actions to help "stop the bleeding"
  - Closed Tier I pension plan to new hires
  - Created Tier II pension plan
  - Pension Board adjustments
  - Reduced investment fees by 30%
  - Implemented vacation and holiday accumulation caps
  - City implemented $5.2 million cut

Summary
(continued)

- Proposal is for us all to have "skin in the game"
  - Citizens: 1-cent sales tax with sunset
  - City: Additional 1-percent contribution and makes "whole" previous years' underfunding from telecomm settlement
  - Police/Fire Employees: Additional contribution in 2010 (amount determined in 2009)
- Approximately 50% of sales tax paid by visitors

Summary
(continued)

- Determines Springfield's "quality of life"

- "If the sales tax does not pass, the resulting budget cuts will set Springfield's 'quality of life' back one or two decades" – Greg Burris

Summary
(continued)

- Delaying the solution costs us more later – better to solve it now

- By addressing this now, we will put Springfield at a competitive advantage over other cities facing this same issue

CITY of SPRINGFIELD

Questions?
Comments?

For additional information, visit www.springfieldmo.gov

CITY OF SPRINGFIELD

POLICE OFFICERS AND FIRE FIGHTERS PENSION SYSTEM

TASK FORCE REPORT

OCTOBER 24, 2008

The Task Force was charged with identifying the positive and negatives when TIER II benefits of the Police and Fire Pension System were compared to the LAGERS L-11 (State of Missouri's public sector pension system) benefit from both the employee and employer perspective. The Task Force also looked at which employee groups would be impacted by our recommendation; and if a change was recommended, the timing of any implementation action steps. Finally, the cost impact of moving future hires to LAGERS was examined by means of an actuarial study that was prepared by the Board's Actuary, Milliman.

The information was used to formulate a recommendation to the City Manager to assist in his decision of whether or not to recommend to City Council:

- *That future new hires be placed in LAGERS under the L-11 benefit, and*
  close the plan to new entrants; or

- *To leave the plan open and continue future new hires under the TIER II benefits of the current system.*

City of Springfield
Police and Fire Pension System
Task Force Report – TIER II versus LAGERS for Future Hires
October 24, 2008

Comparison of LAGERS to TIER II Benefits from Employee's perspective:

The following benefit features under LAGERS were considered the same or neutral:

- The Average or Final Salary calculation
- Vesting after five years of service for both groups
- The COLA or Post Retirement Adjustment
- The Early Retirement Benefit calculation
- Treatment of Workers Compensation and Military Service

The following benefit features were considered more favorable to employees under LAGERS:

- The Normal Retirement Age is 5 years less under LAGERS
- The Age and Service Benefit has no cap as to the percentage allowed
- The Early Retirement Age is 5 years less under LAGERS
- The Duty Disability Benefit is higher under LAGERS in the majority of cases
- The Duty Death Benefit for a spouse is based on attainment of Age 60 by the deceased
- The Non-Duty Benefit is calculated at 2.5% versus 2.1875% or .31% greater under LAGERS and the death benefit would be larger in most cases
- LAGERS is non-contributory versus the 8.5% (non-refundable) contribution that TIER II employees are required to contribute
- There is no earnings restriction under LAGERS for disability retirees
- LAGERS offers a portability feature between other jurisdictions within Missouri; thus, allows the employee to transfer benefits between cities and counties who are members of LAGERS

The following benefit features were considered negative when LAGERS is compared to the TIER II benefits:

- A spousal benefit requires a reduction in the retiree's benefit based on an option chosen prior to date of first retirement benefit payment
- A spousal benefit under LAGERS does not provide for a minimum benefit
- The time to receive approval for a disability retirement under LAGERS has been known to take a longer period of time than under the City's system
- For a non-duty benefit, the retiree must have been married to the spouse for a period of 2 years at date of retirement

- There is no minimum payment for a non-duty benefit or non-duty death under LAGERS
- Dependents – LAGERS only has a survivor's benefit that must cover both spouse and other dependents and is based on an option chosen at time of retirement

Comparison of LAGERS to TIER II Benefits from Employer's perspective:

Benefits:

- Stability of contribution rate – only allowed to increase up to1% per year
- Employer contribution rates would be lower
- Pooled Risk for paying retirees
- Investment Earnings – more potential for greater earnings on investments
- Stability of a state-wide system
- Administration of the plan would have less impact on the City and would be less costly
- Employee recruitment could benefit the City's lateral hire program due to the portability feature of LAGERS

Negatives:

- Employee retention could be an issue due to the portability feature of LAGERS
- The City would not have the option to contribute less than the determined actuarial rate for the employer's annual contribution amount

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What Groups are impacted if future new hires are moved to LAGERS?

There will be three groups of employees impacted by closing the TIER II plan provisions and moving all future new hires to LAGERS.

TIER I - This group includes all police officers and fire fighters hired prior to June 1, 2006.

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October 24, 2008

TIER II - This group includes all police officers and fire fighters hired on or after June 1, 2006. There are currently 17 firefighters in this group with ages ranging from 25 to 42; and 44 police officers with ages ranging from 22.65 to 40.61.

Future Hires – This group would include those employees hired after the City met all the requirements for enrolling future hires into the LAGERS plan if that is the decision that is recommended to City Council.

TIMING:

The Task Force is supportive of acquiring the actuarial study from LAGERS immediately and once received, posting the study for the required 45 days prior to Council action. This process could take as much or more than 90 days. Proceeding with this part of the process now would enable us to move quickly into LAGERS if the decision is made to place new hires into LAGERS and the tax referendum passes. When the tax passes and if the 45 day posting is completed, the only action remaining would be City Council approval.

Future academies should be delayed until after the February election date and City Council action is taken on the LAGERS decision.

COST IMPACT OF MOVING NEW HIRES TO LAGERS:

The actuarially determined funding projections as presented by Milliman, the Board's Actuary, on October 21, 2008, is attached as Appendix - Exhibit I. The projections were made under the parameters as set forth on page 1 of the report and for four scenarios – funding ratio targets of 90% and 100%, in combination with investment return assumptions of 6% and 7.5%.

The ballot language proposes a sunset when the plan becomes 100% funded or 5 years, whichever occurs first. If the investment return meets the long-term actuarial 7.5% return assumption and the tax is collected for five years, the plan is projected to

reach a 92.4% funding ratio when the tax sunsets. The City's cost at that point in time is approximately 13.7% of payroll and continues to decline to zero by 2028.
If the long-term actuarial investment return assumption were 6% and the tax is collected for five years, the plan is projected to reach a 70.4% funding ratio when the tax sunsets. The City's cost at that point in time would most likely need to continue at the 28.88% rate or higher. The scenario for the 6% assumption continued the tax for 8 and 9 years; therefore, the City's contribution rate is not reflected based on a sunset after 5 years.

However, it is important to note that the Board's approved actuarial assumption is 7.5% and the asset allocation is predicated on this assumption; therefore, the fund would be expected to reach the 92.4% funding ratio with a five-year tax.

At the same time that these two scenarios may be playing out, the City will be making contributions to the LAGERS plan for the future hires and possibly the 61 employees who are currently in TIER II as will be discussed below. The LAGERS contribution will continue to grow as the City's contribution to the current plan might decrease.

RECOMMENDATION:

The Task Force is in agreement that the LAGERS plan in most cases offers a better level of benefits than the TIER II benefits of our current Police and Fire Pension System. The question was posed with LAGERS as to whether we could move our TIER II employees to LAGERS in addition to future hires. Their response was that we would have to move all current employees as a group or future hires only.

An idea was presented regarding the possibility of allowing TIER II employees to voluntarily terminate their employment with the City and withdraw their contributions from the plan. They would then be re-hired under the LAGERS plan. If they were re-hired within one year, they would be entitled to re-instatement of all their service time and leave accrual balances at the date of termination. We have contacted LAGERS and are waiting on a response before we are able to absolutely know if this is a viable option for TIER II employees. Their initial indication appears to be positive but they need additional time to give us their final decision.

Several Task Force members want a response to this question before they are able to support any recommendation to close the current plan to future hires and place them under the LAGERS system. ***Response from LAGERS was received October 28, 2008 and is included in the Appendix as Exhibit II.***

Since time is of the essence related to our recommendation and to finalize the work of the Task Force, the following three questions were presented to the Task Force for their consideration and approval/disapproval:

Task Force Recommendation – Vote Outcome:

Shall the City place future new-hired police officers and fire fighters in the LAGERS, state-sponsored, retirement system if a 1% sales tax for funding the plan's shortfall is approved by the citizens of Springfield in February, 2009?

The Task Force voted 5 "yes" to 3 "no" on this question with the following comments submitted:

I only vote no because of the TIER II people. If that can be worked out, I am supportive of such plan.

If TIER II employees do not have the LAGERS option, I am concerned they would not support the tax. We need the buy-in of all groups.

I believe the City "getting out of the pension business" is key to passing the tax and ultimately resolving the City's financial problems.

I and my association cannot support moving new hires to LAGERS until the TIER II individuals are made whole through moving them to LAGERS or TIER I.

I would support if TIER II had an option or if TIER II was given benefit adjustments equal to LAGERS.

Ensures safety of all plan participants for benefits they were hired with.

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October 24, 2008

Shall the City place future new-hired police officers and fire fighters in the LAGERS, state-sponsored, retirement system if a 1% sales tax for funding the plan's shortfall is approved by the citizens of Springfield in February, 2009 and if TIER II employees are given the option of terminating their employment under the current system and being immediately reinstated under the LAGERS system without forfeiting employment-service credit or other benefits currently earned under the City's merit system?

This question was unanimously supported by the Task Force. The following comments were submitted:

I am supportive of the move to LAGERS for new hires under the above conditions. That is if the tax passes, and the situation involving TIER II employees is worked out to the satisfaction of all involved.

This is obviously the better scenario for everyone (City and TIER II employees). I do not find the impact on TIER II employees to be necessary (thought preferred) as TIER II is the benefit they were offered and promised when hired.

This would be acceptable if details were worked out and LAGERS is willing to do this.

I would support this and encourage the membership to do the same.

Shall the City immediately begin the process to place all future new-hired police officers and fire fighters in the LAGERS, state-sponsored, retirement system and close the current system regardless of other considerations?

The Task Force voted 2 "yes" to 6 "no" on this question with the following comments submitted:

I would be opposed to moving if the tax fails. Most of the feedback I have received as a pension board representative is the same. It would be much more costly to the city to fund the plan.

This option is too expensive and will be too difficult for the current plan.

I do not feel I have enough cost impact information to vote yes on this option at this time.

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Police and Fire Pension System
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October 24, 2008

Absolutely not!

This would magnify the City funding issues and would potentially enact State action quicker.

Is unaffordable by City and places pension plan at great risk.

SUMMARY:

- The Task Force is in agreement that the LAGERS plan in most cases offers a better level of benefits than the TIER II benefits of our current Police and Fire Pension System.
- Three groups would be impacted: TIER I and TIER II who are current active employees and who have two difference benefit levels under the current Police/Fire Pension System. The third group would include all future hires.
- The Task Force is supportive of acquiring the actuarial study from LAGERS immediately and once received, posting the study for the required 45 days prior to Council action. Council action and hiring of additional police officers and fire fighters should be delayed until after the February election.
- The cost impact to closing the plan and moving new hires to LAGERS is favorable so long as investment returns provide for sustainability and the City maintains its annual contribution at the actuarially determine rate after the tax sunsets.
- The Task Force's majority recommendation (5 to 3) is to move new hires to LAGERS if the tax passes. The recommendation received a unanimous approval if the TIER II employees are allowed to terminate and reinstate under the LAGERS system. The majority of the Task Force (6 to 2) would not recommend moving new hires to LAGERS if the tax fails.
- The response from LAGERS was received on October 28, 2008 subsequent to the initial release of this report. Their response is positive; therefore, we have submitted the data requested by LAGERS and expect the Actuarial study to be returned to us for posting within the next 30 days.

City of Springfield
Police and Fire Pension System
Task Force Report – TIER II versus LAGERS for Future Hires
October 24, 2008

Respectfully submitted,
Task Force Members:

Evelyn Honea
Deputy City Manager

Sheila Maerz
Human Resource Director

Dan Wichmer
City Attorney

Mary Mannix-Decker
Director of Finance

David Hall, Fire
Pension Board Representative

Jim McCulloch, Police
Pension Board Representative

Tony Kelley, President, Local 152
International Association of Fire Fighters

Scott Steck
Springfield Police Officers Association

APPENDIX

EXHIBIT I

Milliman

One Financial Plaza
501 North Broadway
Suite 550
St. Louis, MO 63102
USA

Milliman.com

October 21, 2008

Mary Mannix Decker
City Finance Director
City of Springfield
840 Boonville
Springfield, MO 65801-8368

RE: Police and Fire Retirement Fund – Requested Funding Projections

Dear Mary:

This letter summarizes our analysis and findings with respect to our most recent assignment on the Police and Fire Retirement Fund.

Assignment

Milliman was requested to perform funding projections under the following parameters:

- 1% sales tax (generating $40 million annually) would commence August 1, 2009
- Sales tax revenue would increase 1% each year
- No new entrants after June 30, 2009
- While 1% sales tax is in place, City will contribute at a rate of 29.88% of payroll
- Sales tax would sunset upon attaining a target funded ratio and then the City contribution would be actuarially determined thereafter to maintain the funded ratio
- Four scenarios – funding ratio targets of 90% and 100%, in combination with investment return assumptions of 6% and 7.5%.

Methodology

The June 30, 2008 actuarial valuation results were used as a starting point.

Because the fund is closed to new members under this analysis, amortizing the unfunded actuarial accrued liability over future payroll becomes impractical over time. Therefore, the analysis assumes the amortization methodology will switch to a level dollar basis the year the target is reached. Beginning in 2020, the 30 year amortization period is decreased by one year each year until 2050.

Finally, the return on market value of assets for year ending June 30, 2009 is assumed to be zero, and then either 6% or 7.5% annually thereafter.

Specific Scenarios

The four scenarios are all plotted on the graph labeled Exhibit 1. Numerical results are summarized on charts that follow.

- 7.5% assumption/100% target
  Yellow triangles on graph

- 7.5% assumption/90% target
  Blue "X'"s on graph

- 6.0% assumption/100% target
  Black diamonds on graph

- 6.0% assumption/90% target
  Pink boxes on graph

Analysis

Observations regarding the scenarios modeled:

- In general, the analysis appears less favorable than the studies performed 6-12 months ago. The primary reasons are that the sales tax revenue would commence 1 year later, there has been recognition of the poor investment performance for year ending June 30, 2008 and the analysis further assumes a substantial investment loss for year ending June 30, 2009.
- The 6% scenarios dip immediately because the liability values increase significantly using a 6% discount rate.
- Under both 6.0% and 7.5% scenarios, funding until the 100% target appears to overshoot the desired results long term. The 90% target scenarios seem to better match the desired long term outcomes.
- From the charts, we see that the earliest the target is reached is June 30, 2014 under the 7.5%/90% scenario.
- As the Fund matures over time, fund investment return becomes almost the sole determining factor on funding progress.
- Even though the plan is closed to new entrants in the analysis, significant liabilities still exist in 2050. Consider that a 28 year old new entrant in 2008 has a reasonable probability of receiving a monthly benefit in 2070.

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Plan Results - Yellow Triangles on Graph

7.5% Assumed Return and Discount Rate

Tax Ends after reaching 100%/Contributions Then Based on 100% Target

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 14,048,071	$ 7,617,434	$ 311,101,706	$ 137,230,964	$ 16,951,643	44.1%
2010	$ 13,080,553	$ 7,579,715	$ 327,387,556	$ 171,115,782	$ 17,855,318	52.3%
2011	$ 11,671,658	$ 7,437,585	$ 343,949,286	$ 210,871,150	$ 19,038,010	61.3%
2012	$ 9,903,174	$ 7,282,080	$ 360,340,361	$ 257,240,943	$ 19,947,245	71.4%
2013	$ 7,839,122	$ 7,099,663	$ 376,821,842	$ 308,857,405	$ 20,664,314	82.0%
2014	$ 6,255,588	$ 6,887,331	$ 393,565,947	$ 363,756,901	$ 22,091,865	92.4%
2015	$ 2,829,708	$ 2,829,708	$ 409,716,321	$ 421,409,681	$ 22,916,906	102.9%
2016	$ 1,161,640	$ 1,161,640	$ 425,860,153	$ 456,628,875	$ 24,065,017	107.2%
2017	$ 1,189,198	$ 1,189,198	$ 441,578,058	$ 469,425,767	$ 24,912,925	106.3%
2018	$ 1,241,829	$ 1,241,829	$ 457,112,772	$ 482,225,593	$ 26,000,753	105.5%
2019	$ 918,453	$ 918,453	$ 467,936,670	$ 494,795,889	$ 27,103,063	105.7%
2020	$ 522,455	$ 522,455	$ 477,498,618	$ 506,702,047	$ 28,355,536	106.1%
2021	$ 98,513	$ 98,513	$ 485,947,175	$ 517,657,685	$ 29,756,535	106.5%
2022	$ -	$ -	$ 493,023,968	$ 527,395,419	$ 30,940,636	107.0%
2023	$ -	$ -	$ 498,841,465	$ 536,386,598	$ 32,243,918	107.5%
2024	$ -	$ -	$ 503,162,798	$ 544,541,427	$ 33,582,038	108.2%
2025	$ -	$ -	$ 505,793,366	$ 551,756,535	$ 34,638,048	109.1%
2026	$ -	$ -	$ 506,913,775	$ 558,251,335	$ 35,497,866	110.1%
2027	$ -	$ -	$ 506,628,372	$ 564,200,502	$ 35,931,650	111.4%
2028	$ -	$ -	$ 505,418,119	$ 570,024,792	$ 36,567,077	112.8%
2029	$ -	$ -	$ 503,046,255	$ 575,521,554	$ 37,274,318	114.4%
2030	$ -	$ -	$ 499,401,913	$ 580,594,826	$ 37,674,542	116.3%
2031	$ -	$ -	$ 494,757,905	$ 585,554,389	$ 37,904,045	118.4%
2032	$ -	$ -	$ 489,296,981	$ 590,572,517	$ 38,125,329	120.7%
2033	$ -	$ -	$ 482,986,287	$ 595,664,191	$ 38,281,992	123.3%
2034	$ -	$ -	$ 475,852,192	$ 600,908,489	$ 38,433,171	126.3%
2035	$ -	$ -	$ 467,850,133	$ 606,336,743	$ 38,472,758	129.6%
2036	$ -	$ -	$ 459,087,166	$ 612,089,057	$ 38,530,747	133.3%
2037	$ -	$ -	$ 449,508,885	$ 618,169,068	$ 38,435,210	137.5%
2038	$ -	$ -	$ 439,239,797	$ 624,768,672	$ 38,383,288	142.2%
2039	$ -	$ -	$ 428,196,672	$ 631,878,694	$ 38,230,271	147.6%
2040	$ -	$ -	$ 416,436,106	$ 639,654,196	$ 38,008,106	153.6%

2041	$	-	$	-	$	404,005,590	$	648,221,862	$	37,687,373	160.4%
2042	$	-	$	-	$	390,978,496	$	657,749,894	$	37,274,698	168.2%
2043	$	-	$	-	$	377,425,902	$	668,413,080	$	36,780,483	177.1%
2044	$	-	$	-	$	363,413,278	$	680,385,917	$	36,163,039	187.2%
2045	$	-	$	-	$	349,055,277	$	693,896,167	$	35,499,802	198.8%
2046	$	-	$	-	$	334,381,182	$	709,107,402	$	34,772,758	212.1%
2047	$	-	$	-	$	319,441,918	$	726,213,721	$	33,985,384	227.3%
2048	$	-	$	-	$	304,287,584	$	745,419,914	$	33,143,469	245.0%
2049	$	-	$	-	$	288,964,920	$	766,940,058	$	32,245,897	265.4%
2050	$	-	$	-	$	273,525,469	$	791,005,444	$	-	289.2%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Plan Results - Light Blue Crosses on Graph 5

7.5% Assumed Return and Discount Rate

Tax Ends after reaching 90%/Contributions Then Based on 90% Target

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 14,048,071	$ 7,617,434	$ 311,101,706	$ 137,230,964	$ 16,951,643	44.1%
2010	$ 13,080,553	$ 7,579,715	$ 327,387,556	$ 171,115,782	$ 17,855,318	52.3%
2011	$ 11,671,658	$ 7,437,585	$ 343,949,286	$ 210,871,150	$ 19,038,010	61.3%
2012	$ 9,903,174	$ 7,282,080	$ 360,340,361	$ 257,240,943	$ 19,947,245	71.4%
2013	$ 7,839,122	$ 7,099,663	$ 376,821,842	$ 308,857,405	$ 20,664,314	82.0%
2014	$ 3,155,707	$ 3,155,707	$ 393,565,947	$ 363,756,901	$ 22,091,865	92.4%
2015	$ 1,625,280	$ 1,625,280	$ 409,716,321	$ 395,729,662	$ 22,916,906	96.6%
2016	$ 1,815,077	$ 1,815,077	$ 425,860,153	$ 405,746,719	$ 24,065,017	95.3%
2017	$ 1,966,013	$ 1,966,013	$ 441,578,058	$ 415,405,391	$ 24,912,925	94.1%
2018	$ 2,151,922	$ 2,151,922	$ 457,112,772	$ 424,959,634	$ 26,000,753	93.0%
2019	$ 2,007,208	$ 2,007,208	$ 467,936,670	$ 434,179,203	$ 27,103,063	92.8%
2020	$ 1,805,007	$ 1,805,007	$ 477,498,618	$ 442,668,694	$ 28,355,536	92.7%
2021	$ 1,602,524	$ 1,602,524	$ 485,947,175	$ 450,152,477	$ 29,756,535	92.6%
2022	$ 1,370,305	$ 1,370,305	$ 493,023,968	$ 456,387,732	$ 30,940,636	92.6%
2023	$ 1,145,957	$ 1,145,957	$ 498,841,465	$ 461,475,026	$ 32,243,918	92.5%
2024	$ 889,362	$ 889,362	$ 503,162,798	$ 465,200,417	$ 33,582,038	92.5%
2025	$ 620,844	$ 620,844	$ 505,793,366	$ 467,387,663	$ 34,638,048	92.4%
2026	$ 321,332	$ 321,332	$ 506,913,775	$ 468,198,925	$ 35,497,866	92.4%
2027	$ 87,200	$ 87,200	$ 506,628,372	$ 467,727,543	$ 35,931,650	92.3%
2028	$ -	$ -	$ 505,418,119	$ 466,406,830	$ 36,567,077	92.3%
2029	$ -	$ -	$ 503,046,255	$ 464,132,244	$ 37,274,318	92.3%
2030	$ -	$ -	$ 499,401,913	$ 460,851,319	$ 37,674,542	92.3%
2031	$ -	$ -	$ 494,757,905	$ 456,830,117	$ 37,904,045	92.3%
2032	$ -	$ -	$ 489,296,981	$ 452,193,926	$ 38,125,329	92.4%
2033	$ -	$ -	$ 482,986,287	$ 446,907,205	$ 38,281,992	92.5%
2034	$ -	$ -	$ 475,852,192	$ 440,994,729	$ 38,433,171	92.7%
2035	$ -	$ -	$ 467,850,133	$ 434,429,450	$ 38,472,758	92.9%
2036	$ -	$ -	$ 459,087,166	$ 427,288,717	$ 38,530,747	93.1%
2037	$ -	$ -	$ 449,508,885	$ 419,508,704	$ 38,435,210	93.3%
2038	$ -	$ -	$ 439,239,797	$ 411,208,781	$ 38,383,288	93.6%
2039	$ -	$ -	$ 428,196,672	$ 402,301,811	$ 38,230,271	94.0%
2040	$ -	$ -	$ 416,436,106	$ 392,859,046	$ 38,008,106	94.3%

2041	$ -	$ -	$ 404,005,590	$ 382,917,077	$ 37,687,373	94.8%
2042	$ -	$ -	$ 390,978,496	$ 372,547,250	$ 37,274,698	95.3%
2043	$ -	$ -	$ 377,425,902	$ 361,820,237	$ 36,780,483	95.9%
2044	$ -	$ -	$ 363,413,278	$ 350,798,612	$ 36,163,039	96.5%
2045	$ -	$ -	$ 349,055,277	$ 339,589,814	$ 35,499,802	97.3%
2046	$ -	$ -	$ 334,381,182	$ 328,228,072	$ 34,772,758	98.2%
2047	$ -	$ -	$ 319,441,918	$ 316,768,441	$ 33,985,384	99.2%
2048	$ -	$ -	$ 304,287,584	$ 305,266,238	$ 33,143,469	100.3%
2049	$ -	$ -	$ 288,964,920	$ 293,774,857	$ 32,245,897	101.7%
2050	$ -	$ -	$ 273,525,469	$ 282,352,853	$ -	103.2%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Plan Results - Black Diamonds on Graph

9

6.0% Assumed Return and Discount Rate

Tax Ends after reaching 100%/Contributions Then Based on 100% Target

Valuation Date	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 16,448,615	$ 7,617,434	$ 400,499,489	$ 135,823,750	$ 16,951,643	33.9%
2010	$ 15,802,683	$ 7,579,715	$ 418,416,079	$ 168,123,631	$ 17,855,318	40.2%
2011	$ 14,799,597	$ 7,437,585	$ 436,485,404	$ 205,544,419	$ 19,038,010	47.1%
2012	$ 13,537,405	$ 7,282,080	$ 454,252,603	$ 248,724,835	$ 19,947,245	54.8%
2013	$ 12,088,944	$ 7,099,663	$ 471,969,858	$ 295,738,053	$ 20,664,314	62.7%
2014	$ 10,497,154	$ 6,887,331	$ 489,797,002	$ 344,988,116	$ 22,091,865	70.4%
2015	$ 8,803,138	$ 6,643,526	$ 506,870,172	$ 395,838,866	$ 22,916,906	78.1%
2016	$ 6,988,710	$ 6,381,756	$ 523,769,311	$ 448,972,094	$ 24,065,017	85.7%
2017	$ 5,843,256	$ 6,083,436	$ 540,066,756	$ 504,163,905	$ 24,912,925	93.4%
2018	$ 2,820,514	$ 2,820,514	$ 555,997,296	$ 561,823,374	$ 26,000,753	101.0%
2019	$ 962,873	$ 962,873	$ 566,043,592	$ 596,262,692	$ 27,103,063	105.3%
2020	$ 600,314	$ 600,314	$ 574,637,639	$ 607,062,867	$ 28,355,536	105.6%
2021	$ 206,192	$ 206,192	$ 581,933,715	$ 616,715,338	$ 29,756,535	106.0%
2022	$ -	$ -	$ 587,680,576	$ 624,952,840	$ 30,940,636	106.3%
2023	$ -	$ -	$ 591,998,997	$ 632,107,474	$ 32,243,918	106.8%
2024	$ -	$ -	$ 594,662,085	$ 638,191,618	$ 33,582,038	107.3%
2025	$ -	$ -	$ 595,489,026	$ 643,100,692	$ 34,638,048	108.0%
2026	$ -	$ -	$ 594,674,754	$ 647,051,990	$ 35,497,866	108.8%
2027	$ -	$ -	$ 592,336,765	$ 650,215,087	$ 35,931,650	109.8%
2028	$ -	$ -	$ 588,964,695	$ 653,001,032	$ 36,567,077	110.9%
2029	$ -	$ -	$ 584,330,157	$ 655,195,310	$ 37,274,318	112.1%
2030	$ -	$ -	$ 578,333,460	$ 656,691,540	$ 37,674,542	113.5%
2031	$ -	$ -	$ 571,258,080	$ 657,786,911	$ 37,904,045	115.1%
2032	$ -	$ -	$ 563,294,723	$ 658,636,869	$ 38,125,329	116.9%
2033	$ -	$ -	$ 554,418,066	$ 659,237,198	$ 38,281,992	118.9%
2034	$ -	$ -	$ 544,662,627	$ 659,645,954	$ 38,433,171	121.1%
2035	$ -	$ -	$ 533,992,796	$ 659,871,381	$ 38,472,758	123.6%
2036	$ -	$ -	$ 522,524,038	$ 660,027,876	$ 38,530,747	126.3%
2037	$ -	$ -	$ 510,211,122	$ 660,090,785	$ 38,435,210	129.4%
2038	$ -	$ -	$ 497,187,421	$ 660,220,600	$ 38,383,288	132.8%
2039	$ -	$ -	$ 483,379,085	$ 660,373,539	$ 38,230,271	136.6%
2040	$ -	$ -	$ 468,852,703	$ 660,666,928	$ 38,008,106	140.9%

2041	$	-	$	-	$	453,665,573	$	661,185,412	$	37,687,373	145.7%
2042	$	-	$	-	$	437,900,637	$	662,050,497	$	37,274,698	151.2%
2043	$	-	$	-	$	421,638,128	$	663,384,999	$	36,780,483	157.3%
2044	$	-	$	-	$	404,952,071	$	665,305,797	$	36,163,039	164.3%
2045	$	-	$	-	$	387,964,964	$	667,976,671	$	35,499,802	172.2%
2046	$	-	$	-	$	370,713,575	$	671,490,542	$	34,772,758	181.1%
2047	$	-	$	-	$	353,255,999	$	675,964,034	$	33,985,384	191.4%
2048	$	-	$	-	$	335,649,273	$	681,516,931	$	33,143,469	203.0%
2049	$	-	$	-	$	317,946,837	$	688,270,174	$	32,245,897	216.5%
2050	$	-	$	-	$	300,206,600	$	696,353,111	$	-	232.0%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Plan Results - Pink Squares on Graph

8

6.0% Assumed Return and Discount Rate

Tax Ends after reaching 90%/Contributions Then Based on 90% Target

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 16,448,615	$ 7,617,434	$ 400,499,489	$ 135,823,750	$ 16,951,643	33.9%
2010	$ 15,802,683	$ 7,579,715	$ 418,416,079	$ 168,123,631	$ 17,855,318	40.2%
2011	$ 14,799,597	$ 7,437,585	$ 436,485,404	$ 205,544,419	$ 19,038,010	47.1%
2012	$ 13,537,405	$ 7,282,080	$ 454,252,603	$ 248,724,835	$ 19,947,245	54.8%
2013	$ 12,088,944	$ 7,099,663	$ 471,969,858	$ 295,738,053	$ 20,664,314	62.7%
2014	$ 10,497,154	$ 6,887,331	$ 489,797,002	$ 344,988,116	$ 22,091,865	70.4%
2015	$ 8,803,138	$ 6,643,526	$ 506,870,172	$ 395,838,866	$ 22,916,906	78.1%
2016	$ 6,988,710	$ 6,381,756	$ 523,769,311	$ 448,972,094	$ 24,065,017	85.7%
2017	$ 2,141,817	$ 2,141,817	$ 540,066,756	$ 504,163,905	$ 24,912,925	93.4%
2018	$ 816,979	$ 816,979	$ 555,997,296	$ 535,456,658	$ 26,000,753	96.3%
2019	$ 684,471	$ 684,471	$ 566,043,592	$ 543,720,416	$ 27,103,063	96.1%
2020	$ 498,729	$ 498,729	$ 574,637,639	$ 551,081,301	$ 28,355,536	95.9%
2021	$ 293,080	$ 293,080	$ 581,933,715	$ 557,270,246	$ 29,756,535	95.8%
2022	$ 57,846	$ 57,846	$ 587,680,576	$ 562,030,537	$ 30,940,636	95.6%
2023	$ -	$ -	$ 591,998,997	$ 565,469,414	$ 32,243,918	95.5%
2024	$ -	$ -	$ 594,662,085	$ 567,555,274	$ 33,582,038	95.4%
2025	$ -	$ -	$ 595,489,026	$ 568,226,167	$ 34,638,048	95.4%
2026	$ -	$ -	$ 594,674,754	$ 567,684,993	$ 35,497,866	95.5%
2027	$ -	$ -	$ 592,336,765	$ 566,086,070	$ 35,931,650	95.6%
2028	$ -	$ -	$ 588,964,695	$ 563,824,274	$ 36,567,077	95.7%
2029	$ -	$ -	$ 584,330,157	$ 560,667,947	$ 37,274,318	96.0%
2030	$ -	$ -	$ 578,333,460	$ 556,492,535	$ 37,674,542	96.2%
2031	$ -	$ -	$ 571,258,080	$ 551,575,966	$ 37,904,045	96.6%
2032	$ -	$ -	$ 563,294,723	$ 546,053,267	$ 38,125,329	96.9%
2033	$ -	$ -	$ 554,418,066	$ 539,898,579	$ 38,281,992	97.4%
2034	$ -	$ -	$ 544,662,627	$ 533,147,018	$ 38,433,171	97.9%
2035	$ -	$ -	$ 533,992,796	$ 525,782,509	$ 38,472,758	98.5%
2036	$ -	$ -	$ 522,524,038	$ 517,893,671	$ 38,530,747	99.1%
2037	$ -	$ -	$ 510,211,122	$ 509,428,528	$ 38,435,210	99.8%
2038	$ -	$ -	$ 497,187,421	$ 500,518,608	$ 38,383,288	100.7%
2039	$ -	$ -	$ 483,379,085	$ 491,089,428	$ 38,230,271	101.6%
2040	$ -	$ -	$ 468,852,703	$ 481,225,769	$ 38,008,106	102.6%

2041	$	-	$	-	$	453,665,573	$	470,977,783	$	37,687,373	103.8%
2042	$	-	$	-	$	437,900,637	$	460,430,411	$	37,274,698	105.1%
2043	$	-	$	-	$	421,638,128	$	449,667,707	$	36,780,483	106.6%
2044	$	-	$	-	$	404,952,071	$	438,765,468	$	36,163,039	108.3%
2045	$	-	$	-	$	387,964,964	$	427,843,922	$	35,499,802	110.3%
2046	$	-	$	-	$	370,713,575	$	416,949,827	$	34,772,758	112.5%
2047	$	-	$	-	$	353,255,999	$	406,150,876	$	33,985,384	115.0%
2048	$	-	$	-	$	335,649,273	$	395,514,983	$	33,143,469	117.8%
2049	$	-	$	-	$	317,946,837	$	385,108,109	$	32,245,897	121.1%
2050	$	-	$	-	$	300,206,600	$	375,001,322	$	-	124.9%

Certification and Disclaimers

In preparing this analysis we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this analysis is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Actuarial computations presented in this report are for purposes of projecting funded ratios under a variety of alternative scenarios. Determinations for purposes other than this analysis may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

The results will vary from those presented in this analysis to the extent actual experience differs from that projected by the actuarial assumptions.

Milliman is not a law firm and cannot render legal opinions. Our analysis is limited to the actuarial computations involved with the projection of the funding ratios. We can offer no advice or opinion on the practical or legal considerations of implementing a sales tax increase.

Milliman's work product was prepared exclusively for the City of Springfield for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the City of Springfield's operations, and uses the City of Springfield's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. The analysis, including the exhibits, should be referenced as a whole. Consideration of only subparts or excerpts could lead the user to incorrect conclusions. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

Milliman

We respectfully submit the above analysis, and we look forward to discussing it with you. We are consulting actuaries for Milliman, Inc. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Michael J. Zwiener, FSA
Consulting Actuary

Michael A. Sudduth, FSA
Actuary

MJZ/MAS/giy

Enclosure: Exhibit 1
Charts

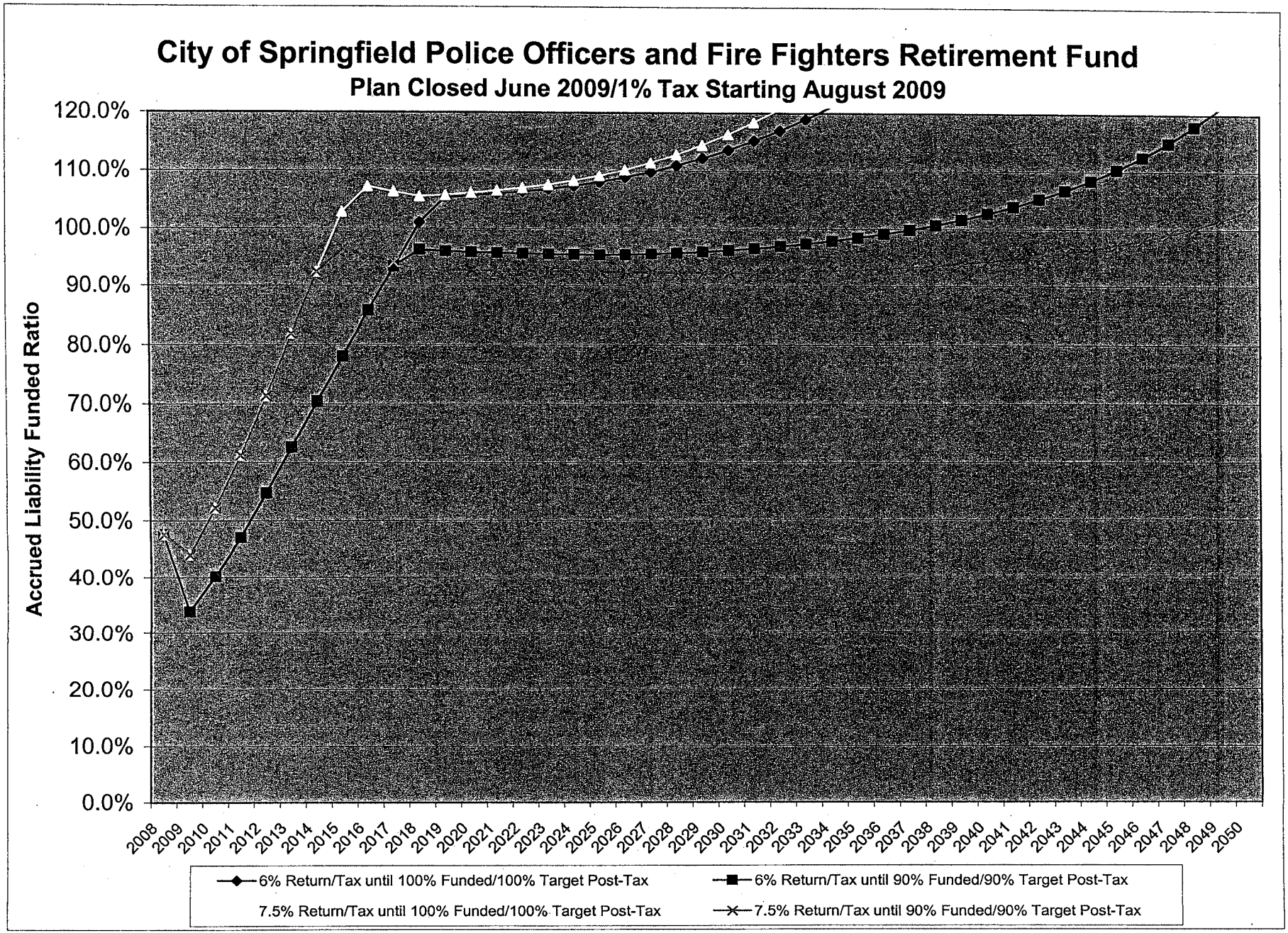

City of Springfield Police Officers and Fire Fighters Retirement Fund
Plan Closed June 2009/1% Tax Starting August 2009
Accrued Liability Funded Ratio
120.0%
110.0%
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
6% Return/Tax until 100% Funded/100% Target Post-Tax
6% Return/Tax until 90% Funded/90% Target Post-Tax
7.5% Return/Tax until 100% Funded/100% Target Post-Tax
7.5% Return/Tax until 90% Funded/90% Target Post-Tax

EXHIBIT II

Questions and Answers – LAGERS: regarding TIER II Employees EXHIBIT II

Keith -
Thanks for taking the time to discuss the City's questions regarding the issues surrounding the possible implementation of LAGERS for our public safety personnel. I thought I would follow up with you to see if you and LAGERS staff have had a chance to discuss some of the issues. I have also added some new questions as well.

1) If the City elects to move public safety new hires into LAGERS, what concerns, if any, would need to be addressed with LAGERS if some or all of the current TIER II employees (approximately 60 individuals) exercise their right to voluntary quit and request reinstatement under the City's Merit Rules after the LAGERS plan has been implemented and after their previous pension plan has been closed? In all of these circumstances, the employees would not be vested in their former pension plan and would receive a refund of their contributions.

   Section 70.630 RSMo. provides for the coverage of new hires only for police and fire employees under LAGERS. Should a current employee exercise his/her right to voluntarily quit and then the city were to reemploy/reinstate such employ after the adoption of LAGERS for new hires of the police and fire groups, it appears that such new reemployment would place the individuals in the LAGERS plan. LAGERS would be accepting the city's declaration that such employees have been hired after such effective date. My only concern about these actions, would the public consider this a sham by the city to get employees in LAGERS?

2) If employees elect reinstatement and become a LAGERS member, what are their options for purchasing prior service credit? These employees would have service ranging from July 1, 2006 to little as November 24, 2008. Would the prior service credit be an option that the employee and/or the employer could purchase? If yes, please describe how we determine the cost of this option.

   Should effected employees have prior service with the city, such service would not automatically be granted such employee. Section 105.691.5 RSMo. provides that upon vesting in LAGERS, such employee may purchase such prior service. After these employees are vested with 5 years of service, this option falls to each individual. The amount of the prior service cost will be the present value of the additional months being added to the existing benefit program.

3) If our public safety employees in TIER II elected to request reinstatement and became a LAGERS member, what length of break in service from the termination to the reinstatement is required by LAGERS, if any?

   LAGERS has no policy pertaining to reemployment/reinstatement of employees. LAGERS would defer to local policies concerning such activities. Our only concern would be that there is an official termination and reemployment, thereby making the employee a new hire after such coverage date. Please be aware, that all LAGERS members have a free 6 month period before

wages are reported on behalf of the employee's. Therefore employees that have never participated in LAGERS would not officially be reported to LAGERS until they have fulfilled this 6 month period.

4) What does LAGERS need from the City to request an actuary to determine the cost of moving our new hires to the LAGERS L-11 plan? How long would it take LAGERS to provide a response?

   I believe LAGERS would need demographic information (birth date, salary, hire date, sex, salary, etc) to calculate the appropriate contribution rate for new hires covered under the system. It would seem appropriate to collect this information on the Tier II employees with the belief that future hires will reflect this group. The actuarial valuation is typically completed within 1 month from the receipt of data.

   One additional comment is that LAGERS views the police and fire employees as separate groups. As such, the demographic data would need to be identified as police or fire and separate contribution rates would be established for each department.

   I realize this is a very important decision for the City of Springfield. If you desire a presentation to employee or management groups please reply and LAGERS will be happy to provide for such educational sessions. Keith

Again, thanks for taking the time to discuss this matter with me last week. The City is hoping to move this issue forward in the very near future, but feel the answers to the questions above are necessary before proceeding. If you have any questions, please do not hesitate to contact me at (417) 864-1601 or Evelyn Honea at (417) 864-1004.

Sheila Maerz

GRS

Gabriel Roeder Smith & Company
Consultants & Actuaries

One Towne Square
Suite 800
Southfield, MI 48076-3723

248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

November 10, 2008 FAX

Mr. Keith Hughes
Assistant Executive Secretary
Missouri Local Government
Employees Retirement System
P.O. Box 1665
Jefferson City, Missouri 65102

Re: The City of Springfield (#981) – Police and Fire Departments

Dear Keith:

As you requested, we have determined the initial computed employer contribution rates for the City of Springfield Police and Fire Departments based upon the requested benefit provisions (L-11, 3 year FAC, non-contributory, and regular retirement). It is our understanding that only new members will be covered by LAGERS while existing police and fire employees will remain in the City of Springfield Policemen and Firemen's Retirement Fund (hereafter referred to as Retirement Fund). The date of the initial valuation was June 30, 2008. Presented below is the development of the computed employer contribution rates (expressed as a % of active payroll):

	Police	Fire
Current Service Cost	13.90%	18.70%
Disability Cost	0.60	0.60
Prior Service Cost	0.00	0.00
Total Employer Contribution Rate	14.50%	19.30%

For purposes of performing the initial actuarial valuation, data for members hired in the 5 years prior to June 30, 2008 was used. A summary of the active member data used for the initial valuation is shown below:

Active Members as of June 30, 2008

Division	Number	Payroll	Avg. Payroll	Avg. Age	Avg. Service
Police	86	$3,148,222	$36,607	29.3 years	2.8 years
Fire	50	$1,874,757	$37,495	32.3 years	3.2 years

The average age at hire for the members used in this initial actuarial valuation appears to be consistent with the average age at hire for the total active population as of June 30, 2005 (the last time an initial actuarial valuation was performed for these groups).

The long term cost (C) of providing retirement benefits depends only on the benefits (B) that are paid to participants, the expenses (E) of administering the plan, and the investment return (I) generated on invested assets: $C = B + E - I$. For a given level of benefits, the cost of providing those benefits is lowered if administrative expenses are lowered or investment income is increased.

The long term costs are financed by a series of employer and member contributions. The series of contributions is flexible. If more is contributed in early years, less has to be contributed in later years, and vice-versa. Over time the series of contributions has to have the same value as benefits and expenses. The actuary determines each year's contribution based on a funding method and a set of actuarial assumptions. The chosen funding method and assumptions do not affect the long term cost of providing retirement benefits, but have a strong impact on the series of contributions made to fund the benefits.

The methods and assumptions used in the initial valuation were the same as those used in the LAGERS annual actuarial valuations as of February 29, 2008 (last updated for the February 28, 2006 valuation). In particular, the assumed rate of investment return was 7.5% and the assumed rate of payroll growth was 4.0%. Please note that the LAGERS actuarial assumptions are different from those used in the Retirement Fund.

If the City participates in LAGERS for new hires in the Police and Fire Departments, the actuarial valuations will be prepared using the LAGERS assumptions, as adopted by the LAGERS Retirement Board. If future experience follows the LAGERS assumptions, the contribution rates calculated in this report will remain approximately level. If future experience is worse than the LAGERS assumptions, the contribution rates will gradually increase over time.

The actuary submitting this report is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Please call if you have any questions.

Sincerely,

Mita Drazilov

Mita D. Drazilov

MDD:bd

cc: Judy Kermans
Michael Gano

POLICE AND FIRE RETIREMENT FUND

FUNDED RATIO PROJECTION STUDIES

Michael J. Zwiener, FSA, with Milliman is the consulting actuary for the Police and Fire Pension Board of Trustees (Board). Since the beginning of 2008, the Board has commissioned Milliman to prepare five reports to measure the funded status of the plan under various scenarios. The first few pages of each report explain the scenarios that were outlined by the Board for the study. Five reports are included in this section of the notebook and are briefly summarized as follows:

February 27, 2008 – Modeled the impact on plan-funded ratios of an additional revenue stream to the fund under both an "open group" and "closed group" scenario from a .25% and .50% sales tax when investment assumptions under the plan are met and also when the plan has poor experience. The goal for the study was to determine how long it would take for the new revenue stream to raise the fund's funded ratio from its current level of 50% (at the time) to a target of 90% under the various scenarios.

March 6, 2008 – Additional scenarios were added to the February 27th report as outlined on page 1 and 2 of the report as a supplement to the February 27th report.

April 14, 2008 – This report was requested to determine if the City's 28.88% contribution rate (in place in FY08) would be sufficient to fund the plan if it became "frozen" as of July 1, 2008. This meant that no new entrants would be allowed in the plan and no service or pay of current active members would be recognized after June 30, 2008, essentially closing the plan. All benefits of retirees and actives through June 30, 2008 would be recognized and maintained by the closed plan until the last benefit was paid in the future.

October 21, 2008 - Modeled the impact of a 1% sales tax revenue stream under various funding targets and return assumptions for a plan that would be closed to new members. This study was the basis for the tax referendum presented to voters in February, 2009.

December 31, 2008 – This was a supplement to the October 21st study to determine the impact to the plan if Tier 2 employees (those hired after June 1, 2006) were no longer members of the plan using the same assumptions as outlined in the earlier study.

One Financial Plaza
501 N. Broadway, Suite 550
St. Louis, MO 63102
314-231-3031 Fax 314-231-0249
www.milliman.com

MEMORANDUM

TO: Evelyn Honea
Mary Mannix

FROM: Mike Zwiener

DATE: February 27, 2008

RE: Police & Fire Retirement Fund – Funded Ratio Projections

Milliman was requested to project expected funded ratios over the next several years taking into account a variety of proposed additional funding sources. The results of our analysis follow. The stated goal is to raise the Fund's funded ratio from its current level of 50% to a target of 90%.

Funded Ratio – Defined

There are a variety of ways to measure the funded status of a retirement plan. In the public retirement plan sector, the most common is:

$$\frac{\text{Actuarial (Smoothed) Value of Assets}}{\text{Actuarial Accrued Liability}}$$

This is the measure that was used throughout this analysis.

Additional Funding Sources – Proposed

We were asked to model the impact on plan funded ratios of additional revenue from a sales tax. We used the City's estimate that each quarter percent of sales tax would generate approximately $10 million annually.

In all scenarios in our analysis, we assumed the new revenue stream to the Fund would start July 1, 2008. Should the commencement be pushed back a few months, it would not materially impact our findings.

It was assumed that the revenue from sales tax receipts would increase 3% annually.

Under the closed group analysis, all but one of the scenarios included another proposed additional revenue source. If future hires are covered under LAGERS, the expectation is that the associated cost will be about 18% of payroll. We assumed that the difference between the City's current 28.88% contribution rate and the expected 18% contribution rate to LAGERS would be contributed to the plan. We have referred to this as the "LAGERS Differential Contribution".

Closed Group/Open Group

The same scenarios were modeled under both "open group" and "closed group" scenarios.

"Closed Group" means that no new entrants after a certain date (for purposes of this analysis we used June 30, 2008) would become covered by the plan. Instead, future hires would be covered under the LAGERS system. The program of benefits for the current retirees and active members in the plan would be unchanged.

"Open Group" assumes that new members will continue to enter the plan. For purposes of these projections, we have assumed that the number of new entrants will exactly match the number of members leaving (retirement, turnover, etc.) so that the active member headcount stays at the same number over the projection period. New entrants are assumed covered under the terms of the plan as amended in 2006 for new hires.

Specific Scenarios

The specific scenarios modeled under both closed group and open group assumptions are:

- 0% Sales Tax/Assumptions Met
  Black line on graphs, detail on Exhibits 1-3 and 2-3

- 0.50% Sales Tax/Assumptions Met
  Pink line on graphs, detail on Exhibits 1-4 and 2-4

- 0.50% Sales Tax/Poor Experience
  Yellow line on graphs, detail on Exhibits 1-5 and 2-5

- 0.25% Sales Tax/Assumptions Met
  Blue line on graphs, detail on Exhibits 1-6 and 2-6

- 0.25% Sales Tax/Poor Experience
  Purple line on graphs, detail on Exhibits 1-7 and 2-7

- 0.25% Sales Tax/Assumptions Met/No LAGERS Differential Contribution
  Brown line on graph, detail on Exhibit 1-8 (no open group scenario)

"Poor Experience" was arbitrarily defined as a 3% annual return on investments for each of the first 10 years and 7.5% thereafter. In addition, annual actuarial losses of 1% of accrued liability were assumed from non-investment sources. If actual investment experience turns out to fall between the assumed 7.5% rate and what we have defined as "Poor Experience" the resulting funded ratios would fall between these two extremes.

Under all scenarios, sales tax income was assumed to stop once the funded ratio reached 90%.

Closed Group Analysis (Exhibits 1-1 through 1-8)

Under the closed group scenarios, all post June 30, 2008 hires are assumed to be covered by LAGERS. Thus, the headcount of covered members will slowly decline over time, as will covered payroll.

Exhibit 1-1

This exhibit is a summary in graph form of the plan's funded ratios under all 6 scenarios over the next 27 years.

Several observations are of note:

- If there is no sales tax revenue and the City does not otherwise increase the 28.88% contribution rate, the fund will become exhausted in about 20 years. (black line)

- If assumptions are met, both the 0.25% and 0.50% tax rates will enable the plan to reach the 90% target, although it will take more than twice as long at the 0.25% rate (pink and blue lines).

- If the plan has "Poor Experience" (as defined above), the 0.50% tax will be sufficient to overcome that and still eventually reach 90% (yellow line). However, the 0.25% tax rate would not be sufficient if the plan has poor experience.

- The impact of the LAGERS Differential Contribution is not significant compared to the impact of investment returns and sales tax revenue. This can be seen by comparing the blue line and the brown line – the only difference between the two is that the brown line does not include the LAGERS Differential Contribution while the blue line does.

- The impact of the level of the sales tax is significant (compare pink line vs. blue line and yellow line vs. purple line).

- The impact of Poor Experience vs. meeting assumptions is significant (compare pink line vs. yellow line and blue line vs. purple line).

- Once the lines reach 90%, the sales tax revenue ceases. Note that the lines remain relatively level and do not decrease.

Exhibit 1-2

This exhibit is simply a summary in table format of the funded ratios displayed in the graph on the preceding exhibit.

Exhibits 1-3 through 1-8

These exhibits provide the detailed numbers behind the graph in table format for each of the six closed group scenarios. Comments regarding these exhibits:

- The top rows (year ended June 30, 2007) are actual, historical numbers

- Although the extra $1 million of contribution ($500,000 ad hoc from the City and $500,000 from the phone settlement) for the current year is not specifically displayed in the June 30, 2008 row, it was taken into account for purposes of the projections.

Open Group Analysis (Exhibits 2-1 through 2-7)

The exhibits for the open group scenarios are arranged in the same manner as the closed group exhibits. Exhibits 2-1 and 2-2 summarize the funded ratios for all scenarios in graph form and table form, respectively. Exhibits 2-3 through 2-7 provide the detailed numbers behind each of the scenarios.

Note that under the open group analysis, there are no LAGERS Differential Contributions, so the final scenario (which would have been Exhibit 2-8) would be redundant and is not shown.

Observations Regarding the Open Group Scenarios

- Although it takes a few more years than under the closed group version, no sales tax revenue will eventually result in the fund becoming exhausted.

- While the funded ratio patterns are remarkably similar when comparing the open and closed group scenarios, note that the absolute size of the assets and liabilities grows much faster under the open group scenarios and the absolute ***difference*** in the size of the fund grows over time. Thus, the impact of investment experience (good and bad) will have a greater absolute impact on the plan if it remains open to new entrants.

Demographic Data

This analysis was based on the June 30, 2007 participant census that was used in the June 30, 2007 actuarial valuation. Details of this demographic information can be found in the June 30, 2007 actuarial valuation report.

Assumptions

The analysis was based on the same assumptions as those used in the June 30, 2007 actuarial valuation. These can be found in the June 30, 2007 actuarial valuation report.

Due to the specific nature of this analysis, the additional assumptions were made:

- Sales tax revenue was assumed to increase 3% annually from the initial year.
- For the open group projections, the active member headcount was assumed to remain constant in all future years.
- Variations in experience under specific scenarios are specifically noted in the commentary.

Certification and Disclaimers

In preparing this analysis we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this analysis is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Actuarial computations presented in this report are for purposes of projecting funded ratios under a variety of alternative scenarios. Determinations for purposes other than this analysis may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

The results will vary from those presented in this analysis to the extent actual experience differs from that projected by the actuarial assumptions.

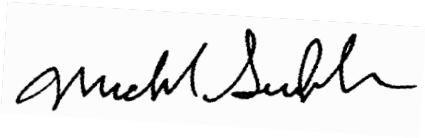
Milliman is not a law firm and cannot render legal opinions. Our analysis is limited to the actuarial computations involved with the projection of the funding ratios. We can offer no advice or opinion on the practical or legal considerations of implementing a sales tax increase.

Milliman's work product was prepared exclusively for the City of Springfield for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the City of Springfield's operations, and uses the City of Springfield's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. The analysis, including the exhibits, should be referenced as a whole. Consideration of only subparts or excerpts could lead the user to incorrect conclusions. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We respectfully submit the above analysis, and we look forward to discussing it with you.
We are consulting actuaries for Milliman, Inc. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Michael J. Zwiener, FSA
Consulting Actuary



Michael A. Sudduth, FSA
Actuary

MJZ/MAS/giy

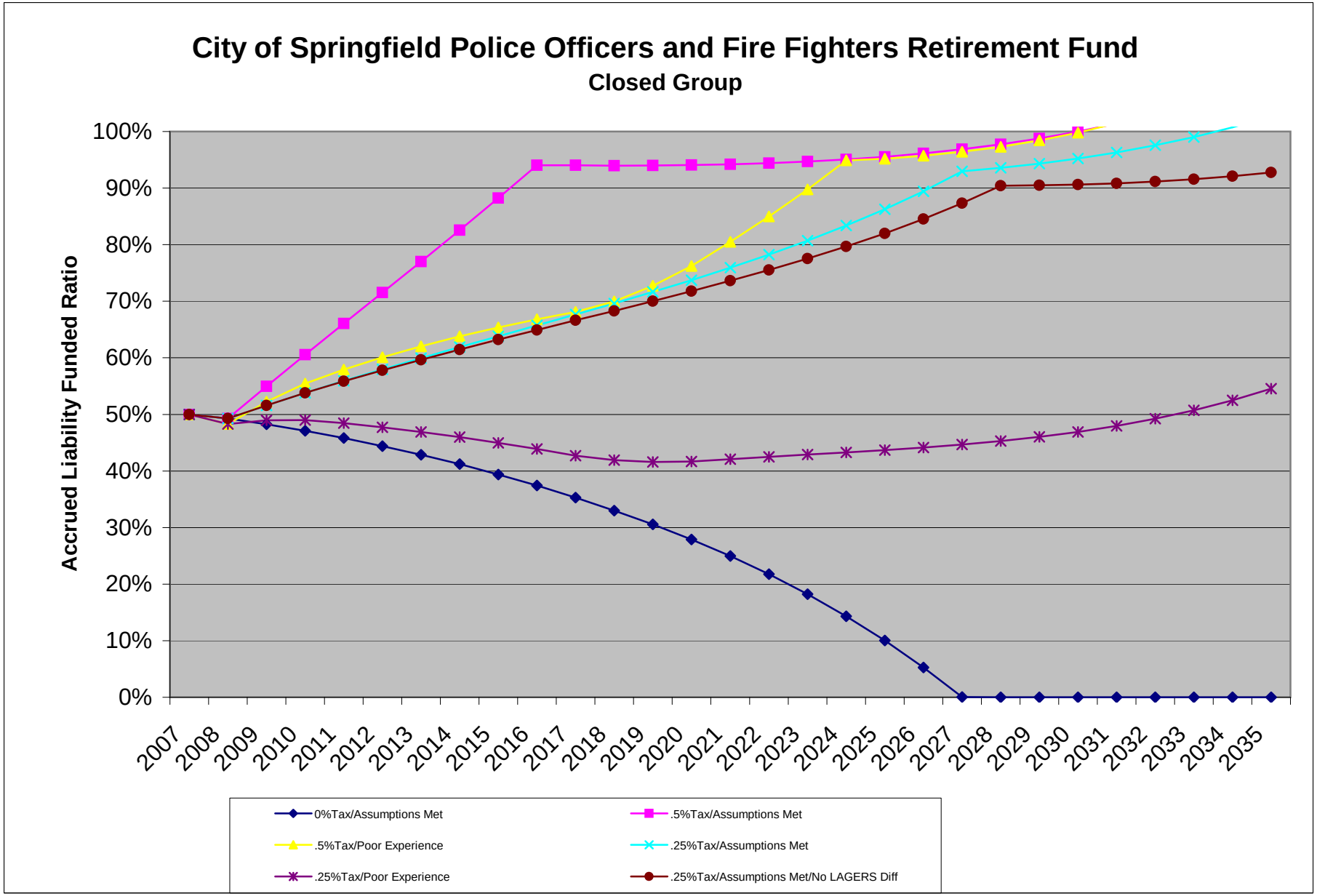

City of Springfield Police Officers and Fire Fighters Retirement Fund
Closed Group
Accrued Liability Funded Ratio
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
0%Tax/Assumptions Met
.5%Tax/Assumptions Met
.5%Tax/Poor Experience
.25%Tax/Assumptions Met
.25%Tax/Poor Experience
.25%Tax/Assumptions Met/No LAGERS Diff

Exhibit 1-2

City of Springfield Police Officers and Fire Fighters Retirement Fund

Summary of Projected Closed Group Funded Ratios

Valuation Date July 1	0% Tax Assumptions Met	.5% Tax Assumptions Met	.5% Tax Poor Experience	.25% Tax Assumptions Met	.25% Tax Poor Experience	.25% Tax Assumptions Met No LAGERS Differential
2007	50%	50%	50%	50%	50%	50%
2008	49%	49%	48%	49%	48%	49%
2009	48%	55%	52%	52%	49%	52%
2010	47%	61%	55%	54%	49%	54%
2011	46%	66%	58%	56%	48%	56%
2012	44%	72%	60%	58%	48%	58%
2013	43%	77%	62%	60%	47%	60%
2014	41%	83%	64%	62%	46%	61%
2015	39%	88%	65%	64%	45%	63%
2016	37%	**94%**	67%	66%	44%	65%
2017	35%	94%	68%	68%	43%	67%
2018	33%	94%	70%	70%	42%	68%
2019	31%	94%	73%	72%	42%	70%
2020	28%	94%	76%	74%	42%	72%
2021	25%	94%	80%	76%	42%	74%
2022	22%	94%	85%	78%	43%	76%
2023	18%	95%	**90%**	81%	43%	78%
2024	14%	95%	95%	83%	43%	80%
2025	10%	96%	95%	86%	44%	82%
2026	5%	96%	96%	89%	44%	85%
2027	0%	97%	96%	**93%**	45%	87%
2028	0%	98%	97%	94%	45%	**90%**
2029	0%	99%	98%	94%	46%	90%
2030	0%	100%	100%	95%	47%	91%
2031	0%	101%	101%	96%	48%	91%
2032	0%	103%	103%	98%	49%	91%
2033	0%	105%	106%	99%	51%	92%
2034	0%	107%	108%	101%	52%	92%
2035	0%	110%	111%	103%	55%	93%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Closed Group Results - 0%Tax/Assumptions Met Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 144,349,626	$ 292,919,048	49.3%
2009	$ 7,059,771	$2,751,194	$ -	$ -	$ 9,810,965	$ 148,928,497	$ 308,722,046	48.2%
2010	$ 7,012,349	$2,731,747	$ -	$ 85,657	$ 9,829,753	$ 152,932,738	$ 324,761,831	47.1%
2011	$ 6,940,465	$2,702,641	$ -	$ 177,714	$ 9,820,820	$ 156,283,152	$ 341,007,927	45.8%
2012	$ 6,780,924	$2,639,037	$ -	$ 286,733	$ 9,706,694	$ 158,529,843	$ 357,012,940	44.4%
2013	$ 6,612,285	$2,571,806	$ -	$ 396,244	$ 9,580,336	$ 159,910,675	$ 373,087,754	42.9%
2014	$ 6,424,377	$2,496,949	$ -	$ 502,923	$ 9,424,250	$ 160,475,820	$ 389,353,638	41.2%
2015	$ 6,208,100	$2,410,890	$ -	$ 627,314	$ 9,246,304	$ 159,503,319	$ 405,048,155	39.4%
2016	$ 5,971,195	$2,317,075	$ -	$ 749,549	$ 9,037,818	$ 157,443,587	$ 420,748,194	37.4%
2017	$ 5,724,035	$2,219,245	$ -	$ 878,423	$ 8,821,703	$ 153,895,141	$ 436,065,501	35.3%
2018	$ 5,449,986	$2,111,093	$ -	$1,010,545	$ 8,571,625	$ 149,021,362	$ 451,683,488	33.0%
2019	$ 5,202,735	$2,013,590	$ -	$1,141,377	$ 8,357,702	$ 142,474,552	$ 466,444,361	30.5%
2020	$ 4,933,134	$1,907,507	$ -	$1,160,722	$ 8,001,363	$ 133,985,419	$ 480,650,421	27.9%
2021	$ 4,634,218	$1,789,914	$ -	$1,303,683	$ 7,727,814	$ 123,326,994	$ 493,991,435	25.0%
2022	$ 4,320,468	$1,666,618	$ -	$1,440,533	$ 7,427,618	$ 110,125,834	$ 506,133,008	21.8%
2023	$ 3,970,768	$1,529,258	$ -	$1,580,926	$ 7,080,952	$ 94,264,142	$ 517,029,391	18.2%
2024	$ 3,601,347	$1,384,146	$ -	$1,724,592	$ 6,710,085	$ 75,438,267	$ 526,400,792	14.3%
2025	$ 3,209,120	$1,230,022	$ -	$1,868,218	$ 6,307,359	$ 53,539,339	$ 534,218,961	10.0%
2026	$ 2,815,446	$1,075,331	$ -	$1,999,948	$ 5,890,725	$ 28,424,212	$ 540,425,001	5.3%
2027	$ 2,407,361	$ 914,936	$ -	$2,159,283	$ 5,481,581	$ 136,697	$ 545,161,185	0.0%
2028	$ 2,047,115	$ 774,881	$ -	$2,299,942	$ 5,121,939	$ -	$ 548,828,415	0.0%
2029	$ 1,749,510	$ 657,858	$ -	$2,432,388	$ 4,839,755	$ -	$ 551,191,622	0.0%
2030	$ 1,476,663	$ 551,986	$ -	$2,555,410	$ 4,584,059	$ -	$ 552,083,478	0.0%
2031	$ 1,214,467	$ 450,199	$ -	$2,675,631	$ 4,340,296	$ -	$ 551,723,376	0.0%
2032	$ 1,006,819	$ 369,926	$ -	$2,774,162	$ 4,150,907	$ -	$ 550,278,483	0.0%
2033	$ 821,327	$ 297,033	$ -	$2,880,391	$ 3,998,750	$ -	$ 547,774,952	0.0%
2034	$ 663,804	$ 238,691	$ -	$2,983,903	$ 3,886,398	$ -	$ 544,349,500	0.0%
2035	$ 557,862	$ 197,867	$ -	$3,060,006	$ 3,815,735	$ -	$ 540,018,510	0.0%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Closed Group Results - .5%Tax/Assumptions Met Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 144,349,626	$ 292,919,048	49.3%
2009	$ 7,059,771	$2,751,194	$20,000,000	$ -	$29,810,965	$ 169,678,497	$ 308,722,046	55.0%
2010	$ 7,012,349	$2,731,747	$20,600,000	$ 85,657	$30,429,753	$ 196,611,488	$ 324,761,831	60.5%
2011	$ 6,940,465	$2,702,641	$21,218,000	$ 177,714	$31,038,820	$ 225,251,483	$ 341,007,927	66.1%
2012	$ 6,780,924	$2,639,037	$21,854,540	$ 286,733	$31,561,234	$ 255,344,884	$ 357,012,940	71.5%
2013	$ 6,612,285	$2,571,806	$22,510,176	$ 396,244	$32,090,512	$ 287,341,152	$ 373,087,754	77.0%
2014	$ 6,424,377	$2,496,949	$23,185,481	$ 502,923	$32,609,731	$ 321,518,520	$ 389,353,638	82.6%
2015	$ 6,208,100	$2,410,890	$23,881,046	$ 627,314	$33,127,350	$ 357,400,806	$ 405,048,155	88.2%
2016	$ 5,971,195	$2,317,075	$24,597,477	$ 749,549	$33,635,296	$ 395,703,269	$ 420,748,194	94.0%
2017	$ 5,724,035	$2,219,245	$ -	$ 878,423	$ 8,821,703	$ 410,024,299	$ 436,065,501	94.0%
2018	$ 5,449,986	$2,111,093	$ -	$1,010,545	$ 8,571,625	$ 424,360,206	$ 451,683,488	94.0%
2019	$ 5,202,735	$2,013,590	$ -	$1,141,377	$ 8,357,702	$ 438,463,810	$ 466,444,361	94.0%
2020	$ 4,933,134	$1,907,507	$ -	$1,160,722	$ 8,001,363	$ 452,173,872	$ 480,650,421	94.1%
2021	$ 4,634,218	$1,789,914	$ -	$1,303,683	$ 7,727,814	$ 465,379,581	$ 493,991,435	94.2%
2022	$ 4,320,468	$1,666,618	$ -	$1,440,533	$ 7,427,618	$ 477,832,365	$ 506,133,008	94.4%
2023	$ 3,970,768	$1,529,258	$ -	$1,580,926	$ 7,080,952	$ 489,548,662	$ 517,029,391	94.7%
2024	$ 3,601,347	$1,384,146	$ -	$1,724,592	$ 6,710,085	$ 500,369,126	$ 526,400,792	95.1%
2025	$ 3,209,120	$1,230,022	$ -	$1,868,218	$ 6,307,359	$ 510,340,013	$ 534,218,961	95.5%
2026	$ 2,815,446	$1,075,331	$ -	$1,999,948	$ 5,890,725	$ 519,484,936	$ 540,425,001	96.1%
2027	$ 2,407,361	$ 914,936	$ -	$2,159,283	$ 5,481,581	$ 528,026,976	$ 545,161,185	96.9%
2028	$ 2,047,115	$ 774,881	$ -	$2,299,942	$ 5,121,939	$ 536,354,400	$ 548,828,415	97.7%
2029	$ 1,749,510	$ 657,858	$ -	$2,432,388	$ 4,839,755	$ 544,366,806	$ 551,191,622	98.8%
2030	$ 1,476,663	$ 551,986	$ -	$2,555,410	$ 4,584,059	$ 552,006,773	$ 552,083,478	100.0%
2031	$ 1,214,467	$ 450,199	$ -	$2,675,631	$ 4,340,296	$ 559,535,341	$ 551,723,376	101.4%
2032	$ 1,006,819	$ 369,926	$ -	$2,774,162	$ 4,150,907	$ 567,177,164	$ 550,278,483	103.1%
2033	$ 821,327	$ 297,033	$ -	$2,880,391	$ 3,998,750	$ 575,056,626	$ 547,774,952	105.0%
2034	$ 663,804	$ 238,691	$ -	$2,983,903	$ 3,886,398	$ 583,387,210	$ 544,349,500	107.2%
2035	$ 557,862	$ 197,867	$ -	$3,060,006	$ 3,815,735	$ 592,280,292	$ 540,018,510	109.7%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Closed Group Results - .5%Tax/Poor Experience Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 142,813,985	$ 295,819,236	48.3%
2009	$ 7,059,771	$2,751,194	$20,000,000	$ -	$29,810,965	$ 164,513,065	$ 314,865,618	52.2%
2010	$ 7,012,349	$2,731,747	$20,600,000	$ 85,657	$30,429,753	$ 185,453,558	$ 334,504,046	55.4%
2011	$ 6,940,465	$2,702,641	$21,218,000	$ 177,714	$31,038,820	$ 205,430,107	$ 354,715,092	57.9%
2012	$ 6,780,924	$2,639,037	$21,854,540	$ 286,733	$31,561,234	$ 225,407,343	$ 375,040,308	60.1%
2013	$ 6,612,285	$2,571,806	$22,510,176	$ 396,244	$32,090,512	$ 245,606,155	$ 395,807,284	62.1%
2014	$ 6,424,377	$2,496,949	$23,185,481	$ 502,923	$32,609,731	$ 266,170,902	$ 417,153,434	63.8%
2015	$ 6,208,100	$2,410,890	$23,881,046	$ 627,314	$33,127,350	$ 286,483,408	$ 438,265,255	65.4%
2016	$ 5,971,195	$2,317,075	$24,597,477	$ 749,549	$33,635,296	$ 307,107,019	$ 459,760,274	66.8%
2017	$ 5,724,035	$2,219,245	$25,335,402	$ 878,423	$34,157,104	$ 327,761,290	$ 481,215,612	68.1%
2018	$ 5,449,986	$2,111,093	$26,095,464	$1,010,545	$34,667,089	$ 352,272,550	$ 503,385,837	70.0%
2019	$ 5,202,735	$2,013,590	$26,878,328	$1,141,377	$35,236,030	$ 381,711,693	$ 524,983,221	72.7%
2020	$ 4,933,134	$1,907,507	$27,684,677	$1,160,722	$35,686,040	$ 416,325,077	$ 546,328,304	76.2%
2021	$ 4,634,218	$1,789,914	$28,515,218	$1,303,683	$36,243,032	$ 456,426,665	$ 567,051,614	80.5%
2022	$ 4,320,468	$1,666,618	$29,370,674	$1,440,533	$36,798,292	$ 498,680,055	$ 586,741,263	85.0%
2023	$ 3,970,768	$1,529,258	$30,251,794	$1,580,926	$37,332,747	$ 543,346,166	$ 605,307,423	89.8%
2024	$ 3,601,347	$1,384,146	$31,159,348	$1,724,592	$37,869,433	$ 590,529,266	$ 622,380,675	94.9%
2025	$ 3,209,120	$1,230,022	$ -	$1,868,218	$ 6,307,359	$ 607,262,163	$ 637,878,056	95.2%
2026	$ 2,815,446	$1,075,331	$ -	$1,999,948	$ 5,890,725	$ 623,676,248	$ 651,677,300	95.7%
2027	$ 2,407,361	$ 914,936	$ -	$2,159,283	$ 5,481,581	$ 640,032,637	$ 663,897,276	96.4%
2028	$ 2,047,115	$ 774,881	$ -	$2,299,942	$ 5,121,939	$ 656,760,485	$ 674,980,685	97.3%
2029	$ 1,749,510	$ 657,858	$ -	$2,432,388	$ 4,839,755	$ 673,803,348	$ 684,598,847	98.4%
2030	$ 1,476,663	$ 551,986	$ -	$2,555,410	$ 4,584,059	$ 691,151,055	$ 692,495,736	99.8%
2031	$ 1,214,467	$ 450,199	$ -	$2,675,631	$ 4,340,296	$ 709,115,445	$ 698,895,971	101.5%
2032	$ 1,006,819	$ 369,926	$ -	$2,774,162	$ 4,150,907	$ 727,975,774	$ 703,967,291	103.4%
2033	$ 821,327	$ 297,033	$ -	$2,880,391	$ 3,998,750	$ 747,915,131	$ 707,702,805	105.7%
2034	$ 663,804	$ 238,691	$ -	$2,983,903	$ 3,886,398	$ 769,210,103	$ 710,240,403	108.3%
2035	$ 557,862	$ 197,867	$ -	$3,060,006	$ 3,815,735	$ 792,039,902	$ 711,565,674	111.3%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Closed Group Results - .25%Tax/Assumptions Met Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 144,349,626	$ 292,919,048	49.3%
2009	$ 7,059,771	$2,751,194	$10,000,000	$ -	$19,810,965	$ 159,303,497	$ 308,722,046	51.6%
2010	$ 7,012,349	$2,731,747	$10,300,000	$ 85,657	$20,129,753	$ 174,772,113	$ 324,761,831	53.8%
2011	$ 6,940,465	$2,702,641	$10,609,000	$ 177,714	$20,429,820	$ 190,767,318	$ 341,007,927	55.9%
2012	$ 6,780,924	$2,639,037	$10,927,270	$ 286,733	$20,633,964	$ 206,937,364	$ 357,012,940	58.0%
2013	$ 6,612,285	$2,571,806	$11,255,088	$ 396,244	$20,835,424	$ 223,625,914	$ 373,087,754	59.9%
2014	$ 6,424,377	$2,496,949	$11,592,741	$ 502,923	$21,016,990	$ 240,997,170	$ 389,353,638	61.9%
2015	$ 6,208,100	$2,410,890	$11,940,523	$ 627,314	$21,186,827	$ 258,452,062	$ 405,048,155	63.8%
2016	$ 5,971,195	$2,317,075	$12,298,739	$ 749,549	$21,336,557	$ 276,573,429	$ 420,748,194	65.7%
2017	$ 5,724,035	$2,219,245	$12,667,701	$ 878,423	$21,489,403	$ 295,102,460	$ 436,065,501	67.7%
2018	$ 5,449,986	$2,111,093	$13,047,732	$1,010,545	$21,619,357	$ 314,356,252	$ 451,683,488	69.6%
2019	$ 5,202,735	$2,013,590	$13,439,164	$1,141,377	$21,796,866	$ 334,152,691	$ 466,444,361	71.6%
2020	$ 4,933,134	$1,907,507	$13,842,339	$1,160,722	$21,843,701	$ 354,400,845	$ 480,650,421	73.7%
2021	$ 4,634,218	$1,789,914	$14,257,609	$1,303,683	$21,985,423	$ 375,065,845	$ 493,991,435	75.9%
2022	$ 4,320,468	$1,666,618	$14,685,337	$1,440,533	$22,112,955	$ 395,981,137	$ 506,133,008	78.2%
2023	$ 3,970,768	$1,529,258	$15,125,897	$1,580,926	$22,206,849	$ 417,251,710	$ 517,029,391	80.7%
2024	$ 3,601,347	$1,384,146	$15,579,674	$1,724,592	$22,289,759	$ 438,813,814	$ 526,400,792	83.4%
2025	$ 3,209,120	$1,230,022	$16,047,064	$1,868,218	$22,354,424	$ 460,816,881	$ 534,218,961	86.3%
2026	$ 2,815,446	$1,075,331	$16,528,476	$1,999,948	$22,419,201	$ 483,395,864	$ 540,425,001	89.4%
2027	$ 2,407,361	$ 914,936	$17,024,331	$2,159,283	$22,505,912	$ 506,893,968	$ 545,161,185	93.0%
2028	$ 2,047,115	$ 774,881	$ -	$2,299,942	$ 5,121,939	$ 513,636,417	$ 548,828,415	93.6%
2029	$ 1,749,510	$ 657,858	$ -	$2,432,388	$ 4,839,755	$ 519,944,975	$ 551,191,622	94.3%
2030	$ 1,476,663	$ 551,986	$ -	$2,555,410	$ 4,584,059	$ 525,753,304	$ 552,083,478	95.2%
2031	$ 1,214,467	$ 450,199	$ -	$2,675,631	$ 4,340,296	$ 531,312,862	$ 551,723,376	96.3%
2032	$ 1,006,819	$ 369,926	$ -	$2,774,162	$ 4,150,907	$ 536,837,997	$ 550,278,483	97.6%
2033	$ 821,327	$ 297,033	$ -	$2,880,391	$ 3,998,750	$ 542,442,022	$ 547,774,952	99.0%
2034	$ 663,804	$ 238,691	$ -	$2,983,903	$ 3,886,398	$ 548,326,511	$ 544,349,500	100.7%
2035	$ 557,862	$ 197,867	$ -	$3,060,006	$ 3,815,735	$ 554,590,041	$ 540,018,510	102.7%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Closed Group Results - .25%Tax/Poor Experience Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 142,813,985	$ 295,819,236	48.3%
2009	$ 7,059,771	$2,751,194	$10,000,000	$ -	$19,810,965	$ 154,194,315	$ 314,865,618	49.0%
2010	$ 7,012,349	$2,731,747	$10,300,000	$ 85,657	$20,129,753	$ 163,915,683	$ 334,504,046	49.0%
2011	$ 6,940,465	$2,702,641	$10,609,000	$ 177,714	$20,429,820	$ 171,840,497	$ 354,715,092	48.4%
2012	$ 6,780,924	$2,639,037	$10,927,270	$ 286,733	$20,633,964	$ 179,006,028	$ 375,040,308	47.7%
2013	$ 6,612,285	$2,571,806	$11,255,088	$ 396,244	$20,835,424	$ 185,654,664	$ 395,807,284	46.9%
2014	$ 6,424,377	$2,496,949	$11,592,741	$ 502,923	$21,016,990	$ 191,897,984	$ 417,153,434	46.0%
2015	$ 6,208,100	$2,410,890	$11,940,523	$ 627,314	$21,186,827	$ 197,083,734	$ 438,265,255	45.0%
2016	$ 5,971,195	$2,317,075	$12,298,739	$ 749,549	$21,336,557	$ 201,739,829	$ 459,760,274	43.9%
2017	$ 5,724,035	$2,219,245	$12,667,701	$ 878,423	$21,489,403	$ 205,548,991	$ 481,215,612	42.7%
2018	$ 5,449,986	$2,111,093	$13,047,732	$1,010,545	$21,619,357	$ 210,924,029	$ 503,385,837	41.9%
2019	$ 5,202,735	$2,013,590	$13,439,164	$1,141,377	$21,796,866	$ 218,293,228	$ 524,983,221	41.6%
2020	$ 4,933,134	$1,907,507	$13,842,339	$1,160,722	$21,843,701	$ 227,573,153	$ 546,328,304	41.7%
2021	$ 4,634,218	$1,789,914	$14,257,609	$1,303,683	$21,985,423	$ 238,726,076	$ 567,051,614	42.1%
2022	$ 4,320,468	$1,666,618	$14,685,337	$1,440,533	$22,112,955	$ 249,415,886	$ 586,741,263	42.5%
2023	$ 3,970,768	$1,529,258	$15,125,897	$1,580,926	$22,206,849	$ 259,694,066	$ 605,307,423	42.9%
2024	$ 3,601,347	$1,384,146	$15,579,674	$1,724,592	$22,289,759	$ 269,439,347	$ 622,380,675	43.3%
2025	$ 3,209,120	$1,230,022	$16,047,064	$1,868,218	$22,354,424	$ 278,739,329	$ 637,878,056	43.7%
2026	$ 2,815,446	$1,075,331	$16,528,476	$1,999,948	$22,419,201	$ 287,662,495	$ 651,677,300	44.1%
2027	$ 2,407,361	$ 914,936	$17,024,331	$2,159,283	$22,505,912	$ 296,480,596	$ 663,897,276	44.7%
2028	$ 2,047,115	$ 774,881	$17,535,061	$2,299,942	$22,656,999	$ 305,634,667	$ 674,980,685	45.3%
2029	$ 1,749,510	$ 657,858	$18,061,112	$2,432,388	$22,900,867	$ 315,081,497	$ 684,598,847	46.0%
2030	$ 1,476,663	$ 551,986	$18,602,946	$2,555,410	$23,187,005	$ 324,825,622	$ 692,495,736	46.9%
2031	$ 1,214,467	$ 450,199	$19,161,034	$2,675,631	$23,501,330	$ 335,195,178	$ 698,895,971	48.0%
2032	$ 1,006,819	$ 369,926	$19,735,865	$2,774,162	$23,886,772	$ 346,487,447	$ 703,967,291	49.2%
2033	$ 821,327	$ 297,033	$20,327,941	$2,880,391	$24,326,691	$ 358,905,420	$ 707,702,805	50.7%
2034	$ 663,804	$ 238,691	$20,937,779	$2,983,903	$24,824,177	$ 372,747,609	$ 710,240,403	52.5%
2035	$ 557,862	$ 197,867	$21,565,913	$3,060,006	$25,381,648	$ 388,217,356	$ 711,565,674	54.6%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Closed Group Results - .25%Tax/Assumptions Met/No LAGERS Diff Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 144,349,626	$ 292,919,048	49.3%
2009	$ 7,059,771	$2,751,194	$10,000,000	$ -	$19,810,965	$ 159,303,497	$ 308,722,046	51.6%
2010	$ 7,012,349	$2,731,747	$10,300,000	$ -	$20,044,096	$ 174,683,244	$ 324,761,831	53.8%
2011	$ 6,940,465	$2,702,641	$10,609,000	$ -	$20,252,106	$ 190,487,404	$ 341,007,927	55.9%
2012	$ 6,780,924	$2,639,037	$10,927,270	$ -	$20,347,231	$ 206,338,972	$ 357,012,940	57.8%
2013	$ 6,612,285	$2,571,806	$11,255,088	$ -	$20,439,179	$ 222,571,539	$ 373,087,754	59.7%
2014	$ 6,424,377	$2,496,949	$11,592,741	$ -	$20,514,067	$ 239,341,935	$ 389,353,638	61.5%
2015	$ 6,208,100	$2,410,890	$11,940,523	$ -	$20,559,513	$ 256,021,847	$ 405,048,155	63.2%
2016	$ 5,971,195	$2,317,075	$12,298,739	$ -	$20,587,008	$ 273,183,289	$ 420,748,194	64.9%
2017	$ 5,724,035	$2,219,245	$12,667,701	$ -	$20,610,981	$ 290,546,696	$ 436,065,501	66.6%
2018	$ 5,449,986	$2,111,093	$13,047,732	$ -	$20,608,812	$ 308,410,365	$ 451,683,488	68.3%
2019	$ 5,202,735	$2,013,590	$13,439,164	$ -	$20,655,489	$ 326,576,685	$ 466,444,361	70.0%
2020	$ 4,933,134	$1,907,507	$13,842,339	$ -	$20,682,980	$ 345,052,390	$ 480,650,421	71.8%
2021	$ 4,634,218	$1,789,914	$14,257,609	$ -	$20,681,740	$ 363,663,686	$ 493,991,435	73.6%
2022	$ 4,320,468	$1,666,618	$14,685,337	$ -	$20,672,423	$ 382,229,262	$ 506,133,008	75.5%
2023	$ 3,970,768	$1,529,258	$15,125,897	$ -	$20,625,924	$ 400,828,235	$ 517,029,391	77.5%
2024	$ 3,601,347	$1,384,146	$15,579,674	$ -	$20,565,167	$ 419,369,315	$ 526,400,792	79.7%
2025	$ 3,209,120	$1,230,022	$16,047,064	$ -	$20,486,205	$ 437,975,770	$ 534,218,961	82.0%
2026	$ 2,815,446	$1,075,331	$16,528,476	$ -	$20,419,253	$ 456,766,723	$ 540,425,001	84.5%
2027	$ 2,407,361	$ 914,936	$17,024,331	$ -	$20,346,628	$ 476,027,385	$ 545,161,185	87.3%
2028	$ 2,047,115	$ 774,881	$17,535,061	$ -	$20,357,057	$ 496,261,275	$ 548,828,415	90.4%
2029	$ 1,749,510	$ 657,858	$ -	$ -	$ 2,407,367	$ 498,743,094	$ 551,191,622	90.5%
2030	$ 1,476,663	$ 551,986	$ -	$ -	$ 2,028,649	$ 500,310,044	$ 552,083,478	90.6%
2031	$ 1,214,467	$ 450,199	$ -	$ -	$ 1,664,666	$ 501,185,391	$ 551,723,376	90.8%
2032	$ 1,006,819	$ 369,926	$ -	$ -	$ 1,376,745	$ 501,572,774	$ 550,278,483	91.1%
2033	$ 821,327	$ 297,033	$ -	$ -	$ 1,118,359	$ 501,543,501	$ 547,774,952	91.6%
2034	$ 663,804	$ 238,691	$ -	$ -	$ 902,495	$ 501,264,801	$ 544,349,500	92.1%
2035	$ 557,862	$ 197,867	$ -	$ -	$ 755,729	$ 500,823,946	$ 540,018,510	92.7%

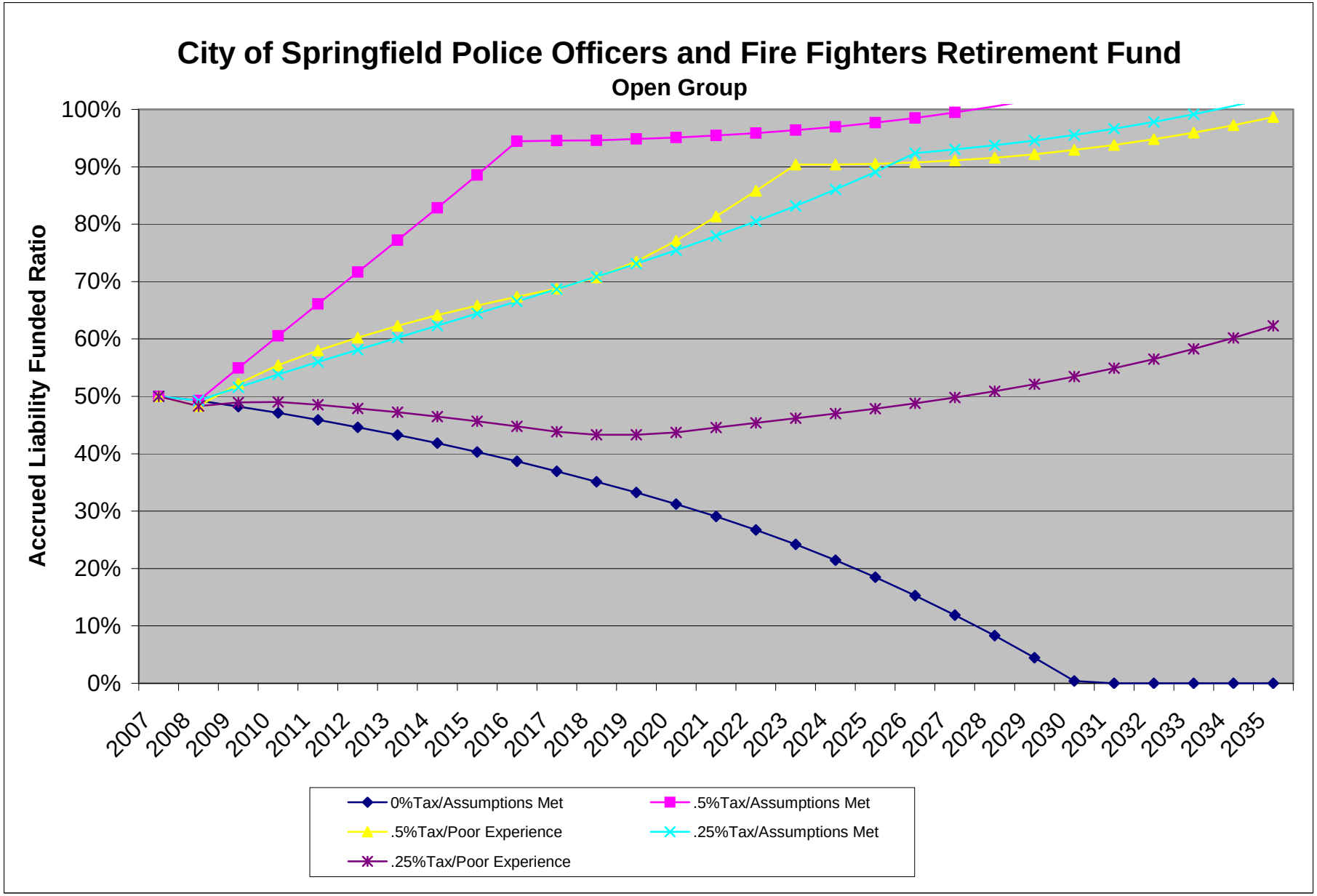

City of Springfield Police Officers and Fire Fighters Retirement Fund
Open Group
Accrued Liability Funded Ratio
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
0%Tax/Assumptions Met
.5%Tax/Assumptions Met
.5%Tax/Poor Experience
.25%Tax/Assumptions Met
.25%Tax/Poor Experience

Exhibit 2-2

City of Springfield Police Officers and Fire Fighters Retirement Fund

Summary of Projected Open Group Funded Ratios

Valuation Date July 1	0% Tax Assumptions Met	.5% Tax Assumptions Met	.5% Tax Poor Experience	.25% Tax Assumptions Met	.25% Tax Poor Experience
2007	50%	50%	50%	50%	50%
2008	49%	49%	48%	49%	48%
2009	48%	55%	52%	52%	49%
2010	47%	61%	55%	54%	49%
2011	46%	66%	58%	56%	49%
2012	45%	72%	60%	58%	48%
2013	43%	77%	62%	60%	47%
2014	42%	83%	64%	62%	46%
2015	40%	89%	66%	64%	46%
2016	39%	**94%**	67%	67%	45%
2017	37%	95%	69%	69%	44%
2018	35%	95%	71%	71%	43%
2019	33%	95%	74%	73%	43%
2020	31%	95%	77%	75%	44%
2021	29%	95%	81%	78%	45%
2022	27%	96%	86%	80%	45%
2023	24%	96%	**90%**	83%	46%
2024	21%	97%	90%	86%	47%
2025	18%	98%	91%	89%	48%
2026	15%	99%	91%	**92%**	49%
2027	12%	99%	91%	93%	50%
2028	8%	101%	92%	94%	51%
2029	4%	102%	92%	95%	52%
2030	0%	103%	93%	96%	53%
2031	0%	105%	94%	97%	55%
2032	0%	106%	95%	98%	57%
2033	0%	108%	96%	99%	58%
2034	0%	110%	97%	101%	60%
2035	0%	112%	99%	102%	62%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Open Group Results - 0%Tax/Assumptions Met Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 144,349,626	$ 292,919,048	49.3%
2009	$ 7,059,771	$2,751,194	$ -	$ -	$ 9,810,965	$ 148,928,497	$ 308,814,161	48.2%
2010	$ 7,239,718	$2,798,666	$ -	$ -	$10,038,384	$ 153,145,317	$ 325,099,448	47.1%
2011	$ 7,412,192	$2,841,480	$ -	$ -	$10,253,673	$ 156,948,561	$ 341,778,219	45.9%
2012	$ 7,542,031	$2,863,047	$ -	$ -	$10,405,078	$ 159,944,112	$ 358,427,523	44.6%
2013	$ 7,664,080	$2,881,372	$ -	$ -	$10,545,452	$ 162,388,190	$ 375,371,649	43.3%
2014	$ 7,759,343	$2,889,858	$ -	$ -	$10,649,201	$ 164,343,325	$ 392,768,607	41.8%
2015	$ 7,873,250	$2,900,979	$ -	$ -	$10,774,229	$ 165,151,384	$ 409,884,423	40.3%
2016	$ 7,960,806	$2,902,660	$ -	$ -	$10,863,466	$ 165,281,349	$ 427,327,092	38.7%
2017	$ 8,055,730	$2,905,513	$ -	$ -	$10,961,243	$ 164,373,496	$ 444,741,638	37.0%
2018	$ 8,132,389	$2,900,582	$ -	$ -	$11,032,971	$ 162,627,364	$ 462,841,327	35.1%
2019	$ 8,232,419	$2,905,290	$ -	$ -	$11,137,710	$ 159,722,897	$ 480,488,669	33.2%
2020	$ 8,287,073	$2,894,642	$ -	$ -	$11,181,715	$ 155,508,854	$ 498,043,370	31.2%
2021	$ 8,377,293	$2,891,580	$ -	$ -	$11,268,874	$ 149,758,161	$ 515,240,427	29.1%
2022	$ 8,437,015	$2,878,205	$ -	$ -	$11,315,220	$ 142,123,757	$ 531,787,242	26.7%
2023	$ 8,470,768	$2,853,704	$ -	$ -	$11,324,473	$ 132,540,031	$ 547,688,480	24.2%
2024	$ 8,494,084	$2,824,182	$ -	$ -	$11,318,266	$ 120,758,001	$ 562,713,417	21.5%
2025	$ 8,495,097	$2,785,797	$ -	$ -	$11,280,894	$ 106,719,388	$ 576,867,671	18.5%
2026	$ 8,459,113	$2,736,383	$ -	$ -	$11,195,496	$ 90,299,433	$ 590,171,578	15.3%
2027	$ 8,481,824	$2,702,780	$ -	$ -	$11,184,604	$ 71,665,371	$ 602,819,738	11.9%
2028	$ 8,500,018	$2,674,108	$ -	$ -	$11,174,126	$ 51,025,938	$ 615,259,757	8.3%
2029	$ 8,557,736	$2,661,664	$ -	$ -	$11,219,400	$ 28,087,697	$ 627,256,364	4.5%
2030	$ 8,612,895	$2,652,331	$ -	$ -	$11,265,226	$ 2,610,424	$ 638,705,897	0.4%
2031	$ 8,671,137	$2,644,856	$ -	$ -	$11,315,993	$ -	$ 649,814,191	0.0%
2032	$ 8,724,922	$2,641,529	$ -	$ -	$11,366,450	$ -	$ 660,765,068	0.0%
2033	$ 8,820,568	$2,651,380	$ -	$ -	$11,471,948	$ -	$ 671,596,246	0.0%
2034	$ 8,936,994	$2,673,667	$ -	$ -	$11,610,661	$ -	$ 682,410,315	0.0%
2035	$ 9,032,796	$2,692,220	$ -	$ -	$11,725,016	$ -	$ 693,191,464	0.0%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Open Group Results - .5%Tax/Assumptions Met Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 144,349,626	$ 292,919,048	49.3%
2009	$ 7,059,771	$2,751,194	$20,000,000	$ -	$29,810,965	$ 169,678,497	$ 308,814,161	54.9%
2010	$ 7,239,718	$2,798,666	$20,600,000	$ -	$30,638,384	$ 196,824,067	$ 325,099,448	60.5%
2011	$ 7,412,192	$2,841,480	$21,218,000	$ -	$31,471,673	$ 225,916,893	$ 341,778,219	66.1%
2012	$ 7,542,031	$2,863,047	$21,854,540	$ -	$32,259,618	$ 256,759,154	$ 358,427,523	71.6%
2013	$ 7,664,080	$2,881,372	$22,510,176	$ -	$33,055,628	$ 289,818,668	$ 375,371,649	77.2%
2014	$ 7,759,343	$2,889,858	$23,185,481	$ -	$33,834,683	$ 325,386,026	$ 392,768,607	82.8%
2015	$ 7,873,250	$2,900,979	$23,881,046	$ -	$34,655,275	$ 363,048,872	$ 409,884,423	88.6%
2016	$ 7,960,806	$2,902,660	$24,597,477	$ -	$35,460,943	$ 403,541,032	$ 427,327,092	94.4%
2017	$ 8,055,730	$2,905,513	$ -	$ -	$10,961,243	$ 420,502,655	$ 444,741,638	94.5%
2018	$ 8,132,389	$2,900,582	$ -	$ -	$11,032,971	$ 437,966,211	$ 462,841,327	94.6%
2019	$ 8,232,419	$2,905,290	$ -	$ -	$11,137,710	$ 455,712,158	$ 480,488,669	94.8%
2020	$ 8,287,073	$2,894,642	$ -	$ -	$11,181,715	$ 473,697,309	$ 498,043,370	95.1%
2021	$ 8,377,293	$2,891,580	$ -	$ -	$11,268,874	$ 491,810,750	$ 515,240,427	95.5%
2022	$ 8,437,015	$2,878,205	$ -	$ -	$11,315,220	$ 509,830,290	$ 531,787,242	95.9%
2023	$ 8,470,768	$2,853,704	$ -	$ -	$11,324,473	$ 527,824,554	$ 547,688,480	96.4%
2024	$ 8,494,084	$2,824,182	$ -	$ -	$11,318,266	$ 545,688,863	$ 562,713,417	97.0%
2025	$ 8,495,097	$2,785,797	$ -	$ -	$11,280,894	$ 563,520,065	$ 576,867,671	97.7%
2026	$ 8,459,113	$2,736,383	$ -	$ -	$11,195,496	$ 581,360,161	$ 590,171,578	98.5%
2027	$ 8,481,824	$2,702,780	$ -	$ -	$11,184,604	$ 599,555,653	$ 602,819,738	99.5%
2028	$ 8,500,018	$2,674,108	$ -	$ -	$11,174,126	$ 618,507,991	$ 615,259,757	100.5%
2029	$ 8,557,736	$2,661,664	$ -	$ -	$11,219,400	$ 638,130,904	$ 627,256,364	101.7%
2030	$ 8,612,895	$2,652,331	$ -	$ -	$11,265,226	$ 658,406,871	$ 638,705,897	103.1%
2031	$ 8,671,137	$2,644,856	$ -	$ -	$11,315,993	$ 679,622,832	$ 649,814,191	104.6%
2032	$ 8,724,922	$2,641,529	$ -	$ -	$11,366,450	$ 701,984,128	$ 660,765,068	106.2%
2033	$ 8,820,568	$2,651,380	$ -	$ -	$11,471,948	$ 725,664,258	$ 671,596,246	108.1%
2034	$ 8,936,994	$2,673,667	$ -	$ -	$11,610,661	$ 750,885,668	$ 682,410,315	110.0%
2035	$ 9,032,796	$2,692,220	$ -	$ -	$11,725,016	$ 777,708,829	$ 693,191,464	112.2%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Open Group Results - .5%Tax/Poor Experience Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 142,813,985	$ 295,819,236	48.3%
2009	$ 7,059,771	$2,751,194	$20,000,000	$ -	$29,810,965	$ 164,513,065	$ 314,959,566	52.2%
2010	$ 7,239,718	$2,798,666	$20,600,000	$ -	$30,638,384	$ 185,664,984	$ 334,851,791	55.4%
2011	$ 7,412,192	$2,841,480	$21,218,000	$ -	$31,471,673	$ 206,088,157	$ 355,516,347	58.0%
2012	$ 7,542,031	$2,863,047	$21,854,540	$ -	$32,259,618	$ 226,795,600	$ 376,526,321	60.2%
2013	$ 7,664,080	$2,881,372	$22,510,176	$ -	$33,055,628	$ 248,015,252	$ 398,230,258	62.3%
2014	$ 7,759,343	$2,889,858	$23,185,481	$ -	$33,834,683	$ 269,889,604	$ 420,812,231	64.1%
2015	$ 7,873,250	$2,900,979	$23,881,046	$ -	$34,655,275	$ 291,848,089	$ 443,498,135	65.8%
2016	$ 7,960,806	$2,902,660	$24,597,477	$ -	$35,460,943	$ 314,454,338	$ 466,949,171	67.3%
2017	$ 8,055,730	$2,905,513	$25,335,402	$ -	$36,296,645	$ 337,449,307	$ 490,790,074	68.8%
2018	$ 8,132,389	$2,900,582	$26,095,464	$ -	$37,128,434	$ 364,789,325	$ 515,820,868	70.7%
2019	$ 8,232,419	$2,905,290	$26,878,328	$ -	$38,016,037	$ 397,613,161	$ 540,790,092	73.5%
2020	$ 8,287,073	$2,894,642	$27,684,677	$ -	$38,866,393	$ 436,303,804	$ 566,097,891	77.1%
2021	$ 8,377,293	$2,891,580	$28,515,218	$ -	$39,784,091	$ 481,197,269	$ 591,443,282	81.4%
2022	$ 8,437,015	$2,878,205	$29,370,674	$ -	$40,685,894	$ 528,892,872	$ 616,481,267	85.8%
2023	$ 8,470,768	$2,853,704	$30,251,794	$ -	$41,576,267	$ 579,703,066	$ 641,201,270	90.4%
2024	$ 8,494,084	$2,824,182	$ -	$ -	$11,318,266	$ 601,458,264	$ 665,314,266	90.4%
2025	$ 8,495,097	$2,785,797	$ -	$ -	$11,280,894	$ 623,472,171	$ 688,802,262	90.5%
2026	$ 8,459,113	$2,736,383	$ -	$ -	$11,195,496	$ 645,808,675	$ 711,664,746	90.7%
2027	$ 8,481,824	$2,702,780	$ -	$ -	$11,184,604	$ 668,837,806	$ 734,113,860	91.1%
2028	$ 8,500,018	$2,674,108	$ -	$ -	$11,174,126	$ 692,986,305	$ 756,681,763	91.6%
2029	$ 8,557,736	$2,661,664	$ -	$ -	$11,219,400	$ 718,195,092	$ 779,073,858	92.2%
2030	$ 8,612,895	$2,652,331	$ -	$ -	$11,265,226	$ 744,475,873	$ 801,148,971	92.9%
2031	$ 8,671,137	$2,644,856	$ -	$ -	$11,315,993	$ 772,147,010	$ 823,152,579	93.8%
2032	$ 8,724,922	$2,641,529	$ -	$ -	$11,366,450	$ 801,447,619	$ 845,311,982	94.8%
2033	$ 8,820,568	$2,651,380	$ -	$ -	$11,471,948	$ 832,587,511	$ 867,674,846	96.0%
2034	$ 8,936,994	$2,673,667	$ -	$ -	$11,610,661	$ 865,828,166	$ 890,375,351	97.2%
2035	$ 9,032,796	$2,692,220	$ -	$ -	$11,725,016	$ 901,272,015	$ 913,396,935	98.7%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Open Group Results - .25%Tax/Assumptions Met Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 144,349,626	$ 292,919,048	49.3%
2009	$ 7,059,771	$2,751,194	$10,000,000	$ -	$19,810,965	$ 159,303,497	$ 308,814,161	51.6%
2010	$ 7,239,718	$2,798,666	$10,300,000	$ -	$20,338,384	$ 174,984,692	$ 325,099,448	53.8%
2011	$ 7,412,192	$2,841,480	$10,609,000	$ -	$20,862,673	$ 191,432,727	$ 341,778,219	56.0%
2012	$ 7,542,031	$2,863,047	$10,927,270	$ -	$21,332,348	$ 208,351,633	$ 358,427,523	58.1%
2013	$ 7,664,080	$2,881,372	$11,255,088	$ -	$21,800,540	$ 226,103,429	$ 375,371,649	60.2%
2014	$ 7,759,343	$2,889,858	$11,592,741	$ -	$22,241,942	$ 244,864,676	$ 392,768,607	62.3%
2015	$ 7,873,250	$2,900,979	$11,940,523	$ -	$22,714,752	$ 264,100,129	$ 409,884,423	64.4%
2016	$ 7,960,806	$2,902,660	$12,298,739	$ -	$23,162,205	$ 284,411,190	$ 427,327,092	66.6%
2017	$ 8,055,730	$2,905,513	$12,667,701	$ -	$23,628,944	$ 305,580,815	$ 444,741,638	68.7%
2018	$ 8,132,389	$2,900,582	$13,047,732	$ -	$24,080,702	$ 327,962,254	$ 462,841,327	70.9%
2019	$ 8,232,419	$2,905,290	$13,439,164	$ -	$24,576,874	$ 351,401,037	$ 480,488,669	73.1%
2020	$ 8,287,073	$2,894,642	$13,842,339	$ -	$25,024,054	$ 375,924,281	$ 498,043,370	75.5%
2021	$ 8,377,293	$2,891,580	$14,257,609	$ -	$25,526,482	$ 401,497,013	$ 515,240,427	77.9%
2022	$ 8,437,015	$2,878,205	$14,685,337	$ -	$26,000,557	$ 427,979,061	$ 531,787,242	80.5%
2023	$ 8,470,768	$2,853,704	$15,125,897	$ -	$26,450,370	$ 455,527,600	$ 547,688,480	83.2%
2024	$ 8,494,084	$2,824,182	$15,579,674	$ -	$26,897,940	$ 484,133,550	$ 562,713,417	86.0%
2025	$ 8,495,097	$2,785,797	$16,047,064	$ -	$27,327,959	$ 513,996,933	$ 576,867,671	89.1%
2026	$ 8,459,113	$2,736,383	$16,528,476	$ -	$27,723,972	$ 545,271,088	$ 590,171,578	92.4%
2027	$ 8,481,824	$2,702,780	$ -	$ -	$11,184,604	$ 560,759,900	$ 602,819,738	93.0%
2028	$ 8,500,018	$2,674,108	$ -	$ -	$11,174,126	$ 576,802,556	$ 615,259,757	93.7%
2029	$ 8,557,736	$2,661,664	$ -	$ -	$11,219,400	$ 593,297,561	$ 627,256,364	94.6%
2030	$ 8,612,895	$2,652,331	$ -	$ -	$11,265,226	$ 610,211,027	$ 638,705,897	95.5%
2031	$ 8,671,137	$2,644,856	$ -	$ -	$11,315,993	$ 627,812,300	$ 649,814,191	96.6%
2032	$ 8,724,922	$2,641,529	$ -	$ -	$11,366,450	$ 646,287,806	$ 660,765,068	97.8%
2033	$ 8,820,568	$2,651,380	$ -	$ -	$11,471,948	$ 665,790,712	$ 671,596,246	99.1%
2034	$ 8,936,994	$2,673,667	$ -	$ -	$11,610,661	$ 686,521,607	$ 682,410,315	100.6%
2035	$ 9,032,796	$2,692,220	$ -	$ -	$11,725,016	$ 708,517,464	$ 693,191,464	102.2%

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Open Group Results - .25%Tax/Poor Experience Scenario

Year End June 30	Projected Contributions: 28.88% of Pay Employer	Employee	Proposed New Tax	LAGERS Differential	Total	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio
2007	$ 7,411,818	$2,888,469	$ -	$ -	$10,300,287	$ 138,890,814	$ 277,861,524	50.0%
2008	$ 6,891,901	$2,708,555	$ -	$ -	$ 9,600,456	$ 142,813,985	$ 295,819,236	48.3%
2009	$ 7,059,771	$2,751,194	$10,000,000	$ -	$19,810,965	$ 154,194,315	$ 314,959,566	49.0%
2010	$ 7,239,718	$2,798,666	$10,300,000	$ -	$20,338,384	$ 164,127,109	$ 334,851,791	49.0%
2011	$ 7,412,192	$2,841,480	$10,609,000	$ -	$20,862,673	$ 172,498,546	$ 355,516,347	48.5%
2012	$ 7,542,031	$2,863,047	$10,927,270	$ -	$21,332,348	$ 180,394,284	$ 376,526,321	47.9%
2013	$ 7,664,080	$2,881,372	$11,255,088	$ -	$21,800,540	$ 188,063,759	$ 398,230,258	47.2%
2014	$ 7,759,343	$2,889,858	$11,592,741	$ -	$22,241,942	$ 195,616,686	$ 420,812,231	46.5%
2015	$ 7,873,250	$2,900,979	$11,940,523	$ -	$22,714,752	$ 202,448,417	$ 443,498,135	45.6%
2016	$ 7,960,806	$2,902,660	$12,298,739	$ -	$23,162,205	$ 209,087,149	$ 466,949,171	44.8%
2017	$ 8,055,730	$2,905,513	$12,667,701	$ -	$23,628,944	$ 215,237,013	$ 490,790,074	43.9%
2018	$ 8,132,389	$2,900,582	$13,047,732	$ -	$24,080,702	$ 223,440,810	$ 515,820,868	43.3%
2019	$ 8,232,419	$2,905,290	$13,439,164	$ -	$24,576,874	$ 234,194,703	$ 540,790,092	43.3%
2020	$ 8,287,073	$2,894,642	$13,842,339	$ -	$25,024,054	$ 247,551,886	$ 566,097,891	43.7%
2021	$ 8,377,293	$2,891,580	$14,257,609	$ -	$25,526,482	$ 263,496,688	$ 591,443,282	44.6%
2022	$ 8,437,015	$2,878,205	$14,685,337	$ -	$26,000,557	$ 279,628,711	$ 616,481,267	45.4%
2023	$ 8,470,768	$2,853,704	$15,125,897	$ -	$26,450,370	$ 296,050,973	$ 641,201,270	46.2%
2024	$ 8,494,084	$2,824,182	$15,579,674	$ -	$26,897,940	$ 312,696,176	$ 665,314,266	47.0%
2025	$ 8,495,097	$2,785,797	$16,047,064	$ -	$27,327,959	$ 329,701,756	$ 688,802,262	47.9%
2026	$ 8,459,113	$2,736,383	$16,528,476	$ -	$27,723,972	$ 347,153,772	$ 711,664,746	48.8%
2027	$ 8,481,824	$2,702,780	$17,024,331	$ -	$28,208,935	$ 365,446,527	$ 734,113,860	49.8%
2028	$ 8,500,018	$2,674,108	$17,535,061	$ -	$28,709,187	$ 385,033,306	$ 756,681,763	50.9%
2029	$ 8,557,736	$2,661,664	$18,061,112	$ -	$29,280,512	$ 405,884,021	$ 779,073,858	52.1%
2030	$ 8,612,895	$2,652,331	$18,602,946	$ -	$29,868,171	$ 428,042,028	$ 801,148,971	53.4%
2031	$ 8,671,137	$2,644,856	$19,161,034	$ -	$30,477,028	$ 451,860,199	$ 823,152,579	54.9%
2032	$ 8,724,922	$2,641,529	$19,735,865	$ -	$31,102,315	$ 477,615,257	$ 845,311,982	56.5%
2033	$ 8,820,568	$2,651,380	$20,327,941	$ -	$31,799,889	$ 505,557,960	$ 867,674,846	58.3%
2034	$ 8,936,994	$2,673,667	$20,937,779	$ -	$32,548,440	$ 535,994,345	$ 890,375,351	60.2%
2035	$ 9,032,796	$2,692,220	$21,565,913	$ -	$33,290,928	$ 569,075,291	$ 913,396,935	62.3%

Milliman

One Financial Plaza
501 N. Broadway, Suite 550
St. Louis, MO 63102
314-231-3031 Fax 314-231-0249
www.milliman.com

MEMORANDUM

TO: Evelyn Honea
Mary Mannix

FROM: Mike Zwiener

DATE: March 6, 2008

RE: Police & Fire Retirement Fund – Funded Ratio Projections – Second Set

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As a follow-up to the March 3 pension board meeting, in which our February 27 analysis was discussed, Milliman was requested to analyze additional funding scenarios.

This analysis is a supplement to our earlier analysis dated February 27, 2008. It is limited to an analysis of the additional scenarios; the following sections in our February 27 report are equally applicable here and are incorporated by reference:

- Funded Ratio – Defined
- Additional Funding Sources – Proposed
- Closed Group/Open Group
- Demographic Data
- Assumptions

Specific Scenarios

The specific scenarios modeled under both closed group and open group assumptions are:

- 0.50% for 5 years, then 0.25%/Assumptions Met
  Black diamonds line on graphs

- 0.50% for 5 years, then 0.25%/Poor Experience
  Pink squares line on graphs

- 0.50% for 5 years, then 0.375%/Assumptions Met
  Yellow triangles line on graphs

- 0.50% for 5 years, then 0.375%/Poor Experience
  Blue X's line on graphs

- 0.375%/Assumptions Met
  Purple asterisks line on graphs

- 0.375%/ Poor Experience
  Brown circles line on graph

"Poor Experience" was arbitrarily defined as a 3% annual return on investments for each of the first 10 years and 7.5% thereafter. In addition, annual actuarial losses of 1% of accrued liability were assumed from non-investment sources. If actual investment experience turns out to fall between the assumed 7.5% rate and what we have defined as "Poor Experience" the resulting funded ratios would fall between these two extremes.

Closed Group Analysis (Exhibits 3-1 and 4-1)

Under the closed group scenarios, all post June 30, 2008 hires are assumed to be covered by LAGERS. Thus, the headcount of covered members will slowly decline over time, as will covered payroll.

Exhibit 3-1

This exhibit is a summary in graph form of the plan's funded ratios under all 6 scenarios, assuming that the sales tax revenue will cease once an 80% funded ratio is achieved.

Several observations are of note:

- If assumptions are met, the 0.375% tax and both versions using the 0.50% tax for 5 years will reach the 80% target inside of 10 years. (black, yellow and purple lines).

- If the plan has "Poor Experience" all three such scenarios shown will eventually reach 80% but it will take 15-20 years.

- Under "Assumptions are Met" scenarios, cutting the sales tax off upon reaching 80% is premature as the ratios immediately start to drift downward.

- The "Poor Experience" scenarios appear more favorable when looking at the ratios 15+ years and out. This can be misleading. Consider that these scenarios required that the sales tax revenue was being paid in several more years than under the "Assumptions Met" scenarios. Also, the "Poor Experience" ends after the first 10 years. The conclusion that should be drawn, in our opinion, is that the sales tax cutoff target should be set higher than 80%.

Exhibit 3-2

This exhibit is simply a summary in table format of the funded ratios displayed in the graph on exhibit 3-2.

Exhibit 4-1

This exhibit is a summary in graph form of the plan's funded ratios under all 6 scenarios, assuming that the sales tax revenue will cease once a 90% funded ratio is achieved.

Observations of Note:

- If the tax does not sunset until a 90% ratio is met, the ratios under all tested scenarios do not decrease thereafter.

- In our February 27 analysis, the 90% target was reached in 2016 with a 0.50% tax rate; reducing the rate to 0.375% after 5 years does not change this timeframe (yellow triangles); reducing the tax rate to 0.25% after 5 years extends attainment of 90% by 2 years (black diamonds).

- This exhibit emphasizes the overriding importance of investment experience. The 3 scenarios where assumptions are met are all grouped close together and to the left, indicating relatively quick progress toward the funded ratio goal. The exact same 3 scenarios except for Poor Experience are all grouped far to the right indicating much slower progress towards the goal.

Exhibit 4-2

This exhibit is a summary in table format of the funded ratios displayed in Exhibit 4-1.

Open Group Analysis (Exhibits 5-1 and 6-1)

The exhibits for the open group scenarios are arranged in the same manner as the closed group exhibits. Exhibits 5-1 and 5-2 summarize the funded ratios with an 80% target for all scenarios in graph form and table form, respectively. Exhibits 6-1 and 6-2 are the same except with a 90% target.

Note that under the open group analysis, there are no LAGERS Differential Contributions.

Observations Regarding the Open Group Scenarios

- The ratios do not deteriorate if the sales tax is cut off at the 80% target, as they do under the closed group. This is a function of the payroll under the closed group decreasing over time.

- While the funded ratio patterns are very similar when comparing the open and closed group scenarios, note that the absolute size of the assets and liabilities grows much faster under the open group scenarios and the absolute ***difference*** in the size of the fund grows over time. Thus, the impact of investment experience (good and bad) will have a greater absolute impact on the plan if it remains open to new entrants.

Contributing Actuarially Required Contribution (ARC)

Milliman was also requested to model the impact on the funded ratios if the actuarially required amount was contributed each year and there was no sales tax revenue.

The ARC was assumed to be calculated as it is currently with these exceptions:

- The amortization period on the unfunded actuarial accrued liability is decreased by 1 each year until it reaches 20 years (and then reamortized each year thereafter using 20 years).

- The amortization method is switched from a level percentage of payroll to a level dollar amount – this is especially appropriate under a closed group scenario.

Exhibit 7-1

This exhibit is a summary in graph form if the ARC is contributed each year. We looked at 4 scenarios.

- Closed Group/Assumptions Met – black diamonds
- Closed Group/Poor Experience – pink squares
- Open Group/Assumptions Met – yellow triangles
- Open Group/Poor Experience – blue X's

The following observations can be made:

- While the 90% targets are eventually reached, it takes much longer than when there is an explicit sales tax. This is because the sales tax is "front loaded" into the earliest years, providing for a quicker build-up of plan assets which, in turn, allows for the generation of more investment earnings.

- While it does not display on the graph, the pattern of annual contribution requirements will differ from the contribution pattern for sales tax scenarios. Recall that the ARC currently requires a contribution of about 50% of payroll and that a contribution of this amount is still several million dollars less than a contribution of 28.88% of payroll plus 0.25% sales tax revenue. Thus, over time, the amount of the ARC will increase both as a dollar amount and as a percentage of payroll. The scenarios with a sales tax component have contribution dollars loaded in the first few years with the payroll component fixed over time (28.88%).

Exhibit 7-2

This exhibit is a summary in table format of the funded ratios displayed in exhibit 7-1.

Certification and Disclaimers

In preparing this analysis we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this analysis is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Actuarial computations presented in this report are for purposes of projecting funded ratios under a variety of alternative scenarios. Determinations for purposes other than this analysis may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

The results will vary from those presented in this analysis to the extent actual experience differs from that projected by the actuarial assumptions.

Milliman is not a law firm and cannot render legal opinions. Our analysis is limited to the actuarial computations involved with the projection of the funding ratios. We can offer no advice or opinion on the practical or legal considerations of implementing a sales tax increase.

Milliman's work product was prepared exclusively for the City of Springfield for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the City of Springfield's operations, and uses the City of Springfield's data, which

Milliman has not audited. It is not for the use or benefit of any third party for any purpose. The analysis, including the exhibits, should be referenced as a whole. Consideration of only subparts or excerpts could lead the user to incorrect conclusions. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

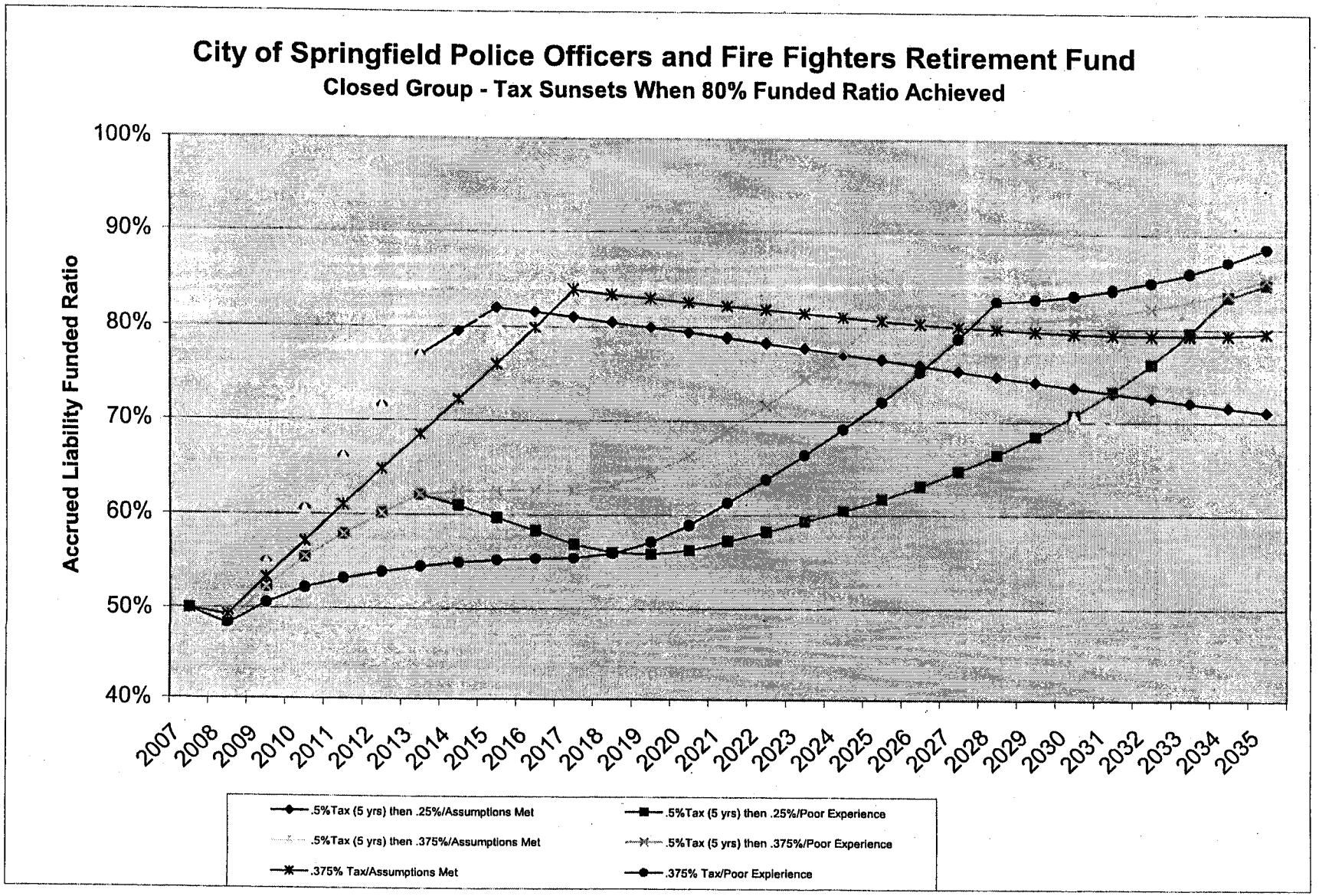
We respectfully submit the above analysis, and we look forward to discussing it with you. We are consulting actuaries for Milliman, Inc. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Michael J. Zwiener, FSA
Consulting Actuary

Michael A. Sudduth, FSA
Actuary

MJZ/MAS/giy


City of Springfield Police Officers and Fire Fighters Retirement Fund
Closed Group - Tax Sunsets When 80% Funded Ratio Achieved
Accrued Liability Funded Ratio
100%
90%
80%
70%
60%
50%
40%
2007
2008
2009
2010
2011
2012
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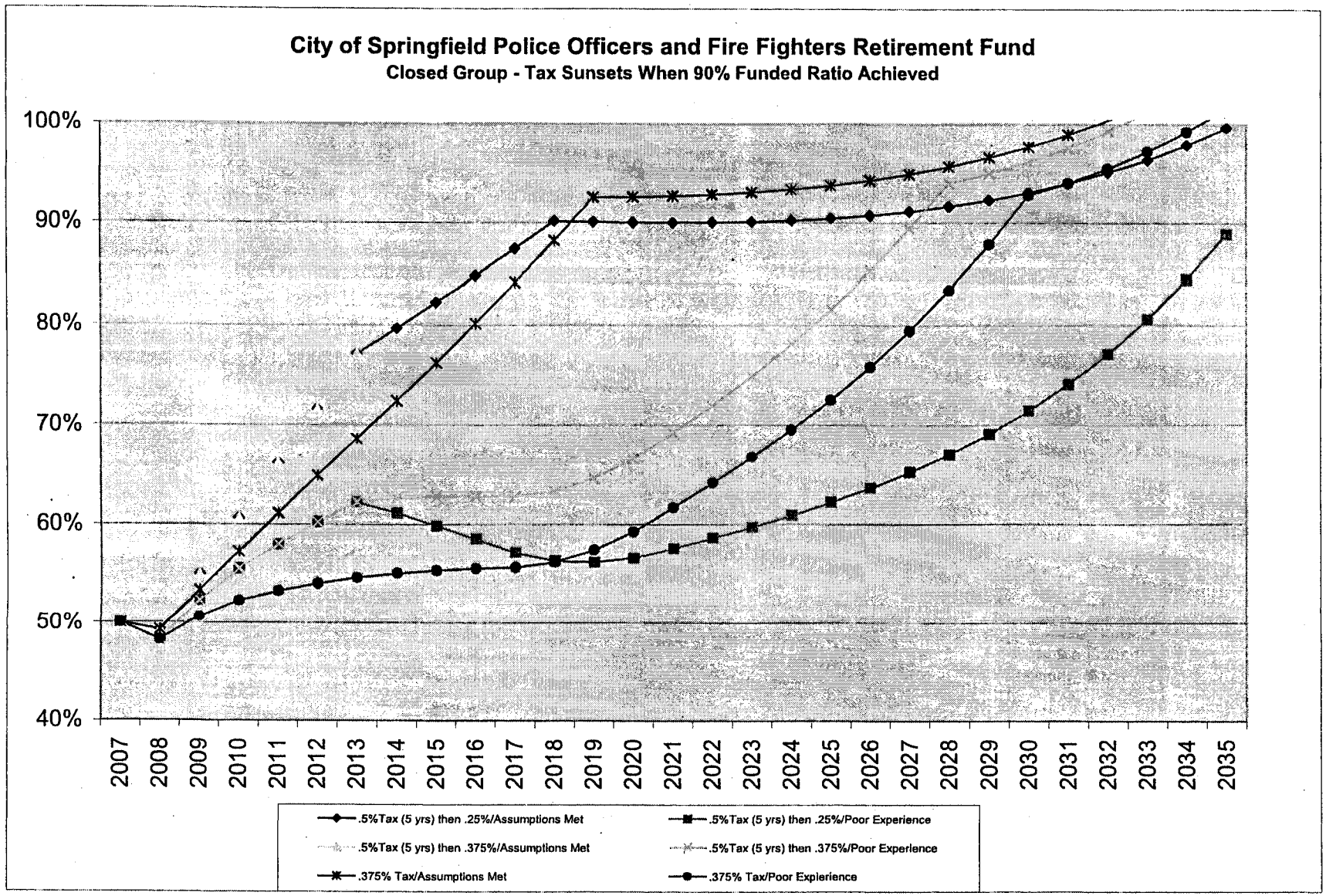
2032
2033
2034
2035
.5%Tax (5 yrs) then .25%/Assumptions Met
.5%Tax (5 yrs) then .25%/Poor Experience
.5%Tax (5 yrs) then .375%/Assumptions Met
.5%Tax (5 yrs) then .375%/Poor Experience
.375% Tax/Assumptions Met
.375% Tax/Poor Experience

City of Springfield Police Officers and Fire Fighters Retirement Fund

Summary of Projected Closed Group Funded Ratios
Tax Sunsets When 80% Funded Ratio Achieved

Valuation Date July 1	.5% Tax 5 Yrs. Then .25% Assumptions Met	.5% Tax 5 Yrs. Then .25% Poor Experience	.5% Tax 5 Yrs. Then .375% Assumptions Met	.5% Tax 5 Yrs. Then .375% Poor Experience	.375% Tax Assumptions Met	.375% Tax Poor Experience
2007	50%	50%	50%	50%	50%	50%
2008	49%	48%	49%	48%	49%	48%
2009	55%	52%	55%	52%	53%	51%
2010	61%	55%	61%	55%	57%	52%
2011	66%	58%	66%	58%	61%	53%
2012	72%	60%	72%	60%	65%	54%
2013	77%	62%	77%	62%	68%	54%
2014	79%	61%	**81%**	62%	72%	55%
2015	**82%**	60%	81%	63%	76%	55%
2016	82%	58%	80%	63%	**80%**	55%
2017	81%	57%	79%	63%	84%	55%
2018	80%	56%	79%	63%	83%	56%
2019	80%	56%	78%	64%	83%	57%
2020	79%	56%	78%	66%	83%	59%
2021	79%	57%	77%	69%	82%	61%
2022	78%	58%	76%	72%	82%	64%
2023	78%	59%	76%	75%	81%	66%
2024	77%	60%	75%	78%	81%	69%
2025	77%	62%	74%	**81%**	81%	72%
2026	76%	63%	74%	81%	80%	75%
2027	75%	65%	73%	81%	80%	79%
2028	75%	66%	72%	81%	80%	**83%**
2029	74%	68%	71%	81%	80%	83%
2030	74%	71%	71%	81%	79%	83%
2031	73%	73%	70%	82%	79%	84%
2032	73%	76%	69%	82%	79%	85%
2033	72%	**80%**	68%	83%	79%	86%
2034	72%	83%	67%	84%	79%	87%
2035	71%	85%	66%	85%	80%	88%

Exhibit 4-1


City of Springfield Police Officers and Fire Fighters Retirement Fund
Closed Group - Tax Sunsets When 90% Funded Ratio Achieved
100%
90%
80%
70%
60%
50%
40%
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
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2019
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2021
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2031
2032
2033
2034
2035
.5%Tax (5 yrs) then .25%/Assumptions Met
.5%Tax (5 yrs) then .25%/Poor Experience
.5%Tax (5 yrs) then .375%/Assumptions Met
.5%Tax (5 yrs) then .375%/Poor Experience
.375% Tax/Assumptions Met
.375% Tax/Poor Experience

Exhibit 4-2

City of Springfield Police Officers and Fire Fighters Retirement Fund

Summary of Projected Closed Group Funded Ratios
Tax Sunsets When 90% Funded Ratio Achieved

Valuation Date July 1	.5% Tax 5 Yrs. Then .25% Assumptions Met	.5% Tax 5 Yrs. Then .25% Poor Experience	.5% Tax 5 Yrs. Then .375% Assumptions Met	.5% Tax 5 Yrs. Then .375% Poor Experience	.375% Tax Assumptions Met	.375% Tax Poor Experience
2007	50%	50%	50%	50%	50%	50%
2008	49%	48%	49%	48%	49%	48%
2009	55%	52%	55%	52%	53%	51%
2010	61%	55%	61%	55%	57%	52%
2011	66%	58%	66%	58%	61%	53%
2012	72%	60%	72%	60%	65%	54%
2013	77%	62%	77%	62%	69%	55%
2014	80%	61%	81%	63%	72%	55%
2015	82%	60%	85%	63%	76%	55%
2016	85%	59%	**90%**	63%	80%	56%
2017	87%	57%	94%	63%	84%	56%
2018	**90%**	56%	94%	63%	88%	56%
2019	90%	56%	94%	65%	**93%**	57%
2020	90%	57%	94%	67%	93%	59%
2021	90%	58%	94%	69%	93%	62%
2022	90%	59%	94%	72%	93%	64%
2023	90%	60%	95%	75%	93%	67%
2024	90%	61%	95%	78%	93%	70%
2025	90%	62%	96%	82%	94%	73%
2026	91%	64%	96%	85%	94%	76%
2027	91%	65%	97%	89%	95%	79%
2028	92%	67%	98%	**94%**	96%	83%
2029	92%	69%	99%	95%	97%	88%
2030	93%	71%	100%	96%	98%	**93%**
2031	94%	74%	102%	98%	99%	94%
2032	95%	77%	103%	99%	100%	95%
2033	96%	81%	105%	101%	102%	97%
2034	98%	84%	108%	104%	104%	99%
2035	100%	89%	110%	106%	106%	102%

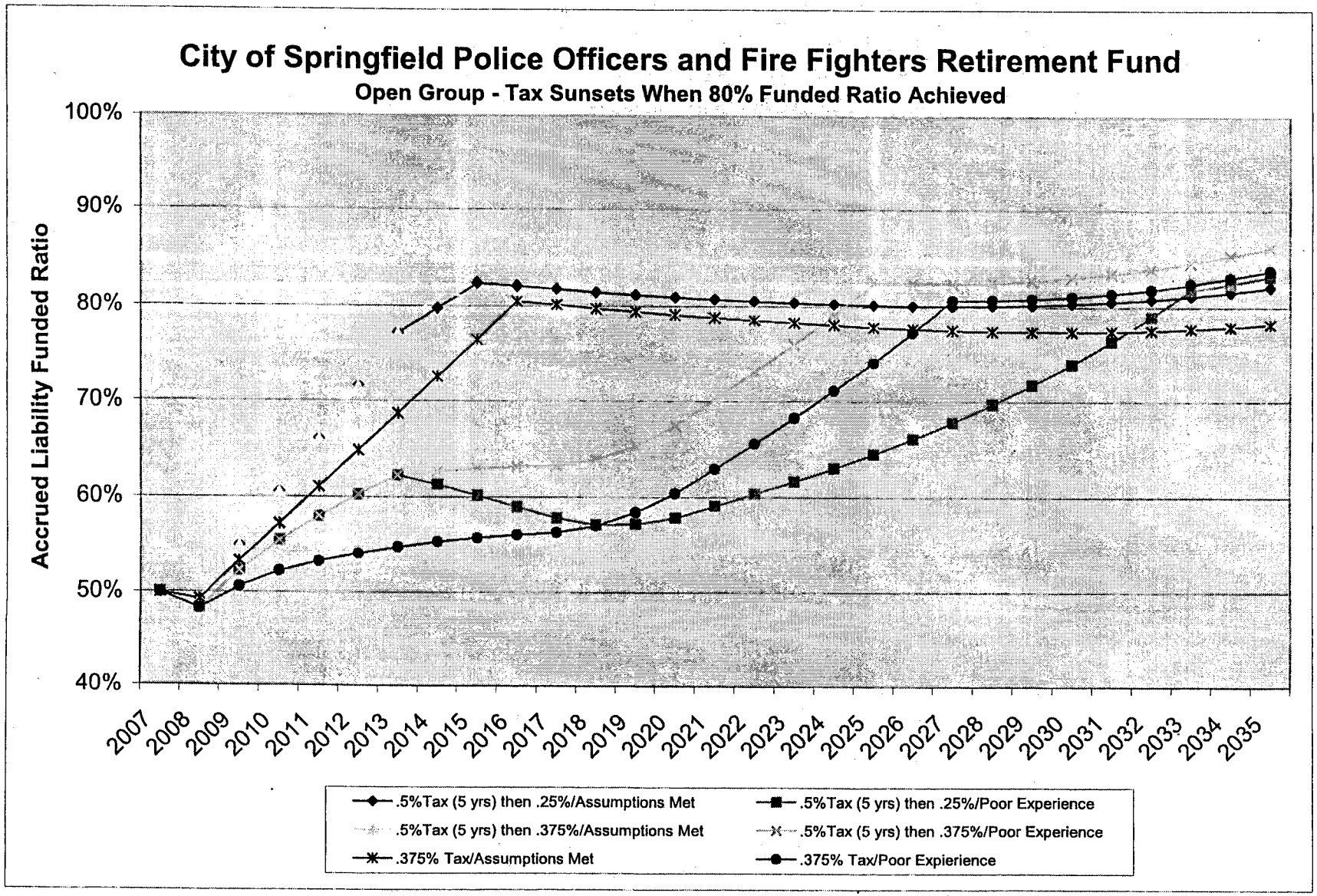

City of Springfield Police Officers and Fire Fighters Retirement Fund
Open Group - Tax Sunsets When 80% Funded Ratio Achieved
Accrued Liability Funded Ratio
100%
90%
80%
70%
60%
50%
40%
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
.5%Tax (5 yrs) then .25%/Assumptions Met
.5%Tax (5 yrs) then .25%/Poor Experience
.5%Tax (5 yrs) then .375%/Assumptions Met
.5%Tax (5 yrs) then .375%/Poor Experience
.375% Tax/Assumptions Met
.375% Tax/Poor Expierience

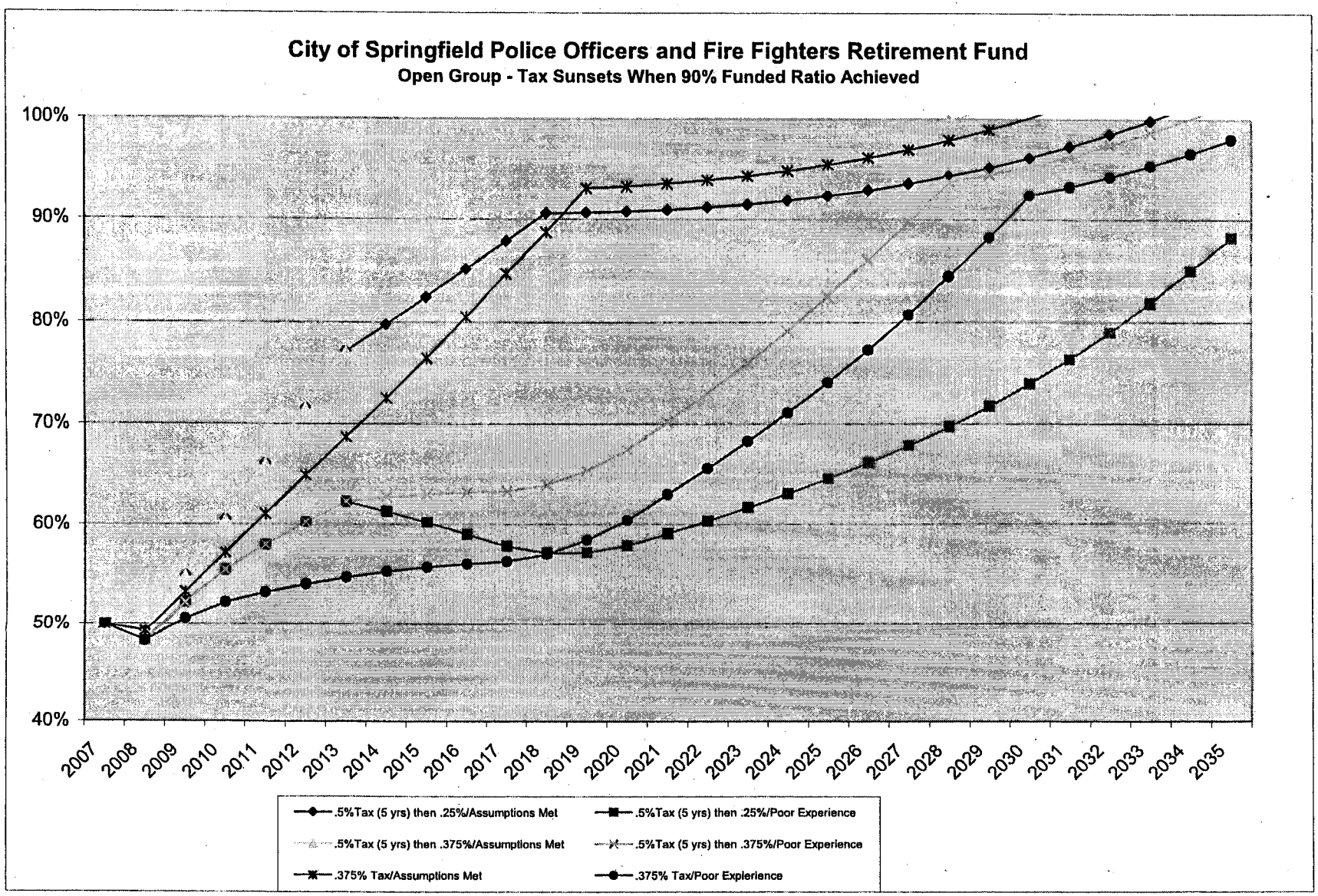
Exhibit 5-2

City of Springfield Police Officers and Fire Fighters Retirement Fund

Summary of Projected Open Group Funded Ratios
Tax Sunsets When 80% Funded Ratio Achieved

Valuation Date July 1	.5% Tax 5 Yrs. Then .25% Assumptions Met	.5% Tax 5 Yrs. Then .25% Poor Experience	.5% Tax 5 Yrs. Then .375% Assumptions Met	.5% Tax 5 Yrs. Then .375% Poor Experience	.375% Tax Assumptions Met	.375% Tax Poor Experience
2007	50%	50%	50%	50%	50%	50%
2008	49%	48%	49%	48%	49%	48%
2009	55%	52%	55%	52%	53%	51%
2010	61%	55%	61%	55%	57%	52%
2011	66%	58%	66%	58%	61%	53%
2012	72%	60%	72%	60%	65%	54%
2013	77%	62%	77%	62%	69%	55%
2014	**80%**	61%	**81%**	63%	73%	55%
2015	82%	60%	81%	63%	77%	56%
2016	82%	59%	81%	63%	**80%**	56%
2017	82%	58%	80%	63%	80%	56%
2018	81%	57%	80%	64%	80%	57%
2019	81%	57%	80%	65%	79%	58%
2020	81%	58%	79%	67%	79%	60%
2021	81%	59%	79%	70%	79%	63%
2022	81%	60%	79%	73%	79%	66%
2023	80%	62%	78%	76%	78%	68%
2024	80%	63%	78%	79%	78%	71%
2025	80%	65%	78%	**82%**	78%	74%
2026	80%	66%	78%	82%	78%	77%
2027	80%	68%	78%	82%	78%	**81%**
2028	80%	70%	78%	82%	77%	81%
2029	80%	72%	78%	83%	77%	81%
2030	80%	74%	78%	83%	77%	81%
2031	81%	76%	78%	83%	77%	81%
2032	81%	79%	78%	84%	78%	82%
2033	81%	**82%**	78%	85%	78%	82%
2034	82%	82%	78%	85%	78%	83%
2035	82%	83%	79%	86%	78%	84%

Exhibit 6


City of Springfield Police Officers and Fire Fighters Retirement Fund
Open Group - Tax Sunsets When 90% Funded Ratio Achieved
100%
90%
80%
70%
60%
50%
40%
2007
2008
2009
2010
2011
2012
2013
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2015
2016
2017
2018
2019
2020
2021
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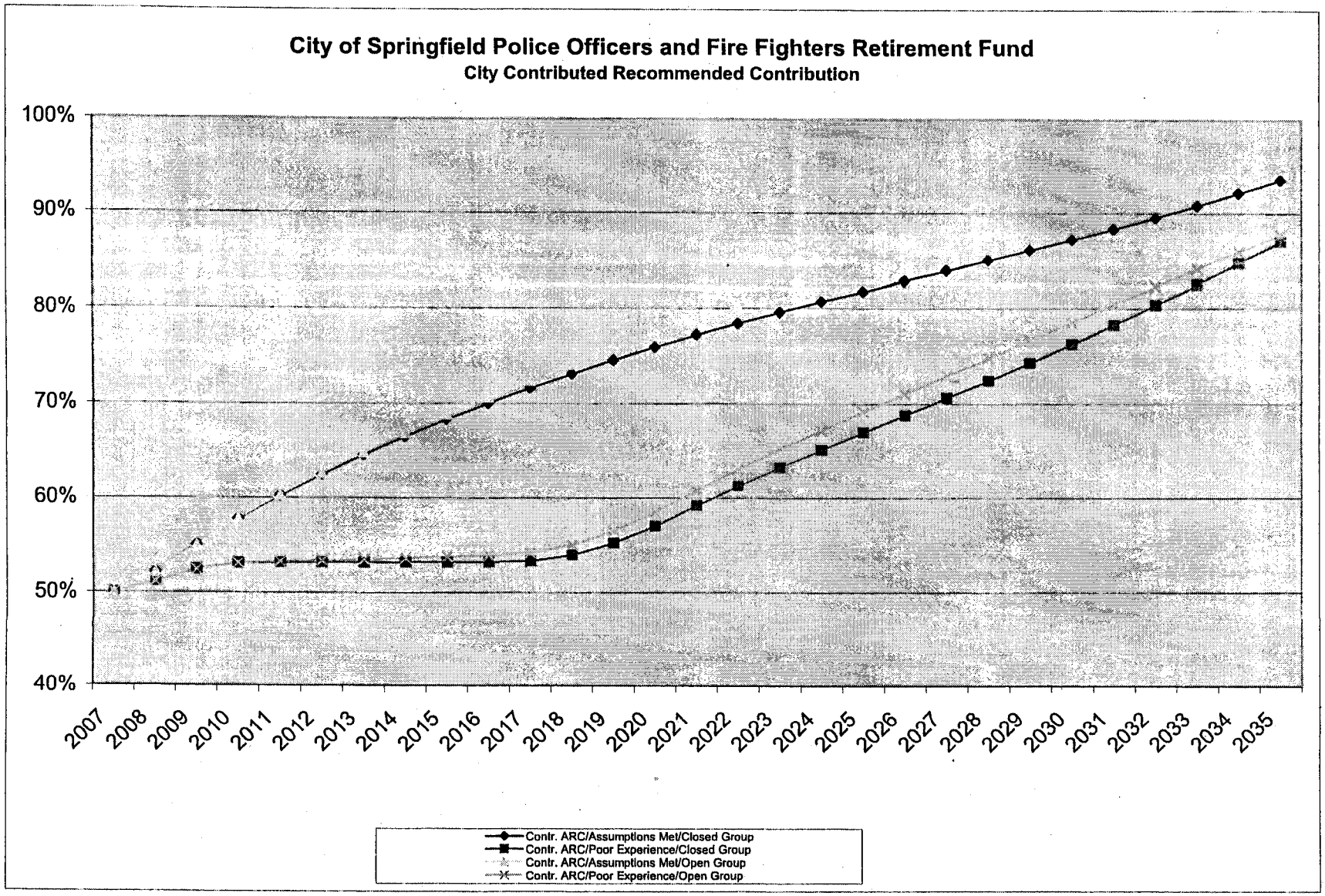
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
.5%Tax (5 yrs) then .25%/Assumptions Met
.5%Tax (5 yrs) then .25%/Poor Experience
.5%Tax (5 yrs) then .375%/Assumptions Met
.5%Tax (5 yrs) then .375%/Poor Experience
.375% Tax/Assumptions Met
.375% Tax/Poor Experience

City of Springfield Police Officers and Fire Fighters Retirement Fund

Summary of Projected Open Group Funded Ratios
Tax Sunsets When 90% Funded Ratio Achieved

Valuation Date July 1	.5% Tax 5 Yrs. Then .25% Assumptions Met	.5% Tax 5 Yrs. Then .25% Poor Experience	.5% Tax 5 Yrs. Then .375% Assumptions Met	.5% Tax 5 Yrs. Then .375% Poor Experience	.375% Tax Assumptions Met	.375% Tax Poor Experience
2007	50%	50%	50%	50%	50%	50%
2008	49%	48%	49%	48%	49%	48%
2009	55%	52%	55%	52%	53%	51%
2010	61%	55%	61%	55%	57%	52%
2011	66%	58%	66%	58%	61%	53%
2012	72%	60%	72%	60%	65%	54%
2013	77%	62%	77%	62%	69%	55%
2014	80%	61%	81%	63%	73%	55%
2015	82%	60%	85%	63%	77%	56%
2016	85%	59%	**90%**	63%	80%	56%
2017	88%	58%	94%	63%	85%	56%
2018	**91%**	57%	94%	64%	89%	57%
2019	91%	57%	94%	65%	**93%**	58%
2020	91%	58%	95%	67%	93%	60%
2021	91%	59%	95%	70%	94%	63%
2022	91%	60%	95%	73%	94%	66%
2023	92%	62%	96%	76%	94%	68%
2024	92%	63%	96%	79%	95%	71%
2025	92%	65%	97%	82%	95%	74%
2026	93%	66%	98%	86%	96%	77%
2027	94%	68%	99%	**90%**	97%	81%
2028	94%	70%	100%	94%	98%	84%
2029	95%	72%	101%	94%	99%	88%
2030	96%	74%	102%	95%	100%	**92%**
2031	97%	76%	104%	96%	101%	93%
2032	99%	79%	105%	97%	103%	94%
2033	100%	82%	107%	99%	105%	95%
2034	101%	85%	109%	100%	106%	97%
2035	103%	88%	111%	102%	108%	98%


City of Springfield Police Officers and Fire Fighters Retirement Fund
City Contributed Recommended Contribution
100%
90%
80%
70%
60%
50%
40%
2007
2008
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2031
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2035
Contr. ARC/Assumptions Met/Closed Group
Contr. ARC/Poor Experience/Closed Group
Contr. ARC/Assumptions Met/Open Group
Contr. ARC/Poor Experience/Open Group

City of Springfield Police Officers and Fire Fighters Retirement Fund

Summary of Projected Funded Ratios
City Contributed Actuarially Recommended Contribution

Valuation Date July 1	Closed Group Assumptions Met	Closed Group Poor Experience	Open Group Assumptions Met	Open Group Poor Experience
2007	50%	50%	50%	50%
2008	52%	51%	52%	51%
2009	55%	52%	55%	52%
2010	58%	53%	58%	53%
2011	60%	53%	60%	53%
2012	62%	53%	63%	53%
2013	65%	53%	65%	53%
2014	67%	53%	67%	54%
2015	68%	53%	69%	54%
2016	70%	53%	71%	54%
2017	72%	53%	73%	54%
2018	73%	54%	74%	55%
2019	75%	55%	76%	56%
2020	76%	57%	77%	58%
2021	77%	59%	79%	61%
2022	78%	61%	80%	63%
2023	80%	63%	81%	65%
2024	81%	65%	83%	67%
2025	82%	67%	84%	69%
2026	83%	69%	85%	71%
2027	84%	71%	86%	73%
2028	85%	72%	88%	75%
2029	86%	74%	89%	77%
2030	87%	76%	90%	79%
2031	88%	78%	91%	80%
2032	90%	80%	92%	82%
2033	91%	82%	94%	84%
2034	92%	85%	95%	86%
2035	94%	87%	96%	88%

Milliman

501 N. Broadway
Suite 550
St. Louis, MO 63102
USA

Tel +1 314 231 3031
Fax +1 314 231 0249

milliman.com

April 14, 2008

Evelyn Honea
Deputy City Manager
City of Springfield
840 Boonville
Springfield, MO 65801-8368

RE: Police and Fire Retirement Fund – Plan Freeze Analysis

Dear Evelyn:

This letter summarizes our analysis and findings with respect to our most recent assignment on the Police and Fire Retirement Fund.

Assignment

Milliman was requested to analyze the cost impact of freezing the plan as of a point in time in the near future (we used June 30, 2008 for study purposes). For purposes of this study, "Freeze" means:

- No new entrants after the date of the freeze.
- Current provisions apply to all current retirees and to benefits earned through June 30, 2008 by current active members.
- No service or pay after June 30, 2008 will be recognized.

Consideration will be given to the special characteristics of a frozen plan, specifically potential asset allocation changes which would serve to impact expected plan asset returns, and in turn plan funding assumptions.

Methodology

As we discussed, the starting point for this analysis was to determine whether the current City contribution rate (approximately $7.4 million annually) would be sufficient to fund the frozen plan. Further, to the extent this amount is more than sufficient, at what point in time could the annual contribution be reduced or eliminated. Similarly, if the current annual contribution is not sufficient to support the frozen plan, what amount of additional funding would be necessary?

This analysis assumes that employee contributions to the fund would cease effective with the date of freeze. Member contributions in year ending June 30, 2007 were about $2.9 million.

Our February 27 and March 6 analyses were premised on a plan that continued to allow for additional accruals, which is a substantially different situation than a freeze.

Under a freeze, it may be less important to quickly reach an 80% or 90% funded ratio. Instead, quickly reaching the state-required 60% level and then projecting slow but steady progress may be a more appropriate overall approach. Over time, the liabilities of the frozen plan will shrink and any potential shortfalls will become smaller and smaller on a dollar basis, especially as compared to a plan that allows continued accruals.

Finally, the duration of the liabilities of a frozen plan will slowly decrease over time as the covered population ages. This may eventually lead to consideration of reallocating assets to better match the changing liabilities of the plan. To this end, we also performed calculations if the asset allocation was modified in such a way by assuming assets will return 6% annually as well as changing the investment return assumption itself to 6%.

Specific Scenarios

The specific scenarios we modeled are:

- 7.5% assumption, actual return of 7.5%
  Black diamonds line on graphs

- 7.5% assumption, actual return of 7.5%, double contribution for 6 years
  Yellow triangles line on graphs

- 7.5% assumption, actual return of 7.5%, additional contribution of $3 million/year for 26 years
  Purple asterisks line on graphs

- 6.0% assumption, actual return of 6.0%
  Pink squares line on graphs

- 6.0% assumption, actual return of 6.0%, double contribution for 6 years
  Blue X's line on graphs

- 6.0% assumption, actual return of 6.0%, additional contribution of $10 million/year for 10 years
  Brown circles line on graphs

Analysis

Observations regarding the scenarios we modeled:

- No contributions beyond the current annual $7.4 million will result in the fund becoming depleted in approximately 2026 (6% scenario) or 2031 (7.5% scenario).
- The fund will also eventually become depleted under the 6% scenario with contributions doubled for the first 6 years (blue X's).
- The two 7.5% scenarios with increased funding show a pattern of slowly rising funded ratios. Not surprisingly, the larger contributions for a shorter period of time (yellow triangles) increases faster. The more modest additional contributions (purple asterisks) eventually "catches up" after 27 years. The key observation is that both are on a constant, upward trend.
- If a more conservative investment allocation is implemented, significantly greater contributions will be necessary. Under the 6% return assumption, additional contributions of $10 million/year for 10 years is required in order to bring the fund over the 60% funded level. It then remains essentially flat thereafter.
- Even though the plan is frozen to new entrants, benefit payments to the youngest current active members may occur 50 or more years into the future. Thus, even though the need for City contributions will end eventually, substantial contributions remain necessary during the 27 year projection period.

Certification and Disclaimers

In preparing this analysis we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this analysis is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Actuarial computations presented in this report are for purposes of projecting funded ratios under a variety of alternative scenarios. Determinations for purposes other than this analysis may be

significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

The results will vary from those presented in this analysis to the extent actual experience differs from that projected by the actuarial assumptions.

Milliman is not a law firm and cannot render legal opinions. Our analysis is limited to the actuarial computations involved with the projection of the funding ratios. We can offer no advice or opinion on the practical or legal considerations of implementing a sales tax increase.

Milliman's work product was prepared exclusively for the City of Springfield for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the City of Springfield's operations, and uses the City of Springfield's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. The analysis, including the exhibits, should be referenced as a whole. Consideration of only subparts or excerpts could lead the user to incorrect conclusions. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We respectfully submit the above analysis, and we look forward to discussing it with you. We are consulting actuaries for Milliman, Inc. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

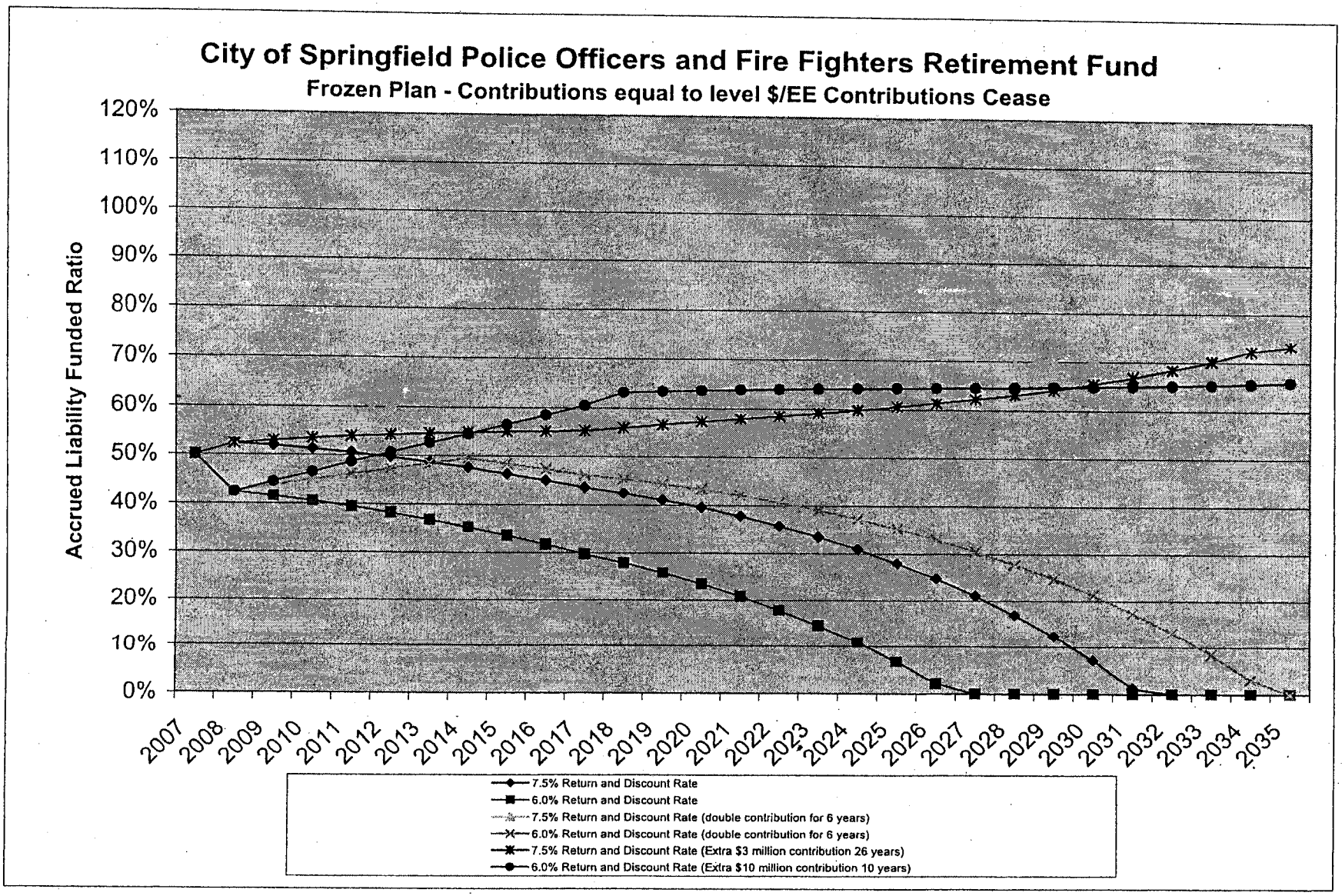
Michael J. Zwiener, FSA
Consulting Actuary

Michael A. Sudduth, FSA
Actuary

MJZ/MAS/giy

Enclosure: Exhibit

Exhibit


City of Springfield Police Officers and Fire Fighters Retirement Fund
Frozen Plan - Contributions equal to level $/EE Contributions Cease
Accrued Liability Funded Ratio
120%
110%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2007
2008
2009
2010
2011
2012
2013
2014
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2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
7.5% Return and Discount Rate
6.0% Return and Discount Rate
7.5% Return and Discount Rate (double contribution for 6 years)
6.0% Return and Discount Rate (double contribution for 6 years)
7.5% Return and Discount Rate (Extra $3 million contribution 26 years)
6.0% Return and Discount Rate (Extra $10 million contribution 10 years)

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Plan Freeze Results

	7.5% Assumed Return and Discount Rate $7.4 Million Per Year Employer Contribution				6.0% Assumed Return and Discount Rate $7.4 Million Per Year Employer Contribution			
Year End June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	City Contribution	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	City Contribution
2007	$ 138,890,814	$ 277,861,524	50.0%	$ 7,411,818	$ 138,890,814	$ 277,861,524	50.0%	$ 7,411,818
2008	$ 144,889,040	$ 277,041,429	52.3%	$ 8,411,818	$ 142,837,620	$ 336,779,200	42.4%	$ 8,411,818
2009	$ 147,428,766	$ 284,410,092	51.8%	$ 7,411,818	$ 143,141,120	$ 344,294,784	41.6%	$ 7,411,818
2010	$ 149,338,939	$ 291,399,629	51.2%	$ 7,411,818	$ 142,648,725	$ 351,337,888	40.6%	$ 7,411,818
2011	$ 150,620,800	$ 298,010,940	50.5%	$ 7,411,818	$ 141,360,790	$ 357,908,421	39.5%	$ 7,411,818
2012	$ 151,025,222	$ 303,980,570	49.7%	$ 7,411,818	$ 139,029,038	$ 363,743,725	38.2%	$ 7,411,818
2013	$ 150,811,697	$ 309,577,265	48.7%	$ 7,411,818	$ 135,913,788	$ 369,113,161	36.8%	$ 7,411,818
2014	$ 150,049,227	$ 314,878,116	47.7%	$ 7,411,818	$ 132,082,545	$ 374,091,983	35.3%	$ 7,411,818
2015	$ 148,318,397	$ 319,432,943	46.4%	$ 7,411,818	$ 127,116,840	$ 378,231,275	33.6%	$ 7,411,818
2016	$ 145,955,586	$ 323,605,248	45.1%	$ 7,411,818	$ 121,354,654	$ 381,895,746	31.8%	$ 7,411,818
2017	$ 142,767,086	$ 327,186,620	43.6%	$ 7,411,818	$ 114,602,946	$ 384,877,720	29.8%	$ 7,411,818
2018	$ 138,882,394	$ 327,053,617	42.5%	$ 7,411,818	$ 106,992,385	$ 383,490,308	27.9%	$ 7,411,818
2019	$ 134,151,746	$ 326,297,945	41.1%	$ 7,411,818	$ 98,374,596	$ 381,411,829	25.8%	$ 7,411,818
2020	$ 128,570,641	$ 324,938,282	39.6%	$ 7,411,818	$ 88,747,664	$ 378,665,686	23.4%	$ 7,411,818
2021	$ 122,067,098	$ 322,920,050	37.8%	$ 7,411,818	$ 78,042,904	$ 375,202,622	20.8%	$ 7,411,818
2022	$ 114,554,069	$ 320,174,256	35.8%	$ 7,411,818	$ 66,177,909	$ 370,960,204	17.8%	$ 7,411,818
2023	$ 106,078,409	$ 316,782,547	33.5%	$ 7,411,818	$ 53,204,746	$ 366,026,791	14.5%	$ 7,411,818
2024	$ 96,613,526	$ 312,747,118	30.9%	$ 7,411,818	$ 39,102,200	$ 360,411,163	10.8%	$ 7,411,818
2025	$ 86,178,980	$ 308,123,895	28.0%	$ 7,411,818	$ 23,895,583	$ 354,175,791	6.7%	$ 7,411,818
2026	$ 74,796,096	$ 302,973,218	24.7%	$ 7,411,818	$ 7,612,020	$ 347,387,101	2.2%	$ 7,411,818
2027	$ 62,441,127	$ 297,307,959	21.0%	$ 7,411,818	$ -	$ 340,063,883	0.0%	$ 7,411,818
2028	$ 49,179,776	$ 291,274,751	16.9%	$ 7,411,818	$ -	$ 332,357,859	0.0%	$ 7,411,818
2029	$ 34,942,564	$ 284,611,737	12.3%	$ 7,411,818	$ -	$ 324,212,062	0.0%	$ 7,411,818
2030	$ 19,678,443	$ 277,947,592	7.1%	$ 7,411,818	$ -	$ 315,660,578	0.0%	$ 7,411,818
2031	$ 3,365,161	$ 270,716,371	1.2%	$ 7,411,818	$ -	$ 306,742,662	0.0%	$ 7,411,818
2032	$ -	$ 263,148,456	0.0%	$ 7,411,818	$ -	$ 297,493,801	0.0%	$ 7,411,818
2033	$ -	$ 255,276,660	0.0%	$ 7,411,818	$ -	$ 287,951,789	0.0%	$ 7,411,818
2034	$ -	$ 247,167,686	0.0%	$ 7,411,818	$ -	$ 278,187,770	0.0%	$ 7,411,818
2035	$ -	$ 238,815,928	0.0%	$ 7,411,818	$ -	$ 268,200,511	0.0%	$ 7,411,818

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Plan Freeze Results

	7.5% Assumed Return and Discount Rate $7.4 Million Per Year Employer Contribution Plus extra $7.4 Million Per Year First 6 Years				6.0% Assumed Return and Discount Rate $7.4 Million Per Year Employer Contribution Plus extra $7.4 Million Per Year First 6 Years			
Year End June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	City Contribution	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	City Contribution
2007	$ 138,890,814	$ 277,861,524	50.0%	$ 7,411,818	$ 138,890,814	$ 277,861,524	50.0%	$ 7,411,818
2008	$ 144,889,040	$ 277,041,429	52.3%	$ 8,411,818	$ 142,837,620	$ 336,779,200	42.4%	$ 8,411,818
2009	$ 155,118,527	$ 284,410,092	54.5%	$ 14,823,636	$ 150,775,292	$ 344,294,784	43.8%	$ 14,823,636
2010	$ 165,295,193	$ 291,399,629	56.7%	$ 14,823,636	$ 158,375,120	$ 351,337,888	45.1%	$ 14,823,636
2011	$ 175,463,535	$ 298,010,940	58.9%	$ 14,823,636	$ 165,664,941	$ 357,908,421	46.3%	$ 14,823,636
2012	$ 185,420,924	$ 303,980,570	61.0%	$ 14,823,636	$ 172,425,611	$ 363,743,725	47.4%	$ 14,823,636
2013	$ 195,476,838	$ 309,577,265	63.1%	$ 14,823,636	$ 178,948,328	$ 369,113,161	48.5%	$ 14,823,636
2014	$ 205,754,015	$ 314,878,116	65.3%	$ 14,823,636	$ 185,333,330	$ 374,091,983	49.5%	$ 14,823,636
2015	$ 208,201,044	$ 319,432,943	65.2%	$ 7,411,818	$ 183,562,672	$ 378,231,275	48.5%	$ 7,411,818
2016	$ 210,329,431	$ 323,605,248	65.0%	$ 7,411,818	$ 181,187,236	$ 381,895,746	47.4%	$ 7,411,818
2017	$ 211,968,970	$ 327,186,620	64.8%	$ 7,411,818	$ 178,025,483	$ 384,877,720	46.3%	$ 7,411,818
2018	$ 213,274,419	$ 327,053,617	65.2%	$ 7,411,818	$ 174,220,274	$ 383,490,308	45.4%	$ 7,411,818
2019	$ 214,123,173	$ 326,297,945	65.6%	$ 7,411,818	$ 169,636,158	$ 381,411,829	44.5%	$ 7,411,818
2020	$ 214,539,925	$ 324,938,282	66.0%	$ 7,411,818	$ 164,284,920	$ 378,665,686	43.4%	$ 7,411,818
2021	$ 214,484,079	$ 322,920,050	66.4%	$ 7,411,818	$ 158,112,395	$ 375,202,622	42.1%	$ 7,411,818
2022	$ 213,902,324	$ 320,174,256	66.8%	$ 7,411,818	$ 151,051,570	$ 370,960,204	40.7%	$ 7,411,818
2023	$ 212,877,783	$ 316,782,547	67.2%	$ 7,411,818	$ 143,170,826	$ 366,026,791	39.1%	$ 7,411,818
2024	$ 211,422,852	$ 312,747,118	67.6%	$ 7,411,818	$ 134,466,245	$ 360,411,163	37.3%	$ 7,411,818
2025	$ 209,599,005	$ 308,123,895	68.0%	$ 7,411,818	$ 124,981,471	$ 354,175,791	35.3%	$ 7,411,818
2026	$ 207,472,623	$ 302,973,218	68.5%	$ 7,411,818	$ 114,763,061	$ 347,387,101	33.0%	$ 7,411,818
2027	$ 205,068,393	$ 297,307,959	69.0%	$ 7,411,818	$ 103,814,033	$ 340,063,883	30.5%	$ 7,411,818
2028	$ 202,504,086	$ 291,274,751	69.5%	$ 7,411,818	$ 92,228,158	$ 332,357,859	27.7%	$ 7,411,818
2029	$ 199,766,197	$ 284,811,737	70.1%	$ 7,411,818	$ 79,965,735	$ 324,212,062	24.7%	$ 7,411,818
2030	$ 196,863,849	$ 277,947,592	70.8%	$ 7,411,818	$ 67,008,154	$ 315,660,578	21.2%	$ 7,411,818
2031	$ 193,839,473	$ 270,716,371	71.6%	$ 7,411,818	$ 53,368,075	$ 306,742,662	17.4%	$ 7,411,818
2032	$ 190,735,687	$ 263,148,456	72.5%	$ 7,411,818	$ 39,055,944	$ 297,493,801	13.1%	$ 7,411,818
2033	$ 187,586,108	$ 255,276,660	73.5%	$ 7,411,818	$ 24,070,724	$ 287,951,789	8.4%	$ 7,411,818
2034	$ 184,459,342	$ 247,167,686	74.6%	$ 7,411,818	$ 8,443,550	$ 278,187,770	3.0%	$ 7,411,818
2035	$ 181,383,131	$ 238,815,928	76.0%	$ 7,411,818	$ -	$ 268,200,511	0.0%	$ 7,411,818

City of Springfield Police Officers and Fire Fighters Retirement Fund

Details of Projected Plan Freeze Results

	7.5% Assumed Return and Discount Rate $7.4 Million Per Year Employer Contribution Plus extra $3 Million Per Year First 26 Years				6.0% Assumed Return and Discount Rate $7.4 Million Per Year Employer Contribution Plus extra $10 Million Per Year First 10 Years			
Year End June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	City Contribution	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	City Contribution
2007	$ 138,890,814	$ 277,861,524	50.0%	$ 7,411,818	$ 138,890,814	$ 277,861,524	50.0%	$ 7,411,818
2008	$ 144,889,040	$ 277,041,429	52.3%	$ 8,411,818	$ 142,837,620	$ 336,779,200	42.4%	$ 8,411,818
2009	$ 150,541,266	$ 284,410,092	52.9%	$ 10,411,818	$ 153,441,120	$ 344,294,784	44.6%	$ 17,411,818
2010	$ 155,797,376	$ 291,399,629	53.5%	$ 10,411,818	$ 163,866,725	$ 351,337,888	46.6%	$ 17,411,818
2011	$ 160,676,120	$ 298,010,940	53.9%	$ 10,411,818	$ 174,151,870	$ 357,908,421	48.7%	$ 17,411,818
2012	$ 164,947,191	$ 303,980,570	54.3%	$ 10,411,818	$ 184,087,583	$ 363,743,725	50.6%	$ 17,411,818
2013	$ 168,890,314	$ 309,577,265	54.6%	$ 10,411,818	$ 193,975,846	$ 369,113,161	52.6%	$ 17,411,818
2014	$ 172,596,241	$ 314,878,116	54.8%	$ 10,411,818	$ 203,928,327	$ 374,091,983	54.5%	$ 17,411,818
2015	$ 175,668,937	$ 319,432,943	55.0%	$ 10,411,818	$ 213,573,369	$ 378,231,275	56.5%	$ 17,411,818
2016	$ 178,469,917	$ 323,605,248	55.2%	$ 10,411,818	$ 223,298,574	$ 381,895,746	58.5%	$ 17,411,818
2017	$ 180,832,492	$ 327,186,620	55.3%	$ 10,411,818	$ 232,963,502	$ 384,877,720	60.5%	$ 17,411,818
2018	$ 182,915,205	$ 327,053,617	55.9%	$ 10,411,818	$ 242,754,574	$ 383,490,308	63.3%	$ 17,411,818
2019	$ 184,599,518	$ 326,297,945	56.6%	$ 10,411,818	$ 242,282,516	$ 381,411,829	63.5%	$ 7,411,818
2020	$ 185,914,496	$ 324,938,282	57.2%	$ 10,411,818	$ 241,290,059	$ 378,665,686	63.7%	$ 7,411,818
2021	$ 186,824,242	$ 322,920,050	57.9%	$ 10,411,818	$ 239,737,842	$ 375,202,622	63.9%	$ 7,411,818
2022	$ 187,280,499	$ 320,174,256	58.5%	$ 10,411,818	$ 237,574,543	$ 370,960,204	64.0%	$ 7,411,818
2023	$ 187,371,821	$ 316,782,547	59.1%	$ 10,411,818	$ 234,885,178	$ 366,026,791	64.2%	$ 7,411,818
2024	$ 187,116,443	$ 312,747,118	59.8%	$ 10,411,818	$ 231,683,458	$ 360,411,163	64.3%	$ 7,411,818
2025	$ 186,582,116	$ 308,123,895	60.6%	$ 10,411,818	$ 228,031,716	$ 354,175,791	64.4%	$ 7,411,818
2026	$ 185,841,967	$ 302,973,218	61.3%	$ 10,411,818	$ 223,996,321	$ 347,387,101	64.5%	$ 7,411,818
2027	$ 184,927,938	$ 297,307,959	62.2%	$ 10,411,818	$ 219,601,289	$ 340,063,883	64.6%	$ 7,411,818
2028	$ 183,965,597	$ 291,274,751	63.2%	$ 10,411,818	$ 214,962,649	$ 332,357,859	64.7%	$ 7,411,818
2029	$ 182,949,821	$ 284,811,737	64.2%	$ 10,411,818	$ 210,064,296	$ 324,212,062	64.8%	$ 7,411,818
2030	$ 181,898,745	$ 277,947,592	65.4%	$ 10,411,818	$ 204,912,628	$ 315,660,578	64.9%	$ 7,411,818
2031	$ 180,864,486	$ 270,716,371	66.8%	$ 10,411,818	$ 199,546,817	$ 306,742,662	65.1%	$ 7,411,818
2032	$ 179,900,076	$ 263,148,456	68.4%	$ 10,411,818	$ 194,005,410	$ 297,493,801	65.2%	$ 7,411,818
2033	$ 179,050,326	$ 255,276,660	70.1%	$ 10,411,818	$ 188,317,158	$ 287,951,789	65.4%	$ 7,411,818
2034	$ 178,395,876	$ 247,167,686	72.2%	$ 10,411,818	$ 182,544,770	$ 278,187,770	65.6%	$ 7,411,818
2035	$ 174,864,905	$ 238,815,928	73.2%	$ 7,411,818	$ 176,709,040	$ 268,200,511	65.9%	$ 7,411,818

Milliman

One Financial Plaza
501 North Broadway
Suite 550
St. Louis, MO 63102
USA

Milliman.com

October 21, 2008

Mary Mannix Decker
City Finance Director
City of Springfield
840 Boonville
Springfield, MO 65801-8368

RE: Police and Fire Retirement Fund – Requested Funding Projections

Dear Mary:

This letter summarizes our analysis and findings with respect to our most recent assignment on the Police and Fire Retirement Fund.

Assignment

Milliman was requested to perform funding projections under the following parameters:

- 1% sales tax (generating $40 million annually) would commence August 1, 2009
- Sales tax revenue would increase 1% each year
- No new entrants after June 30, 2009
- While 1% sales tax is in place, City will contribute at a rate of 29.88% of payroll
- Sales tax would sunset upon attaining a target funded ratio and then the City contribution would be actuarially determined thereafter to maintain the funded ratio
- Four scenarios – funding ratio targets of 90% and 100%, in combination with investment return assumptions of 6% and 7.5%.

Methodology

The June 30, 2008 actuarial valuation results were used as a starting point.

Because the fund is closed to new members under this analysis, amortizing the unfunded actuarial accrued liability over future payroll becomes impractical over time. Therefore, the analysis assumes the amortization methodology will switch to a level dollar basis the year the target is reached. Beginning in 2020, the 30 year amortization period is decreased by one year each year until 2050.

Finally, the return on market value of assets for year ending June 30, 2009 is assumed to be zero, and then either 6% or 7.5% annually thereafter.

Specific Scenarios

The four scenarios are all plotted on the graph labeled Exhibit 1. Numerical results are summarized on charts that follow.

- 7.5% assumption/100% target
  Yellow triangles on graph

- 7.5% assumption/90% target
  Blue "X"'s on graph

- 6.0% assumption/100% target
  Black diamonds on graph

- 6.0% assumption/90% target
  Pink boxes on graph

Analysis

Observations regarding the scenarios modeled:

- In general, the analysis appears less favorable than the studies performed 6-12 months ago. The primary reasons are that the sales tax revenue would commence 1 year later, there has been recognition of the poor investment performance for year ending June 30, 2008 and the analysis further assumes a substantial investment loss for year ending June 30, 2009.
- The 6% scenarios dip immediately because the liability values increase significantly using a 6% discount rate.
- Under both 6.0% and 7.5% scenarios, funding until the 100% target appears to overshoot the desired results long term. The 90% target scenarios seem to better match the desired long term outcomes.
- From the charts, we see that the earliest the target is reached is June 30, 2014 under the 7.5%/90% scenario.
- As the Fund matures over time, fund investment return becomes almost the sole determining factor on funding progress.
- Even though the plan is closed to new entrants in the analysis, significant liabilities still exist in 2050. Consider that a 28 year old new entrant in 2008 has a reasonable probability of receiving a monthly benefit in 2070.

Certification and Disclaimers

In preparing this analysis we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this analysis is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Actuarial computations presented in this report are for purposes of projecting funded ratios under a variety of alternative scenarios. Determinations for purposes other than this analysis may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

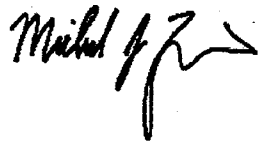
The results will vary from those presented in this analysis to the extent actual experience differs from that projected by the actuarial assumptions.

Milliman is not a law firm and cannot render legal opinions. Our analysis is limited to the actuarial computations involved with the projection of the funding ratios. We can offer no advice or opinion on the practical or legal considerations of implementing a sales tax increase.

Milliman's work product was prepared exclusively for the City of Springfield for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the City of Springfield's operations, and uses the City of Springfield's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. The analysis, including the exhibits, should be referenced as a whole. Consideration of only subparts or excerpts could lead the user to incorrect conclusions. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We respectfully submit the above analysis, and we look forward to discussing it with you. We are consulting actuaries for Milliman, Inc. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,



Michael J. Zwiener, FSA
Consulting Actuary

Michael A. Sudduth, FSA
Actuary

MJZ/MAS/giy

Enclosure: Exhibit 1
Charts

City of Springfield Police Officers a ire Fighters Retirement Fund

Details of Projected Plan Results - ellow Triangles on Graph

7.5% Assumed Return and Discount Rate

Tax Ends after reaching 100%/Contributions Then Based on 100% Target

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 14,048,071	$ 7,617,434	$ 311,101,706	$ 137,230,964	$ 16,951,643	44.1%
2010	$ 13,080,553	$ 7,579,715	$ 327,387,556	$ 171,115,782	$ 17,855,318	52.3%
2011	$ 11,671,658	$ 7,437,585	$ 343,949,286	$ 210,871,150	$ 19,038,010	61.3%
2012	$ 9,903,174	$ 7,282,080	$ 360,340,361	$ 257,240,943	$ 19,947,245	71.4%
2013	$ 7,839,122	$ 7,099,663	$ 376,821,842	$ 308,857,405	$ 20,664,314	82.0%
2014	$ 6,255,588	$ 6,887,331	$ 393,565,947	$ 363,756,901	$ 22,091,865	92.4%
2015	$ 2,829,708	$ 2,829,708	$ 409,716,321	$ 421,409,681	$ 22,916,906	102.9%
2016	$ 1,161,640	$ 1,161,640	$ 425,860,153	$ 456,628,875	$ 24,065,017	107.2%
2017	$ 1,189,198	$ 1,189,198	$ 441,578,058	$ 469,425,767	$ 24,912,925	106.3%
2018	$ 1,241,829	$ 1,241,829	$ 457,112,772	$ 482,225,593	$ 26,000,753	105.5%
2019	$ 918,453	$ 918,453	$ 467,936,670	$ 494,795,889	$ 27,103,063	105.7%
2020	$ 522,455	$ 522,455	$ 477,498,618	$ 506,702,047	$ 28,355,536	106.1%
2021	$ 98,513	$ 98,513	$ 485,947,175	$ 517,657,685	$ 29,756,535	106.5%
2022	$ -	$ -	$ 493,023,968	$ 527,395,419	$ 30,940,636	107.0%
2023	$ -	$ -	$ 498,841,465	$ 536,386,598	$ 32,243,918	107.5%
2024	$ -	$ -	$ 503,162,798	$ 544,541,427	$ 33,582,038	108.2%
2025	$ -	$ -	$ 505,793,366	$ 551,756,535	$ 34,638,048	109.1%
2026	$ -	$ -	$ 506,913,775	$ 558,251,335	$ 35,497,866	110.1%
2027	$ -	$ -	$ 506,628,372	$ 564,200,502	$ 35,931,650	111.4%
2028	$ -	$ -	$ 505,418,119	$ 570,024,792	$ 36,567,077	112.8%
2029	$ -	$ -	$ 503,046,255	$ 575,521,554	$ 37,274,318	114.4%
2030	$ -	$ -	$ 499,401,913	$ 580,594,826	$ 37,674,542	116.3%
2031	$ -	$ -	$ 494,757,905	$ 585,554,389	$ 37,904,045	118.4%
2032	$ -	$ -	$ 489,296,981	$ 590,572,517	$ 38,125,329	120.7%
2033	$ -	$ -	$ 482,986,287	$ 595,664,191	$ 38,281,992	123.3%
2034	$ -	$ -	$ 475,852,192	$ 600,908,489	$ 38,433,171	126.3%
2035	$ -	$ -	$ 467,850,133	$ 606,336,743	$ 38,472,758	129.6%
2036	$ -	$ -	$ 459,087,166	$ 612,089,057	$ 38,530,747	133.3%
2037	$ -	$ -	$ 449,508,885	$ 618,169,068	$ 38,435,210	137.5%
2038	$ -	$ -	$ 439,239,797	$ 624,768,672	$ 38,383,288	142.2%
2039	$ -	$ -	$ 428,196,672	$ 631,878,694	$ 38,230,271	147.6%
2040	$ -	$ -	$ 416,436,106	$ 639,654,196	$ 38,008,106	153.6%

20[illegible]	$ -	$ -	$ 404,005,590		648,221,862	$ 37,687,373	160.4%
2042	$ -	$ -	$ 390,978,496	$	657,749,894	$ 37,274,698	168.2%
2043	$ -	$ -	$ 377,425,902	$	668,413,080	$ 36,780,483	177.1%
2044	$ -	$ -	$ 363,413,278	$	680,385,917	$ 36,163,039	187.2%
2045	$ -	$ -	$ 349,055,277	$	693,896,167	$ 35,499,802	198.8%
2046	$ -	$ -	$ 334,381,182	$	709,107,402	$ 34,772,758	212.1%
2047	$ -	$ -	$ 319,441,918	$	726,213,721	$ 33,985,384	227.3%
2048	$ -	$ -	$ 304,287,584	$	745,419,914	$ 33,143,469	245.0%
2049	$ -	$ -	$ 288,964,920	$	766,940,058	$ 32,245,897	265.4%
2050	$ -	$ -	$ 273,525,469	$	791,005,444	$ -	289.2%

City of Springfield Police Officers a ıre Fighters Retirement Fund

Details of Projected Plan Results - Light Blue Crosses on Graph 5

7.5% Assumed Return and Discount Rate

Tax Ends after reaching 90%/Contributions Then Based on 90% Target

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 14,048,071	$ 7,617,434	$ 311,101,706	$ 137,230,964	$ 16,951,643	44.1%
2010	$ 13,080,553	$ 7,579,715	$ 327,387,556	$ 171,115,782	$ 17,855,318	52.3%
2011	$ 11,671,658	$ 7,437,585	$ 343,949,286	$ 210,871,150	$ 19,038,010	61.3%
2012	$ 9,903,174	$ 7,282,080	$ 360,340,361	$ 257,240,943	$ 19,947,245	71.4%
2013	$ 7,839,122	$ 7,099,663	$ 376,821,842	$ 308,857,405	$ 20,664,314	82.0%
2014	$ 3,155,707	$ 3,155,707	$ 393,565,947	$ 363,756,901	$ 22,091,865	92.4%
2015	$ 1,625,280	$ 1,625,280	$ 409,716,321	$ 395,729,662	$ 22,916,906	96.6%
2016	$ 1,815,077	$ 1,815,077	$ 425,860,153	$ 405,746,719	$ 24,065,017	95.3%
2017	$ 1,966,013	$ 1,966,013	$ 441,578,058	$ 415,405,391	$ 24,912,925	94.1%
2018	$ 2,151,922	$ 2,151,922	$ 457,112,772	$ 424,959,634	$ 26,000,753	93.0%
2019	$ 2,007,208	$ 2,007,208	$ 467,936,670	$ 434,179,203	$ 27,103,063	92.8%
2020	$ 1,805,007	$ 1,805,007	$ 477,498,618	$ 442,668,694	$ 28,355,536	92.7%
2021	$ 1,602,524	$ 1,602,524	$ 485,947,175	$ 450,152,477	$ 29,756,535	92.6%
2022	$ 1,370,305	$ 1,370,305	$ 493,023,968	$ 456,387,732	$ 30,940,636	92.6%
2023	$ 1,145,957	$ 1,145,957	$ 498,841,465	$ 461,475,026	$ 32,243,918	92.5%
2024	$ 889,362	$ 889,362	$ 503,162,798	$ 465,200,417	$ 33,582,038	92.5%
2025	$ 620,844	$ 620,844	$ 505,793,366	$ 467,387,663	$ 34,638,048	92.4%
2026	$ 321,332	$ 321,332	$ 506,913,775	$ 468,198,925	$ 35,497,866	92.4%
2027	$ 87,200	$ 87,200	$ 506,628,372	$ 467,727,543	$ 35,931,650	92.3%
2028	$ -	$ -	$ 505,418,119	$ 466,406,830	$ 36,567,077	92.3%
2029	$ -	$ -	$ 503,046,255	$ 464,132,244	$ 37,274,318	92.3%
2030	$ -	$ -	$ 499,401,913	$ 460,851,319	$ 37,674,542	92.3%
2031	$ -	$ -	$ 494,757,905	$ 456,830,117	$ 37,904,045	92.3%
2032	$ -	$ -	$ 489,296,981	$ 452,193,926	$ 38,125,329	92.4%
2033	$ -	$ -	$ 482,986,287	$ 446,907,205	$ 38,281,992	92.5%
2034	$ -	$ -	$ 475,852,192	$ 440,994,729	$ 38,433,171	92.7%
2035	$ -	$ -	$ 467,850,133	$ 434,429,450	$ 38,472,758	92.9%
2036	$ -	$ -	$ 459,087,166	$ 427,288,717	$ 38,530,747	93.1%
2037	$ -	$ -	$ 449,508,885	$ 419,508,704	$ 38,435,210	93.3%
2038	$ -	$ -	$ 439,239,797	$ 411,208,781	$ 38,383,288	93.6%
2039	$ -	$ -	$ 428,196,672	$ 402,301,811	$ 38,230,271	94.0%
2040	$ -	$ -	$ 416,436,106	$ 392,859,046	$ 38,008,106	94.3%

204	$ -	$ -	$ 404,005,590	382,917,077	$ 37,687,373	94.8%
2042	$ -	$ -	$ 390,978,496	$ 372,547,250	$ 37,274,698	95.3%
2043	$ -	$ -	$ 377,425,902	$ 361,820,237	$ 36,780,483	95.9%
2044	$ -	$ -	$ 363,413,278	$ 350,798,612	$ 36,163,039	96.5%
2045	$ -	$ -	$ 349,055,277	$ 339,589,814	$ 35,499,802	97.3%
2046	$ -	$ -	$ 334,381,182	$ 328,228,072	$ 34,772,758	98.2%
2047	$ -	$ -	$ 319,441,918	$ 316,768,441	$ 33,985,384	99.2%
2048	$ -	$ -	$ 304,287,584	$ 305,266,238	$ 33,143,469	100.3%
2049	$ -	$ -	$ 288,964,920	$ 293,774,857	$ 32,245,897	101.7%
2050	$ -	$ -	$ 273,525,469	$ 282,352,853	$ -	103.2%

City of Springfield Police Officers and Fi ghters Retirement Fund

Details of Projected Plan Results - Black Diamonds on Graph

a

6.0% Assumed Return and Discount Rate

Tax Ends after reaching 100%/Contributions Then Based on 100% Target

Valuation Date	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 16,448,615	$ 7,617,434	$ 400,499,489	$ 135,823,750	$ 16,951,643	33.9%
2010	$ 15,802,683	$ 7,579,715	$ 418,416,079	$ 168,123,631	$ 17,855,318	40.2%
2011	$ 14,799,597	$ 7,437,585	$ 436,485,404	$ 205,544,419	$ 19,038,010	47.1%
2012	$ 13,537,405	$ 7,282,080	$ 454,252,603	$ 248,724,835	$ 19,947,245	54.8%
2013	$ 12,088,944	$ 7,099,663	$ 471,969,858	$ 295,738,053	$ 20,664,314	62.7%
2014	$ 10,497,154	$ 6,887,331	$ 489,797,002	$ 344,988,116	$ 22,091,865	70.4%
2015	$ 8,803,138	$ 6,643,526	$ 506,870,172	$ 395,838,866	$ 22,916,906	78.1%
2016	$ 6,988,710	$ 6,381,756	$ 523,769,311	$ 448,972,094	$ 24,065,017	85.7%
2017	$ 5,843,256	$ 6,083,436	$ 540,066,756	$ 504,163,905	$ 24,912,925	93.4%
2018	$ 2,820,514	$ 2,820,514	$ 555,997,296	$ 561,823,374	$ 26,000,753	101.0%
2019	$ 962,873	$ 962,873	$ 566,043,592	$ 596,262,692	$ 27,103,063	105.3%
2020	$ 600,314	$ 600,314	$ 574,637,639	$ 607,062,867	$ 28,355,536	105.6%
2021	$ 206,192	$ 206,192	$ 581,933,715	$ 616,715,338	$ 29,756,535	106.0%
2022	$ -	$ -	$ 587,680,576	$ 624,952,840	$ 30,940,636	106.3%
2023	$ -	$ -	$ 591,998,997	$ 632,107,474	$ 32,243,918	106.8%
2024	$ -	$ -	$ 594,662,085	$ 638,191,618	$ 33,582,038	107.3%
2025	$ -	$ -	$ 595,489,026	$ 643,100,692	$ 34,638,048	108.0%
2026	$ -	$ -	$ 594,674,754	$ 647,051,990	$ 35,497,866	108.8%
2027	$ -	$ -	$ 592,336,765	$ 650,215,087	$ 35,931,650	109.8%
2028	$ -	$ -	$ 588,964,695	$ 653,001,032	$ 36,567,077	110.9%
2029	$ -	$ -	$ 584,330,157	$ 655,195,310	$ 37,274,318	112.1%
2030	$ -	$ -	$ 578,333,460	$ 656,691,540	$ 37,674,542	113.5%
2031	$ -	$ -	$ 571,258,080	$ 657,786,911	$ 37,904,045	115.1%
2032	$ -	$ -	$ 563,294,723	$ 658,636,869	$ 38,125,329	116.9%
2033	$ -	$ -	$ 554,418,066	$ 659,237,198	$ 38,281,992	118.9%
2034	$ -	$ -	$ 544,662,627	$ 659,645,954	$ 38,433,171	121.1%
2035	$ -	$ -	$ 533,992,796	$ 659,871,381	$ 38,472,758	123.6%
2036	$ -	$ -	$ 522,524,038	$ 660,027,876	$ 38,530,747	126.3%
2037	$ -	$ -	$ 510,211,122	$ 660,090,785	$ 38,435,210	129.4%
2038	$ -	$ -	$ 497,187,421	$ 660,220,600	$ 38,383,288	132.8%
2039	$ -	$ -	$ 483,379,085	$ 660,373,539	$ 38,230,271	136.6%
2040	$ -	$ -	$ 468,852,703	$ 660,666,928	$ 38,008,106	140.9%

204	$ -	$ -	$ 453,665,573		661,185,412	$	37,687,373	145.7%
2042	$ -	$ -	$ 437,900,637	$	662,050,497	$	37,274,698	151.2%
2043	$ -	$ -	$ 421,638,128	$	663,384,999	$	36,780,483	157.3%
2044	$ -	$ -	$ 404,952,071	$	665,305,797	$	36,163,039	164.3%
2045	$ -	$ -	$ 387,964,964	$	667,976,671	$	35,499,802	172.2%
2046	$ -	$ -	$ 370,713,575	$	671,490,542	$	34,772,758	181.1%
2047	$ -	$ -	$ 353,255,999	$	675,964,034	$	33,985,384	191.4%
2048	$ -	$ -	$ 335,649,273	$	681,516,931	$	33,143,469	203.0%
2049	$ -	$ -	$ 317,946,837	$	688,270,174	$	32,245,897	216.5%
2050	$ -	$ -	$ 300,206,600	$	696,353,111	$	-	232.0%

City of Springfield Police Officers a ire Fighters Retirement Fund

Details of Projected Plan Results - Pink Squares on Graph

8

6.0% Assumed Return and Discount Rate

Tax Ends after reaching 90%/Contributions Then Based on 90% Target

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,359,789	47.6%
2009	$ 16,448,615	$ 7,617,434	$ 400,499,489	$ 135,823,750	$ 16,951,643	33.9%
2010	$ 15,802,683	$ 7,579,715	$ 418,416,079	$ 168,123,631	$ 17,855,318	40.2%
2011	$ 14,799,597	$ 7,437,585	$ 436,485,404	$ 205,544,419	$ 19,038,010	47.1%
2012	$ 13,537,405	$ 7,282,080	$ 454,252,603	$ 248,724,835	$ 19,947,245	54.8%
2013	$ 12,088,944	$ 7,099,663	$ 471,969,858	$ 295,738,053	$ 20,664,314	62.7%
2014	$ 10,497,154	$ 6,887,331	$ 489,797,002	$ 344,988,116	$ 22,091,865	70.4%
2015	$ 8,803,138	$ 6,643,526	$ 506,870,172	$ 395,838,866	$ 22,916,906	78.1%
2016	$ 6,988,710	$ 6,381,756	$ 523,769,311	$ 448,972,094	$ 24,065,017	85.7%
2017	$ 2,141,817	$ 2,141,817	$ 540,066,756	$ 504,163,905	$ 24,912,925	93.4%
2018	$ 816,979	$ 816,979	$ 555,997,296	$ 535,456,658	$ 26,000,753	96.3%
2019	$ 684,471	$ 684,471	$ 566,043,592	$ 543,720,416	$ 27,103,063	96.1%
2020	$ 498,729	$ 498,729	$ 574,637,639	$ 551,081,301	$ 28,355,536	95.9%
2021	$ 293,080	$ 293,080	$ 581,933,715	$ 557,270,246	$ 29,756,535	95.8%
2022	$ 57,846	$ 57,846	$ 587,680,576	$ 562,030,537	$ 30,940,636	95.6%
2023	$ -	$ -	$ 591,998,997	$ 565,469,414	$ 32,243,918	95.5%
2024	$ -	$ -	$ 594,662,085	$ 567,555,274	$ 33,582,038	95.4%
2025	$ -	$ -	$ 595,489,026	$ 568,226,167	$ 34,638,048	95.4%
2026	$ -	$ -	$ 594,674,754	$ 567,684,993	$ 35,497,866	95.5%
2027	$ -	$ -	$ 592,336,765	$ 566,086,070	$ 35,931,650	95.6%
2028	$ -	$ -	$ 588,964,695	$ 563,824,274	$ 36,567,077	95.7%
2029	$ -	$ -	$ 584,330,157	$ 560,667,947	$ 37,274,318	96.0%
2030	$ -	$ -	$ 578,333,460	$ 556,492,535	$ 37,674,542	96.2%
2031	$ -	$ -	$ 571,258,080	$ 551,575,966	$ 37,904,045	96.6%
2032	$ -	$ -	$ 563,294,723	$ 546,053,267	$ 38,125,329	96.9%
2033	$ -	$ -	$ 554,418,066	$ 539,898,579	$ 38,281,992	97.4%
2034	$ -	$ -	$ 544,662,627	$ 533,147,018	$ 38,433,171	97.9%
2035	$ -	$ -	$ 533,992,796	$ 525,782,509	$ 38,472,758	98.5%
2036	$ -	$ -	$ 522,524,038	$ 517,893,671	$ 38,530,747	99.1%
2037	$ -	$ -	$ 510,211,122	$ 509,428,528	$ 38,435,210	99.8%
2038	$ -	$ -	$ 497,187,421	$ 500,518,608	$ 38,383,288	100.7%
2039	$ -	$ -	$ 483,379,085	$ 491,089,428	$ 38,230,271	101.6%
2040	$ -	$ -	$ 468,852,703	$ 481,225,769	$ 38,008,106	102.6%

20	$ -	$ -	$ 453,665,573		470,977,783	$	37,687,373	103.8%
2042	$ -	$ -	$ 437,900,637	$	460,430,411	$	37,274,698	105.1%
2043	$ -	$ -	$ 421,638,128	$	449,667,707	$	36,780,483	106.6%
2044	$ -	$ -	$ 404,952,071	$	438,765,468	$	36,163,039	108.3%
2045	$ -	$ -	$ 387,964,964	$	427,843,922	$	35,499,802	110.3%
2046	$ -	$ -	$ 370,713,575	$	416,949,827	$	34,772,758	112.5%
2047	$ -	$ -	$ 353,255,999	$	406,150,876	$	33,985,384	115.0%
2048	$ -	$ -	$ 335,649,273	$	395,514,983	$	33,143,469	117.8%
2049	$ -	$ -	$ 317,946,837	$	385,108,109	$	32,245,897	121.1%
2050	$ -	$ -	$ 300,206,600	$	375,001,322	$	-	124.9%

8b.

Milliman

One Financial Plaza
501 North Broadway
Suite 550
St. Louis, MO 63102
USA

Milliman.com

December 31, 2008

Mary Mannix Decker
City Finance Director
City of Springfield
840 Boonville
Springfield, MO 65801-8368

RE: Police and Fire Retirement Fund – Update to October 21, 2008 Requested Funding Projections – Tier 2 Removed

Dear Mary:

This letter summarizes our analysis and findings with respect to our most recent assignment on the Police and Fire Retirement Fund.

Assignment

Milliman was requested to update the October 21 funding projections assuming that all Tier 2 members cease membership in the plan effective June 30, 2009 and are refunded their own contributions. The other aspects of this assignment are identical to our October 21 analysis and are repeated here for sake of convenience:

- 1% sales tax (generating $40 million annually) would commence August 1, 2009
- Sales tax revenue would increase 1% each year
- No new entrants after June 30, 2009
- While 1% sales tax is in place, City will contribute at a rate of 29.88% of payroll
- Sales tax would sunset upon attaining a target funded ratio and then the City contribution would be actuarially determined thereafter to maintain the funded ratio
- Four scenarios – funding ratio targets of 90% and 100%, in combination with investment return assumptions of 6% and 7.5%.

Methodology

The June 30, 2008 actuarial valuation results were used as a starting point.

There were 47 individuals in Tier 2 who removed from this plan's coverage effective June 30, 2009. A one time distribution of $351,000 was assumed made from the Fund in June 2009, representing the estimated member contributions that would be refunded.

Because the fund is closed to new members under this analysis, amortizing the unfunded actuarial accrued liability over future payroll becomes impractical over time. Therefore, the analysis assumes the amortization methodology will switch to a level dollar basis the year the target is reached. Beginning in 2020, the 30 year amortization period is decreased by one year each year until 2050.

Finally, the return on market value of assets for year ending June 30, 2009 is assumed to be zero, and then either 6% or 7.5% annually thereafter.

Specific Scenarios

The four scenarios are all plotted on the graph labeled Exhibit 1. Numerical results are summarized on charts that follow.

- 7.5% assumption/100% target
  Yellow triangles on graph

- 7.5% assumption/90% target
  Blue "X"'s on graph

- 6.0% assumption/100% target
  Black diamonds on graph

- 6.0% assumption/90% target
  Pink boxes on graph

Analysis

The results here do not differ hardly at all from the results of our October 21 analysis; 90%/100% funding targets are reached in the same years, for example. The other observations made in our October 21 analysis remain true here and are restated for your convenience:

- In general, the analysis appears less favorable than the studies performed 6-12 months ago. The primary reasons are that the sales tax revenue would commence 1 year later, there has been recognition of the poor investment performance for year ending June 30, 2008 and the analysis further assumes a substantial investment loss for year ending June 30, 2009.

- The 6% scenarios dip immediately because the liability values increase significantly using a 6% discount rate.
- Under both 6.0% and 7.5% scenarios, funding until the 100% target appears to overshoot the desired results long term. The 90% target scenarios seem to better match the desired long term outcomes.
- From the charts, we see that the earliest the target is reached is June 30, 2014 under the 7.5%/90% scenario.
- As the Fund matures over time, fund investment return becomes almost the sole determining factor on funding progress.
- Even though the plan is closed to new entrants in the analysis, significant liabilities still exist in 2050. Consider that a 28 year old new entrant in 2008 has a reasonable probability of receiving a monthly benefit in 2070.

Certification and Disclaimers

In preparing this analysis we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this analysis is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Actuarial computations presented in this report are for purposes of projecting funded ratios under a variety of alternative scenarios. Determinations for purposes other than this analysis may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

The results will vary from those presented in this analysis to the extent actual experience differs from that projected by the actuarial assumptions.

Milliman is not a law firm and cannot render legal opinions. Our analysis is limited to the actuarial computations involved with the projection of the funding ratios. We can offer no advice or opinion on the practical or legal considerations of implementing a sales tax increase.

Milliman

Milliman's work product was prepared exclusively for the City of Springfield for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the City of Springfield's operations, and uses the City of Springfield's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. The analysis, including the exhibits, should be referenced as a whole. Consideration of only subparts or excerpts could lead the user to incorrect conclusions. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We respectfully submit the above analysis, and we look forward to discussing it with you. We are consulting actuaries for Milliman, Inc. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

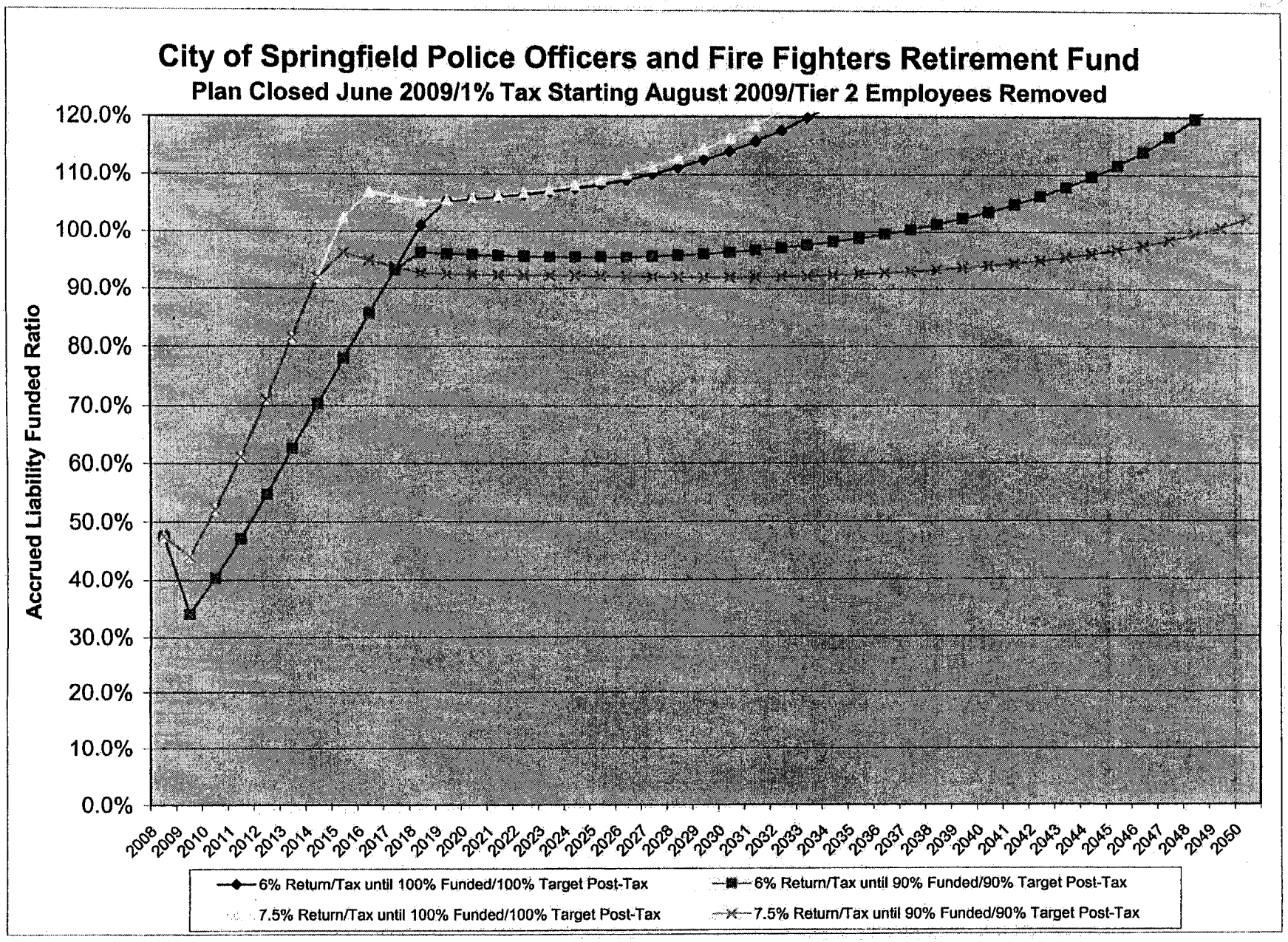
Sincerely,

Michael J. Zwiener, FSA
Consulting Actuary

Michael A. Sudduth, FSA
Actuary

MJZ/MAS/vlh

Enclosure: Exhibit 1
Charts


City of Springfield Police Officers and Fire Fighters Retirement Fund
Plan Closed June 2009/1% Tax Starting August 2009/Tier 2 Employees Removed
Accrued Liability Funded Ratio
120.0%
110.0%
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050
6% Return/Tax until 100% Funded/100% Target Post-Tax
6% Return/Tax until 90% Funded/90% Target Post-Tax
7.5% Return/Tax until 100% Funded/100% Target Post-Tax
7.5% Return/Tax until 90% Funded/90% Target Post-Tax

City of Springfield Police Officers a Fire Fighters Retirement Fund

Details of Projected Plan Results - Yellow Triangles on Graph

7.5% Assumed Return and Discount Rate
Tax Ends after reaching 100%/Contributions Then Based on 100% Target
Tier 2 Employees Removed From Plan

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,711,939	47.6%
2009	$ 14,048,071	$ 7,617,434	$ 310,508,741	$ 136,868,909	$ 16,934,028	44.1%
2010	$ 12,977,866	$ 7,061,490	$ 326,474,056	$ 170,549,358	$ 17,828,812	52.2%
2011	$ 11,588,278	$ 6,902,928	$ 342,684,975	$ 209,550,020	$ 19,003,237	61.1%
2012	$ 9,841,003	$ 6,730,065	$ 358,691,105	$ 255,093,103	$ 19,903,761	71.1%
2013	$ 7,798,835	$ 6,529,335	$ 374,750,407	$ 305,801,281	$ 20,611,785	81.6%
2014	$ 6,276,217	$ 6,302,081	$ 391,031,638	$ 359,709,010	$ 22,030,112	92.0%
2015	$ 2,891,925	$ 2,891,925	$ 406,677,430	$ 416,284,724	$ 22,845,911	102.4%
2016	$ 1,214,286	$ 1,214,286	$ 422,272,800	$ 451,023,502	$ 23,984,650	106.8%
2017	$ 1,233,632	$ 1,233,632	$ 437,396,471	$ 463,302,133	$ 24,823,308	105.9%
2018	$ 1,278,455	$ 1,278,455	$ 452,290,438	$ 475,545,206	$ 25,902,066	105.1%
2019	$ 950,077	$ 950,077	$ 462,466,361	$ 487,518,037	$ 26,995,433	105.4%
2020	$ 549,941	$ 549,941	$ 471,354,244	$ 498,786,305	$ 28,238,764	105.8%
2021	$ 124,768	$ 124,768	$ 479,088,807	$ 509,062,832	$ 29,630,354	106.3%
2022	$ -	$ -	$ 485,410,653	$ 518,080,419	$ 30,804,868	106.7%
2023	$ -	$ -	$ 490,429,417	$ 526,281,304	$ 32,098,217	107.3%
2024	$ -	$ -	$ 493,904,810	$ 533,597,971	$ 33,425,793	108.0%
2025	$ -	$ -	$ 495,639,371	$ 539,923,895	$ 34,471,032	108.9%
2026	$ -	$ -	$ 495,809,800	$ 545,480,691	$ 35,292,824	110.0%
2027	$ -	$ -	$ 494,562,446	$ 550,461,656	$ 35,714,103	111.3%
2028	$ -	$ -	$ 492,333,055	$ 555,264,209	$ 36,305,312	112.8%
2029	$ -	$ -	$ 488,930,199	$ 559,714,225	$ 36,961,399	114.5%
2030	$ -	$ -	$ 484,248,215	$ 563,721,150	$ 37,317,528	116.4%
2031	$ -	$ -	$ 478,550,997	$ 567,580,732	$ 37,484,836	118.6%
2032	$ -	$ -	$ 472,030,117	$ 571,494,528	$ 37,563,507	121.1%
2033	$ -	$ -	$ 464,770,251	$ 575,574,377	$ 37,567,405	123.8%
2034	$ -	$ -	$ 456,843,384	$ 579,903,500	$ 37,606,043	126.9%
2035	$ -	$ -	$ 448,144,154	$ 584,486,705	$ 37,507,375	130.4%
2036	$ -	$ -	$ 438,828,802	$ 589,488,242	$ 37,437,132	134.3%
2037	$ -	$ -	$ 428,827,654	$ 594,922,464	$ 37,170,162	138.7%
2038	$ -	$ -	$ 418,345,604	$ 601,030,148	$ 36,975,447	143.7%
2039	$ -	$ -	$ 407,274,340	$ 607,782,161	$ 36,685,649	149.2%
2040	$ -	$ -	$ 395,672,834	$ 615,329,739	$ 36,394,586	155.5%

2041	$	-	$	-	$	383,512,850	$	623,736,223	$	36,006,679	162.6%
2042	$	-	$	-	$	370,869,918	$	633,167,388	$	35,565,432	170.7%
2043	$	-	$	-	$	357,771,589	$	643,758,780	$	35,071,355	179.9%
2044	$	-	$	-	$	344,250,499	$	655,655,277	$	34,468,017	190.5%
2045	$	-	$	-	$	330,405,856	$	669,069,227	$	33,817,904	202.5%
2046	$	-	$	-	$	316,268,997	$	684,163,411	$	33,110,227	216.3%
2047	$	-	$	-	$	301,885,074	$	701,123,806	$	32,342,580	232.2%
2048	$	-	$	-	$	287,305,023	$	720,152,665	$	31,521,228	250.7%
2049	$	-	$	-	$	272,576,043	$	741,460,841	$	30,646,229	272.0%
2050	$	-	$	-	$	257,748,821	$	765,274,941	$	-	296.9%

City of Springfield Police Officers a. Fire Fighters Retirement Fund

Details of Projected Plan Results - Light Blue Crosses on Graph

7.5% Assumed Return and Discount Rate
Tax Ends after reaching 90%/Contributions Then Based on 90% Target
Tier 2 Employees Removed From Plan

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,711,939	47.6%
2009	$ 14,048,071	$ 7,617,434	$ 310,508,741	$ 136,868,909	$ 16,934,028	44.1%
2010	$ 12,977,866	$ 7,061,490	$ 326,474,056	$ 170,549,358	$ 17,828,812	52.2%
2011	$ 11,588,278	$ 6,902,928	$ 342,684,975	$ 209,550,020	$ 19,003,237	61.1%
2012	$ 9,841,003	$ 6,730,065	$ 358,691,105	$ 255,093,103	$ 19,903,761	71.1%
2013	$ 7,798,835	$ 6,529,335	$ 374,750,407	$ 305,801,281	$ 20,611,785	81.6%
2014	$ 3,196,298	$ 3,196,298	$ 391,031,638	$ 359,709,010	$ 22,030,112	92.0%
2015	$ 1,660,291	$ 1,660,291	$ 406,677,430	$ 391,254,016	$ 22,845,911	96.2%
2016	$ 1,843,224	$ 1,843,224	$ 422,272,800	$ 400,811,127	$ 23,984,650	94.9%
2017	$ 1,988,674	$ 1,988,674	$ 437,396,471	$ 409,976,353	$ 24,823,308	93.7%
2018	$ 2,169,497	$ 2,169,497	$ 452,290,438	$ 419,003,348	$ 25,902,066	92.6%
2019	$ 2,022,165	$ 2,022,165	$ 462,466,361	$ 427,659,997	$ 26,995,433	92.5%
2020	$ 1,818,015	$ 1,818,015	$ 471,354,244	$ 435,551,202	$ 28,238,764	92.4%
2021	$ 1,616,271	$ 1,616,271	$ 479,088,807	$ 442,400,723	$ 29,630,354	92.3%
2022	$ 1,385,074	$ 1,385,074	$ 485,410,653	$ 447,966,087	$ 30,804,868	92.3%
2023	$ 1,161,342	$ 1,161,342	$ 490,429,417	$ 452,345,411	$ 32,098,217	92.2%
2024	$ 905,540	$ 905,540	$ 493,904,810	$ 455,321,778	$ 33,425,793	92.2%
2025	$ 631,879	$ 631,879	$ 495,639,371	$ 456,716,485	$ 34,471,032	92.1%
2026	$ 345,835	$ 345,835	$ 495,809,800	$ 456,688,300	$ 35,292,824	92.1%
2027	$ 106,899	$ 106,899	$ 494,562,446	$ 455,368,639	$ 35,714,103	92.1%
2028	$ -	$ -	$ 492,333,055	$ 453,150,124	$ 36,305,312	92.0%
2029	$ -	$ -	$ 488,930,199	$ 449,941,584	$ 36,961,399	92.0%
2030	$ -	$ -	$ 484,248,215	$ 445,715,561	$ 37,317,528	92.0%
2031	$ -	$ -	$ 478,550,997	$ 440,724,723	$ 37,484,836	92.1%
2032	$ -	$ -	$ 472,030,117	$ 435,124,318	$ 37,563,507	92.2%
2033	$ -	$ -	$ 464,770,251	$ 428,976,401	$ 37,567,405	92.3%
2034	$ -	$ -	$ 456,843,384	$ 422,310,675	$ 37,606,043	92.4%
2035	$ -	$ -	$ 448,144,154	$ 415,074,418	$ 37,507,375	92.6%
2036	$ -	$ -	$ 438,828,802	$ 407,370,033	$ 37,437,132	92.8%
2037	$ -	$ -	$ 428,827,654	$ 399,145,389	$ 37,170,162	93.1%
2038	$ -	$ -	$ 418,345,604	$ 390,569,792	$ 36,975,447	93.4%
2039	$ -	$ -	$ 407,274,340	$ 381,537,279	$ 36,685,649	93.7%
2040	$ -	$ -	$ 395,672,834	$ 372,116,491	$ 36,394,586	94.0%

2041	$	-	$	-	$	383,512,850	$	362,281,981	$	36,006,679	94.5%
2042	$	-	$	-	$	370,869,918	$	352,104,078	$	35,565,432	94.9%
2043	$	-	$	-	$	357,771,589	$	341,615,722	$	35,071,355	95.5%
2044	$	-	$	-	$	344,250,499	$	330,851,490	$	34,468,017	96.1%
2045	$	-	$	-	$	330,405,856	$	319,905,156	$	33,817,904	96.8%
2046	$	-	$	-	$	316,268,997	$	308,812,035	$	33,110,227	97.6%
2047	$	-	$	-	$	301,885,074	$	297,621,077	$	32,342,580	98.6%
2048	$	-	$	-	$	287,305,023	$	286,387,231	$	31,521,228	99.7%
2049	$	-	$	-	$	272,576,043	$	275,162,999	$	30,646,229	100.9%
2050	$	-	$	-	$	257,748,821	$	264,004,761	$	-	102.4%

City of Springfield Police Officers and F. Fighters Retirement Fund

Details of Projected Plan Results - Blue Diamonds on Graph

6.0% Assumed Return and Discount Rate
Tax Ends after reaching 100%/Contributions Then Based on 100% Target
Tier 2 Employees Removed From Plan

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,711,939	47.6%
2009	$ 16,448,615	$ 7,617,434	$ 398,099,130	$ 135,463,676	$ 16,934,028	34.0%
2010	$ 15,615,627	$ 7,061,490	$ 415,580,446	$ 167,565,121	$ 17,828,812	40.3%
2011	$ 14,621,856	$ 6,902,928	$ 433,181,079	$ 204,244,512	$ 19,003,237	47.1%
2012	$ 13,369,811	$ 6,730,065	$ 450,442,554	$ 246,623,845	$ 19,903,761	54.8%
2013	$ 11,930,941	$ 6,529,335	$ 467,614,278	$ 292,769,209	$ 20,611,785	62.6%
2014	$ 10,351,245	$ 6,302,081	$ 484,853,013	$ 341,084,096	$ 22,030,112	70.3%
2015	$ 8,670,573	$ 6,045,275	$ 501,294,314	$ 390,932,722	$ 22,845,911	78.0%
2016	$ 6,869,816	$ 5,773,360	$ 517,516,436	$ 442,995,947	$ 23,984,650	85.6%
2017	$ 5,744,073	$ 5,470,866	$ 533,090,382	$ 497,051,165	$ 24,823,308	93.2%
2018	$ 2,749,618	$ 2,749,618	$ 548,250,797	$ 553,510,378	$ 25,902,066	101.0%
2019	$ 888,028	$ 888,028	$ 557,549,137	$ 587,244,431	$ 26,995,433	105.3%
2020	$ 522,337	$ 522,337	$ 565,374,144	$ 597,302,461	$ 28,238,764	105.6%
2021	$ 127,057	$ 127,057	$ 571,865,582	$ 606,175,868	$ 29,630,354	106.0%
2022	$ -	$ -	$ 576,772,008	$ 613,597,463	$ 30,804,868	106.4%
2023	$ -	$ -	$ 580,212,292	$ 619,979,768	$ 32,098,217	106.9%
2024	$ -	$ -	$ 581,957,145	$ 625,256,564	$ 33,425,793	107.4%
2025	$ -	$ -	$ 581,824,020	$ 629,321,604	$ 34,471,032	108.2%
2026	$ -	$ -	$ 580,005,195	$ 632,395,966	$ 35,292,824	109.0%
2027	$ -	$ -	$ 576,661,094	$ 634,669,372	$ 35,714,103	110.1%
2028	$ -	$ -	$ 572,237,379	$ 636,531,190	$ 36,305,312	111.2%
2029	$ -	$ -	$ 566,552,085	$ 637,797,140	$ 36,961,399	112.6%
2030	$ -	$ -	$ 559,511,624	$ 638,367,819	$ 37,317,528	114.1%
2031	$ -	$ -	$ 551,391,544	$ 638,528,116	$ 37,484,836	115.8%
2032	$ -	$ -	$ 542,392,471	$ 638,464,476	$ 37,563,507	117.7%
2033	$ -	$ -	$ 532,606,559	$ 638,270,456	$ 37,567,405	119.8%
2034	$ -	$ -	$ 522,112,775	$ 638,008,491	$ 37,606,043	122.2%
2035	$ -	$ -	$ 510,813,969	$ 637,660,718	$ 37,507,375	124.8%
2036	$ -	$ -	$ 498,873,770	$ 637,366,128	$ 37,437,132	127.8%
2037	$ -	$ -	$ 486,230,570	$ 637,111,019	$ 37,170,162	131.0%
2038	$ -	$ -	$ 473,096,199	$ 637,104,575	$ 36,975,447	134.7%
2039	$ -	$ -	$ 459,369,526	$ 637,282,653	$ 36,685,649	138.7%
2040	$ -	$ -	$ 445,117,314	$ 637,758,488	$ 36,394,586	143.3%

2041	$ -	$ -	$ 430,319,434	$ 638,553,593	$ 36,006,679	148.4%
2042	$ -	$ -	$ 415,059,604	$ 639,787,750	$ 35,565,432	154.1%
2043	$ -	$ -	$ 399,373,415	$ 641,545,572	$ 35,071,355	160.6%
2044	$ -	$ -	$ 383,301,413	$ 643,915,922	$ 34,468,017	168.0%
2045	$ -	$ -	$ 366,950,276	$ 647,049,189	$ 33,817,904	176.3%
2046	$ -	$ -	$ 350,358,504	$ 651,039,766	$ 33,110,227	185.8%
2047	$ -	$ -	$ 333,578,113	$ 655,998,618	$ 32,342,580	196.7%
2048	$ -	$ -	$ 316,666,674	$ 662,045,678	$ 31,521,228	209.1%
2049	$ -	$ -	$ 299,677,761	$ 669,301,554	$ 30,646,229	223.3%
2050	$ -	$ -	$ 282,668,084	$ 677,894,031	$ -	239.8%

City of Springfield Police Officers a... Fire Fighters Retirement Fund

Details of Projected Plan Results - Pink Squares on Graph

6.0% Assumed Return and Discount Rate
Tax Ends after reaching 90%/Contributions Then Based on 90% Target
Tier 2 Employees Removed From Plan

Year End June 30	Recommended Employer Contribution	Expected Actual ER Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Expected Benefit Payments	Funded Ratio
2008	$ 12,882,684	$ 7,132,141	$ 295,579,925	$ 140,780,239	$ 16,711,939	47.6%
2009	$ 16,448,615	$ 7,617,434	$ 398,099,130	$ 135,463,676	$ 16,934,028	34.0%
2010	$ 15,615,627	$ 7,061,490	$ 415,580,446	$ 167,565,121	$ 17,828,812	40.3%
2011	$ 14,621,856	$ 6,902,928	$ 433,181,079	$ 204,244,512	$ 19,003,237	47.1%
2012	$ 13,369,811	$ 6,730,065	$ 450,442,554	$ 246,623,845	$ 19,903,761	54.8%
2013	$ 11,930,941	$ 6,529,335	$ 467,614,278	$ 292,769,209	$ 20,611,785	62.6%
2014	$ 10,351,245	$ 6,302,081	$ 484,853,013	$ 341,084,096	$ 22,030,112	70.3%
2015	$ 8,670,573	$ 6,045,275	$ 501,294,314	$ 390,932,722	$ 22,845,911	78.0%
2016	$ 6,869,816	$ 5,773,360	$ 517,516,436	$ 442,995,947	$ 23,984,650	85.6%
2017	$ 2,090,447	$ 2,090,447	$ 533,090,382	$ 497,051,165	$ 24,823,308	93.2%
2018	$ 759,559	$ 759,559	$ 548,250,797	$ 527,721,699	$ 25,902,066	96.3%
2019	$ 624,899	$ 624,899	$ 557,549,137	$ 535,328,754	$ 26,995,433	96.0%
2020	$ 437,641	$ 437,641	$ 565,374,144	$ 542,000,820	$ 28,238,764	95.9%
2021	$ 232,596	$ 232,596	$ 571,865,582	$ 547,468,893	$ 29,630,354	95.7%
2022	$ -	$ -	$ 576,772,008	$ 551,476,774	$ 30,804,868	95.6%
2023	$ -	$ -	$ 580,212,292	$ 554,131,838	$ 32,098,217	95.5%
2024	$ -	$ -	$ 581,957,145	$ 555,457,759	$ 33,425,793	95.4%
2025	$ -	$ -	$ 581,824,020	$ 555,334,870	$ 34,471,032	95.4%
2026	$ -	$ -	$ 580,005,195	$ 553,970,027	$ 35,292,824	95.5%
2027	$ -	$ -	$ 576,661,094	$ 551,537,876	$ 35,714,103	95.6%
2028	$ -	$ -	$ 572,237,379	$ 548,411,803	$ 36,305,312	95.8%
2029	$ -	$ -	$ 566,552,085	$ 544,390,591	$ 36,961,399	96.1%
2030	$ -	$ -	$ 559,511,624	$ 539,356,877	$ 37,317,528	96.4%
2031	$ -	$ -	$ 551,391,544	$ 533,576,517	$ 37,484,836	96.8%
2032	$ -	$ -	$ 542,392,471	$ 527,215,781	$ 37,563,507	97.2%
2033	$ -	$ -	$ 532,606,559	$ 520,346,840	$ 37,567,405	97.7%
2034	$ -	$ -	$ 522,112,775	$ 513,009,459	$ 37,606,043	98.3%
2035	$ -	$ -	$ 510,813,969	$ 505,161,744	$ 37,507,375	98.9%
2036	$ -	$ -	$ 498,873,770	$ 496,917,216	$ 37,437,132	99.6%
2037	$ -	$ -	$ 486,230,570	$ 488,235,172	$ 37,170,162	100.4%
2038	$ -	$ -	$ 473,096,199	$ 479,296,177	$ 36,975,447	101.3%
2039	$ -	$ -	$ 459,369,526	$ 470,005,751	$ 36,685,649	102.3%
2040	$ -	$ -	$ 445,117,314	$ 460,444,972	$ 36,394,586	103.4%

2041	$	-	$	-	$	430,319,434	$	450,601,266	$	36,006,679	104.7%
2042	$	-	$	-	$	415,059,604	$	440,558,285	$	35,565,432	106.1%
2043	$	-	$	-	$	399,373,415	$	430,362,339	$	35,071,355	107.8%
2044	$	-	$	-	$	383,301,413	$	420,061,695	$	34,468,017	109.6%
2045	$	-	$	-	$	366,950,276	$	409,763,708	$	33,817,904	111.7%
2046	$	-	$	-	$	350,358,504	$	399,517,156	$	33,110,227	114.0%
2047	$	-	$	-	$	333,578,113	$	389,384,652	$	32,342,580	116.7%
2048	$	-	$	-	$	316,666,674	$	379,434,874	$	31,521,228	119.8%
2049	$	-	$	-	$	299,677,761	$	369,734,102	$	30,646,229	123.4%
2050	$	-	$	-	$	282,668,084	$	360,352,532	$	-	127.5%

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Research:

Pension Obligation Bonds Are Surging After Brief Hiatus

Publication date: 20-Jan-2004

Credit Analyst: Parry Young, New York (1) 212-438-2120; Steven J Murphy, New York (1) 212-438-2066

Pension obligation bonds (POBs), the once-arcane debt instrument used to finance unfunded pension liabilities, have returned with a vengeance after a brief hiatus, and are again making their mark on the public finance landscape. A number of conditions have fallen into place to spark this resurgence, including:

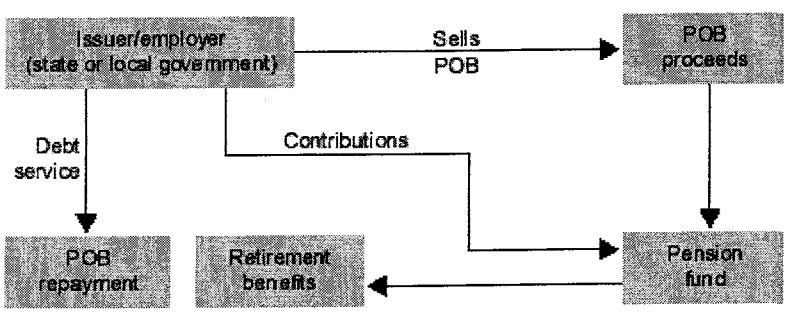
- The rapid growth in unfunded liabilities for public pension funds over the last few years, driven by investment losses, benefit enhancements, and greater longevity of pension plan beneficiaries;
- The relatively low interest-rate environment, which widens the spreads between the POB interest costs paid by the issuer/employer and the assumed investment return rate of the pension systems, which makes the economics of the transaction more attractive; and
- The potential cost savings from a POB, as many state and local employers struggle with budgetary imbalances and other savings alternatives become scarce.

Because of the confluence of these factors, POBs are back. This report details the mechanics of how POBs work, their history, the special risks unique to this debt instrument, the critical rating factors and implications, and future prospects.

How POBs Work

While the financial implications of POBs are complex, the actual mechanics are relatively simple. Generally, the municipal employer will use the findings from the most recent actuarial valuation, or have a new valuation completed, to determine the pension system's unfunded actuarial accrued liability (UAAL). Then, it will decide what portion of the UAAL (either all or a part) will be funded with the POB. In the 1990s most employers funded the entire UAAL, but for various reasons discussed below, many now tend to finance less than the full amount. Once the POB is sized and sold, the net proceeds are placed in the pension trust fund to be commingled with the other funds, and usually invested according to the existing asset allocation guidelines (see Chart). Thus, the pension fund experiences a rapid increase in assets resulting in a higher funded ratio (actuarial value of assets divided by actuarial accrued liability). For the POB to generate savings for the employer, the investment return rate on the POB proceeds must be greater than the interest cost of the bonds (and ideally equal to, or exceed the pension system's investment return assumption), and the larger the spread between these to two rates the better. The employer, as POB issuer and obligor, would then be projected to achieve lower total pension contribution and debt service costs than it would have if it had not sold the POB.

Pension Obligation Bond Mechanics



Brief History

While there were a few issues in the 1980s, the first big wave of POBs really came in the early 1990s. By the end of the decade about $15 billion of POBs had been issued. The years 2000 and 2001 were slow from a POB standpoint, with 2000 correlating to the apex of U.S. public pension funding at an average funded ratios of slightly over 100%, up from only about 80% in 1990. These robust funding gains were fueled by above-average equity returns during the period and a general shift in the weighting of public pension assets to this asset class from fixed-income. The corollary to a high funding level is a lower or nonexistent UAAL. Falling funding ratios, now estimated to be heading towards the 90%, have been exacerbated by a combination of adverse circumstances, some uncontrollable and some self-inflicted. These factors include the decrease in asset values from poor equity returns and the increase in liabilities from benefit enhancements and demographic changes (for example, members living longer). The second wave of POBs, driven by burgeoning unfunded liabilities, has come on strong in 2002 and 2003. As in the first wave, California counties have been leading the pack, and there are a number of repeat borrowers, but there are also significant new players. The state of Illinois, which issued in June of this year, now holds the POB record for sheer size at $10 billion — almost four times larger than the previous record. Oregon sold a $2 billion issue last fall, and other states that have recently completed or plan a POB sale include Kansas, Wisconsin, and West Virginia.

POB Risks

The principal risks to the issuer of a POB fall into a number of categories:

- Arbitrage (investment return/POB interest cost);
- Leverage;
- Market risk; and
- Political.

POBs are essentially an arbitrage play, the success of which is dependent on the premise that the pension fund assets (including POB proceeds) will earn on average more than the interest cost on the POBs and hopefully the assumed investment return rate (generally about 8%) or better each year for the life of the bonds. If the bonds are sold at an interest cost of 6%, for example, the spread could generate handsome savings if the investment returns goals are met over the life of the bonds. The problem is that there is no certainty that the average 8% return will be realized over time, and therein lies the principal risk of the POB to the issuer. If the pension fund earns 8% or more on the POB proceeds, then the result will be success by virtue of having to pay lower pension-related costs (contributions plus POB interest) than without the POB. However, if the investment return is less than the POB interest cost, the transaction becomes a drag on cash flows. Not only will the employer have the new POB debt service costs but also higher contribution rates attributable to new unfunded liabilities from under performing investment returns. If returns are above 6% (as in the example above) but below 8%, the employer will have increasing contribution rate costs, but it would have had them even without the POB. When investment returns are less than the POB interest costs, the POB puts additional strains on financial operations rather than helping.

While the 1990s produced some impressive investment returns, no pension fund consistently earns 8% or higher every year in perpetuity; returns vary dramatically and may (or may not) average the investment return assumption or even the POB interest rate cost. The POB paradigm has a goal to average or beat the 8% investment return assumption over the long-term. With the appropriate asset allocation strategy this goal may be attainable, but market experience over the last several years has led some to believe that an 8% return assumption may be too aggressive.

Another factor in evaluating the success of a POB is that its full effect can only fully be tallied at final maturity of the bonds. Due to market gyrations, a POB may look like a great success for several years, or even a decade, only to see investment gains erode, and at maturity are pronounced a failure. Conversely the exact opposite may be true, with poor results in the early years later overcome to achieve projected benefits in the final analysis.

In any event, we do know that even if projections are met on average over the life of the POBs, there will be years with returns that are higher, and some that are lower (maybe significantly), than the 8%

bogey. We do not have to look back very far to see evidence of such swings: in fiscal 2001 the S&P500 index of domestic equities fell 16%, in 2002 it fell another 19%, but in 2003 it fell only 1.6%. These market declines hurt issuers with POBs outstanding: most had to pay increased contribution rates to cover the new actuarial losses, plus they had the higher debt service costs due to the POB.

The risk of adding too much leverage is another factor for POB issuers to consider. Borrowing for any purpose increases leverage, and incurring debt to pay unfunded liabilities is no different. While the issuer is substituting one type of long-term liability (POB) for another (UAAL), there is a difference. In most cases, bond debt service is a "harder" obligation than the "softer" contribution payments used to amortize the UAAL. Bond debt service must be paid in full and on time or the issue falls into default, with wide ramifications. For certain employers, contribution payments, on the other hand, may be temporarily deferred or reduced without serious negative consequences. Therefore, the size of the POB relative to the total debt structure of the issuer must be measured in terms of what level of debt service can be managed if actual future investment returns do not meet the original POB plan projections.

Because POBs generate very large infusions of funds into the pension system compared with the more steady investment and reinvestment of interest, dividends, and contributions by the fund, the plan for investing POB proceeds must be considered. Should the monies be invested according to the existing asset allocation guidelines, or should POB proceeds have a special allocation strategy because of current market conditions or expectations? If the chief investment officer of the fund believes that international equities, for example, are overvalued, maybe a delay in filling that allocation would be warranted. On the other hand, in that pension funds are long-term investors, most have stuck with their traditional allocations for proceeds, eschewing market timing strategies. Whatever the strategy may be, it should be fully vetted before the POB sale.

Another aspect that few envisioned when this instrument was first initiated is the political risk hidden, almost like a Trojan horse, within the POB structure. As was mentioned in a feature on this subject, ("Pension Obligation Bonds: Unique Rating Documentation", RatingsDirect, March, 4, 1999), POBs can become victims of their own success. For example, if a POB is issued for the full UAAL, resulting in a 100% funded ratio, and subsequent higher-than-average returns push the ratio to 110% or 120%, there will arise tremendous political pressure to distribute the so-called "excess" funding by increasing benefits, thus incurring new liabilities. The excess funding touted in the late 1990s turned out to be illusory. Even systems bolstered by POBs that did not increase benefits found themselves in under funded positions following the market declines from 2000 to 2003. Those that fell victim to the siren's song and increased benefits have even lower funding levels. Some pension funding ratios declined to the extent that the employers' opted to go back to the market to issue POBs for a second time.

Analysis

The rating process for POBs basically parallels that of long-term debt with similar security plus with certain additional analytical factors pertinent to the POB and pension system. Most POBs issued to date have a GO or general fund pledge. Also, a high percentage of those sold have been additionally secured by bond insurance. In Standard & Poor's analysis specific to POBs we focus on the effect of the bonds on the issuer's debt structure and its ability to meet its obligations. The financial review includes the impact on both the balance sheet and the operating statement or cash flows. The status of the issuer's pension fund on a pro forma basis is also part of the review as with any similar analysis.

From the balance sheet perspective, we look at how the POB fits into the issuer's total debt plan. Does the POB dramatically alter the issuer's debt profile? We look at total debt with and without the POB so as not to penalize a POB issuer in comparison to another issuer that might have relatively low debt (and no POBs) but sizable unfunded pension liabilities. Also, we evaluate the leverage added by the POB. Does it markedly increase hard, fixed costs (bond debt service) in place of a softer, more discretionary obligation (pension contributions)? If sub par investment returns put upward pressure on contribution rates will they, coupled with the new higher debt service costs due to the POB, put the issuer's budget under greater strain? The issuer must also be cognizant of the effect the POB issuance may have on statutory debt limits. Will the POB use up debt capacity that might be needed for other, more pressing needs?

From a cash flow standpoint, Standard & Poor's reviews projected debt service and contribution costs, with and without the POB, including the validity of the assumptions including those for POB interest

costs and pension fund investment returns. How do the projections compare in total and on an annual basis? The spread between interest costs and investment return generates the savings expected from the transaction. What is the magnitude of annual savings and total present value savings? Where (in what years) are the savings taken? Are the savings front-loaded in an attempt to mask budgetary stress? Will any front-loading lead to higher, unsustainable contribution rates in later years? Do the potential savings form the POB outweigh the risks involved? The analysis of the cash flows is a critical component to understanding the full impact of the transaction.

As part of the POB analysis we also review the current status of the recipient of bond proceeds — the pension system itself. What is the statutory relationship between the issuer/employer and fund? How have the laws and precedents for making contributions affected funding progress and how do they play into the POB strategy? Have funding levels generally been increasing over time? What are the funding goals and how will the POB impact these objectives?

The pension fund's general actuarial methods and assumptions also will be reviewed for comparative purposes. The fund's asset allocation strategy will be studied for consistency with the POB assumptions and for the general risk profile. An aggressive investment strategy may make the POB objectives more difficult to achieve on a consistent basis.

Rating Implications

Employers looking to help manage their unfunded liabilities through the issuance of a POB should weigh the pros and cons very carefully. Any applicable risks from the above list should be evaluated. There should be a clear POB plan with attainable actuarial and investment assumptions and a conservative structure. Prudent allocation for projected savings over time limits the chances for problems

It is possible for POBs to have a negative effect on credit quality, especially in the investment environment over the last several years or if they were structured poorly at the outset. Standard & Poor's will continue to evaluate POB risks in light of each employer's individual profile at the time of sale as well as their projected effects over time. POBs may work as planned over the long-term, but short-term fiscal dislocations resulting from these structures are part of their baggage.

Special Rating Documentation Requirements for POBs

The unique nature of POBs requires certain additional documentation not normally requested for other types of ratings:

- POB financing plan, including its effect on the overall debt plan;
- Projections of UAAL contributions and debt service with and without the POB;
- Latest pension fund annual report;
- Most recent actuarial valuation and experience studies of the fund; and
- Pension fund's current asset allocation strategy and plan for investing POB proceeds.

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Milliman

PERiSCOPE Public Employee Retirement Systems

Public plan DB/DC choices

Mark Olleman, FSA, MAAA

This article is about choices: When given the choice, do public employees choose a defined benefit (DB) plan or a defined contribution (DC) plan? Do employers give employees the chance to choose a second time? What happens when employees choose their own investments? Can employers choose to offer meaningful death and disability benefits to DC members? What are the implications of an employer choosing to change from a DB to a DC plan? This article looks at the recent experience of statewide retirement systems to provide some answers.

What do public employees choose?

Many people claim that DC plans are more attractive to new employees than DB plans. Is this true? As a test, note that in the last 10 years, the seven statewide systems listed in Table 1 have begun giving new hires the choice between participating in a DB or a DC plan. Their experience indicates that public employees prefer DB plans. The percentage of new employees electing DC plans ranges from 3% in the Ohio Public Employee Retirement System to 26% in Florida.

Table 1 shows that many of the members going into a DB plan never submit an election and are placed in the DB plan by default. However, based on survey data, Florida found that "up to 45% of the defaulters may be using this option as their active election in the belief that by defaulting there could be no mistakes made in their plan choice." What is more, Table 2 shows that in Washington PERS–the only system where DB is not the default–63% of new members have actively chosen an all-DB plan (Plan 2) over the default of a combined DB and DC plan (Plan 3).

Most of these DB/DC choice plans have had relatively stable election percentages in the short time they have existed. However, we do not know how the choices members make will change in the future. The stock market decline of 2000 to 2002 has certainly influenced many members. No doubt factors such as the future of the stock market and the experiences of people retiring with only DC plans will influence future member choices. The financial market experience of late 2008 may have some influence as well.

TABLE 1

NEW HIRE ELECTIONS IN MOST RECENT COMPLETE YEAR

SYSTEM	DB BY DEFAULT	DB ACTIVE ENROLLMENTS	DC ACTIVE ENROLLMENTS	COMBINED PLAN ACTIVE ENROLLMENTS
COLORADO	39%	43%	18%	NOT OFFERED*
FLORIDA	55%	19%	26%	NOT OFFERED*
MONTANA PERS	90%	NOT SEPARATED*	10%	NOT OFFERED*
NORTH DAKOTA**	88%	NOT SEPARATED*	12%	NOT OFFERED*
OHIO PERS	82%	13%	3%	2%
OHIO TEACHERS	72%	14%	11%	4%
SOUTH CAROLINA	80%	NOT SEPARATED*	20%	NOT OFFERED*

** "NOT SEPARATED" MEANS ACTIVE DB ENROLLMENTS HAVE NOT BEEN SEPARATED FROM DEFAULT DB ENROLLMENTS. "NOT OFFERED" MEANS THERE IS NOT AN OPTION TO ENROLL IN A COMBINED DB/DC PLAN.*

*** NORTH DAKOTA STATISTICS ARE FOR JANUARY 2001 THROUGH JUNE 2008.*

TABLE 2

CUMULATIVE WASHINGTON PERS NEW HIRE ELECTIONS FROM MARCH 2002 TO SEPTEMBER 2008

PLAN 3 COMBINED DB & DC BY DEFAULT	PLAN 3 COMBINED DB & DC ACTIVE ENROLLMENTS	PLAN 2 ALL DB ACTIVE ENROLLMENTS
19%	18%	63%

Tables 1 and 2 summarize the experience of systems that allow their members to choose between a DB plan and a DC plan. Ohio and Washington state members also have the choice of a "combined" plan, where employer contributions fund a DB plan and employee contributions fund a DC plan. Washington state members do not have the option of an all-DC plan.

What about do-overs?

One plan design choice employers face is whether to give employees a chance to change their mind. This chance for a do-over has been referred to by some as the pension mulligan. Although Montana PERS, North Dakota, Vermont, and Washington state require new hires to make a one-time irrevocable decision, other systems do not. Colorado allows members to change their election one time in years two through five after hire. Ohio Teachers and South Carolina also allow members to change their election once in the first five years, but only from DC to DB. Florida allows members to change once at any time before retirement or termination of employment. Last, Ohio PERS allows members to change up to three times: once in their first five years of employment, once in their second five years, and once more at any time after 10 years of service through retirement.

You might ask, "What do systems do when members change their mind?" Florida allows two choices when members switch from the DB to the DC plan. The members can either (1) freeze their current DB benefits based on service and salary to date and have future contributions accumulate in their DC accounts, or (2) convert their DB benefits into DC accounts based on the value of the normal retirement benefit.

If a Florida member wants to switch from DC to DB, the member must pay the full cost based on either the present value or the actuarial accrued value, depending upon where the member has previous DB service prior to joining the DC plan. The DC account is used first. If there is more money than needed in the DC account, the member keeps the extra in the DC account. If there is not enough money in the DC account, then the member must pay the difference or stay in the DC plan.

Ohio PERS, which allows up to three changes, takes a somewhat different approach. Changes are prospective only, but members transferring to the DB or combined plan have the option to purchase service in the new plan using their DC accounts. Frozen DB benefits are based on salary and service during DB membership only.

The do-over could be particularly valuable when a member's situation changes. As an example, the portability of a DC plan might be attractive to a teacher who does not expect to stay long in a position due to a military spouse who is frequently moved around the country. However, if the couple's plans change and they decide to settle down, the teacher might want to change to the DB plan.

Can meaningful death and disability benefits be provided in a DC environment?

Yes, meaningful death and disability benefits can be provided in a DC environment, but it will require supplemental contributions. Consider the choices three states have made to respond to the criticism that DC accounts do not provide adequate death and disability benefits.

In Florida, where members choose between a DB and a DC plan, disabled members can choose to surrender their DC account balance and receive the same disability benefits as provided by the DB plan. This raises a question: Where does the money to finance this benefit come from? The answer is that the employer pays a separate charge ranging from 0.25% of pay for general members to 1.33% of pay for special risk members, and a side account is maintained to finance the difference between the cost of the disability benefits and the dollar amount of the DC accounts surrendered by the members. If DC members die in Florida, their death benefit is the DC account balance. Montana PERS has a similar provision where 0.30% of DC member pay is set aside to finance long-term disability benefits.

Alaska has a different approach. Alaska public employees hired after July 1, 2006, all go into a DC plan. Here the occupational death and disability benefit is 40% of salary until normal retirement (50% of salary for the occupational death of police and fire members). The employer continues both the employer and employee contributions into a special occupational death and disability trust account until the member reaches normal retirement, or until the date the member would have reached normal retirement in the case of occupational deaths. At normal retirement age, the 40% (or 50%) of salary benefit stops, and the member, or survivor, receives the DC account as well as the accumulated contributions from the occupational death and disability trust account with actual returns net of expenses. Employers make contributions into a separate fund to finance the extra benefit not provided by the DC account.

What happens when employees choose their own investments?

Experience indicates the average employee directing his or her own investments earns lower investment returns than a statewide DB system. Here is the experience of two states.

Nebraska's state and county employees hired between 1964 and 2003 had only a DC plan. During the same period, Nebraska maintained separate DB plans for its school employees, state judges, and state patrol. Over the 20 years leading up to 2002, the average return in the DB plans was 11% and the average return in the DC plans was between 6% and 7%. Why the significant difference? One reason is that nearly 50% of DC member contributions were invested in the stable value fund. The stable value fund was the default for members not making a specific investment election. Although the stable value fund is very conservative and the investor's balance will not decrease, the investor also has a lower expected rate of return. Partially due to the lower returns, employees were receiving a replacement ratio of their pre-retirement income closer to 30% rather than the projected 50% to 60%. Nebraska has since decided that employees hired on or after Jan. 1, 2003, will go into a hybrid defined benefit plan.

West Virginia had a similar experience. Teachers hired between 1991 and 2005 had only a DC plan. Teachers hired after July 1, 2005, go into a DB plan instead. One of the reasons for this change is that average DC returns lagged DB returns. As an example, during the seven years from 2001 to 2007, the DB plan outperformed the DC plan in both the best and worst markets. The DC return was higher in only one of the seven years Over the seven year period, the average DB return was 3.15% higher. Specific returns are shown in the appendix.

Do DC members have to choose their own investments?

Employees directing their own investments tend to earn lower investment returns than statewide DB systems for a variety of reasons. DC members are part-time investors, whereas DB plans are managed by full-time highly trained professionals. DB plans have investment options that are generally not available to DC members, such as real estate, private equity, and hedge funds. DC members often lack discipline and chase returns. Does this mean that DC members cannot earn the same investment returns as DB plans? No, DC members can earn exactly the same returns. Members of Washington state Plan 3 have the option to invest in the Total Allocation Portfolio (TAP), which mirrors the investments in the state DB plan and therefore earns the same returns. Washington has made the TAP the default investment option for Plan 3, and approximately 61% of the members' DC assets are in the TAP option.

The employee contributions of members in the Oregon Public Service Retirement Plan go into the Individual Account Program (IAP). Like Washington's TAP, Oregon's IAP money is invested in the same manner as the DB plan. However, unlike Washington's TAP, which is one of many investment choices, in Oregon's IAP there are no other investment choices, and so all DC money is invested to match the DB plan.

Both Washington and Oregon provide members with a professionally managed portfolio. Washington's approach leaves room for individual risk tolerance. For instance, members near retirement may not want to take as much risk. Oregon's approach ensures that all member funds are invested in a carefully managed portfolio. Either way, it is ironic that DC members may need to give up their ability to choose their own investments in order to earn returns competitive with DB plans.

Both the Washington and Oregon plans are hybrid plans where employer contributions fund a DB plan and employee contributions go into a DC plan. This is significant because the DB plan will provide some level of guaranteed income regardless of DC investment returns.

Does changing to DC solve funding problems?

In 1991, the West Virginia teachers' poorly funded DB plan was closed to new members. All new hires were put into a DC plan. This funding solution overlooked some important considerations:

- New members do not start with any unfunded obligation.
- Projected contributions for new members were worth more than the projected DB costs for those members.
- No unfunded obligations for existing members are reduced when new members go into a DC plan.

As a result, the loss of new members made it more difficult to finance the unfunded obligations of the West Virginia Teachers' Retirement System (TRS).

In 2003, West Virginia studied whether teacher retirement should be returned to a DB plan. Another factor in the decision was that 4,500 members who transferred from the DB to the DC plan in 1991 found it hard to retire after the bear market of 2000–2002. When also considering the lower average returns that were earned on the DC member accounts, the state decided that starting in 2005 all new hires would go into the DB plan to save money. After studying the issue, the state decided that funding a DB plan properly would be less expensive than a DC plan providing equivalent benefits. The state has shown discipline to achieve this proper funding, with extra contributions of $290.1 million in fiscal year 2006 and $313.8 million in fiscal year 2007. In addition, West Virginia completed a tobacco bond securitization in fiscal year 2007 and deposited $807.5 million of those proceeds into TRS as another special appropriation. Most recently, in June of 2008, the teachers in the DC plan were given the choice to switch to the DB plan. Seventy-eight percent chose to switch.

West Virginia projected a $1.2 billion savings in the first 30 years due to moving new entrants from the DC to the DB plan. This relies on an assumed return of 7.5%. The Legislature asked what return would be needed to break even. The answer was 6.0%. In order for the DB plan to save money, a projected return of more than 6.0% was needed. The employer cannot avoid funding risk with a DB plan, but changing to a DC plan does nothing to take care of unfunded obligations.

Some states require specific contributions to the DB plan as a percent of DC member pay in order to finance preexisting unfunded liabilities and to defray expenses. The systems include Colorado, Montana PERS, Ohio PERS, Ohio Teachers, and South Carolina. Details are in the appendix.

What are the implications of these choices?

The choices discussed in this article have many implications. Public employees have overwhelmingly chosen DB plans over DC plans. This implies that DB plans are more attractive than DC plans to public employees. This is not surprising, as public employees tend to have long service. Some systems have chosen to allow their members a second choice. This do-over could help an employee reverse a bad decision. Some systems have chosen to provide meaningful death and disability benefits in a DC environment; however, supplemental contributions are required. Employees tend to earn less when they choose their own investments. However, this can be countered in a DC plan by using an alternative like Washington state's TAP or Oregon's IAP, where the DC assets are invested in the same manner as the DB assets. Choosing to change from a DB to a DC plan does not solve funding problems.

In the final analysis, it's a question of accumulation and distribution. The accumulation of contributions and investment earnings determines available retirement income. A plan that maximizes investment earnings maximizes the benefits provided by contributions. Public employees are choosing plans that provide lifetime distributions. There is not yet much experience on how many DC members have been able to make their assets last a lifetime. The distribution phase and the loss of longevity risk pooling in retirement is probably the hardest obstacle for DC plans to overcome. The consequences of outliving one's assets are severe. DC plans rarely measure whether assets accumulated will provide adequate retirement income. How many employees can be sufficiently educated and empowered to navigate the risks of pre-retirement accumulation and postretirement distribution?

There often seems to be a choice between the employer bearing all the risk of funding a defined benefit and the member bearing all the risk of accumulating sufficient assets to last a lifetime. However, there are some choices that share risk between employers and employees, such as the combined DB/DC plans in Washington, Oregon, and Ohio, and DB plans where contribution increases are shared by employees. More choices are needed where risk is shared, or better yet reduced, and adequate retirement benefits are provided for a reasonable cost.

Further details are provided in the appendix available on Milliman's Web site.

Mark Olleman is a principal and consulting actuary in Milliman's Seattle office.

This publication is intended to provide information and analysis of a general nature. Application to specific circumstances should rely on separate professional guidance.
Inquiries may be directed to: Brent Banister, Editor; 1120 South 101st Street, Suite 400, Omaha, NE 68124-1088; (402) 393-9400; periscope@milliman.com.
Offices in principal cities worldwide

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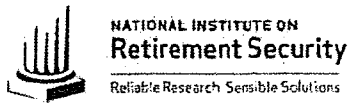
FACT Sheet



A Better Bang for the Buck
The Economic Efficiencies of Defined Benefit Pension Plans

Overview

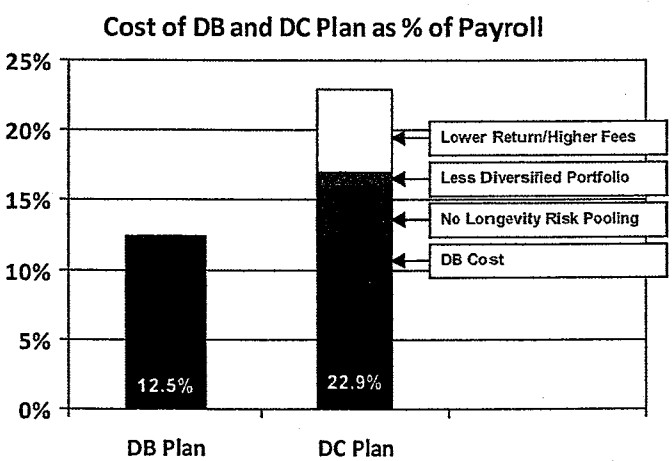
The National Institute on Retirement Security has released a new report, "A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans." The report presents an original analysis on the efficiencies of defined benefit pension (DB) plans, and the costs of DB plans as compared to 401(k)-type individual defined contribution (DC) plans.

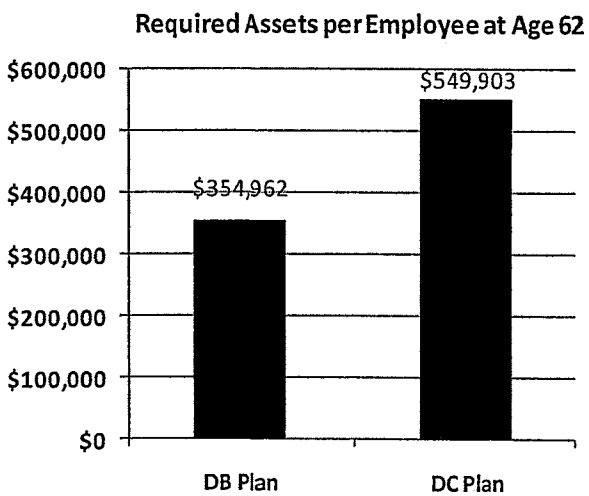
The report's analysis and findings serve as a myth buster with respect to the costs of defined benefit pension plans. Specifically, the embedded **economic efficiencies of DB plans make them nearly half the cost of DC plans, or a 46 percent cost savings.**

Policy and decision makers can utilize these findings to make informed decisions about retirement security issues and to evaluate claims that DC plans save money. The report concludes that DB plans should remain a centerpiece of retirement income policy and practice, especially in light of current fiscal and economic constraints facing corporate and government retirement plan sponsors.

Methodology

The model makes an "apples to apples" calculation of the actual dollar contributions required for a DB and DC plan to achieve the same target retirement benefit. The target retirement benefit in the model is $26,684. Together with Social Security benefits, this retirement benefit allows a retiree to replace 83% of pre-retirement income, which meets generally accepted standards of retirement income adequacy.





Key Findings

The DB plan provides the best bang for the retirement buck. Under the model, the DB plan provides the same retirement income at nearly **half the cost - 46 % less** than individual 401(k)-type DC accounts.

Under the DB plan, contributions of 12.5% of payroll each year are required to fund the target retirement benefit. The DB plan will need to have $355,000 set aside for each participant by the time the worker turns 62. In contrast, the DC plan requires contributions of 22.9% of payroll each year. The less-efficient DC plan will need to have $550,000 set aside for each participant in the plan by the time the worker turns 62. In other words, the DB plan can provide the same benefit at a cost that is 46% lower than the DC plan. The **DB plan can do more with less providing the same benefit for nearly $200,000 less per participant.**

Economic Efficiencies Are Embedded in DB Plans

DB plans have certain embedded characteristics that drive their economic efficiencies:

1. **DB Plans Avoid "Over-Saving."** We won't all live to be ninety-five or one hundred. But in an individual plan, many of us will want to save enough to last until very old age to avoid the risk of running out of money. However, a DB plan only has to save for the AVERAGE life expectancy, which is much lower and which actuaries can calculate with a high degree of accuracy. By saving for a realistic average life expectancy, the DB plan realizes **a 15% cost savings** over the DC plan. In technical terms, this is called "longevity risk pooling."

2. **DB Plans Stay Forever Young.** Individuals age. Therefore, those in individual retirement plans must adjust their asset allocation to ensure sufficient cash is on hand to last throughout retirement. Most financial advisors counsel downshifting from higher risk/higher return investments to lower risk/lower return investments as they get older. This protects individuals from the risk of a stock market crash, but progressively reduces the investment returns that can be earned in retirement piggybanks. However, a DB plan exists across generations and therefore can always maintain the most optimal asset allocation. There isn't a need to be overly weighted in lower return/risk bonds or cash. This results in **a 5% cost savings** over the DC plan.

3. **DB Plans Achieve Higher Investment Returns.** The higher returns of DB plans as compared to individual accounts can be attributed a combination of professional asset management and lower fees. A retirement plan that earns greater investment returns will require less money in contributions. Even seemingly small differences in annual returns compound over time. In our model, a 1% difference in annual investment returns results in **a 26% cost savings** over a career, as compared to the DC plan.

Summary

"A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans," makes it clear that the embedded economic efficiencies of DB plans enable them to deliver the **same benefit at nearly half the cost of DC plans, or a 46 percent cost savings**. While the efficiencies of DB plans are well documented, this report is important in terms of quantifying the magnitude of those efficiencies.

The report's findings also serve as a myth buster to conventional wisdom with respect to the fiscal efficiencies and costs of DB pension plans. In fact, **DB plans are the most fiscally efficient means of providing a modest but stable retirement income that cannot be outlived**. DC plans are important to the retirement security equation, but they were not designed to stand on their own.

Policy and decision makers can utilize this data to make informed decisions about retirement security issues and to evaluate claims that DC plans save money. The report concludes that DB plans should remain a centerpiece of retirement income policy and practice, especially in light of current fiscal and economic constraints facing corporate and government retirement plan sponsors.

White Paper

National Association of State Retirement Administrators

Myths and Misperceptions of Defined Benefit and Defined Contribution Plans

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For questions and comments, contact:
Keith Brainard
NASRA Director of Research
512-868-2774
keithb@nasra.org

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NASRA White Paper

Introduction

Policymakers, public pension plan administrators and others with a political or financial interest are engaged in a debate about the retirement benefits that are provided to public employees. Considering that state and local government pension plans provide benefits for 14 million active employees and hold assets of $2 trillion, the consequences of this discussion are far-reaching.

Ninety percent of state and local government employees participate in a defined benefit (DB) pension plan. A movement has unfolded in recent years calling for defined contribution (DC) plans to replace DB plans as the primary retirement benefit for public employees. A number of myths and misperceptions surround this movement; through this paper, NASRA seeks to address and clarify some of the more popular misunderstandings and misrepresentations about these plan types.

Financial planners have long referred to an ideal mix of retirement income sources as a "three-legged stool," with one leg each representing Social Security, personal savings, and an employer pension. Although not every worker attains it, a well-balanced three-legged stool is a sensible personal financial planning strategy; an important component of an employer's benefits package; and a sound public policy objective. Without an employer pension, there can be no three-legged stool. (In states that do not participate in Social Security, pension benefits for public employees typically are adjusted upward to compensate for the absence of Social Security benefits.)

Most public employers offer a voluntary DC plan, such as a 457 or 403(b) that supplements the DB plan. These types of DC plans, which function like a 401(k) plan, are tax-deferred and can fulfill the personal savings piece of the three-legged stool.

NASRA believes that a DB plan should constitute an employee's basic retirement plan, and should be supplemented by a voluntary DC plan. A 1998 NASRA resolution said, in part:

> " ... NASRA supports the prevailing system of retirement benefits in the public sector, namely, a defined benefit program to provide a guaranteed benefit and a voluntary defined contribution plan to serve as a means for employees to supplement their retirement savings; ... NASRA supports progressive changes within this prevailing system of retirement benefits in the public sector, either within the defined benefit plan or through supplementary plans, that accommodate a changing workforce and better provide many of the features sought by advocates of wholesale conversion.

Policymakers, taxpayers, and others with an interest in public employee benefits are well-served when the discussion about DB and DC plans is based on facts and a clear understanding of these plan types and the way they function.

The Myth: "The public sector should convert from defined benefit to defined contribution plans, as the private sector has."

Summary
Defined benefit (DB) and defined contribution (DC) plans each offer their own advantages and disadvantages. NASRA believes that employers should take advantage of both plan types by offering a DB plan as the primary retirement benefit, supplemented by an optional DC plan.

The implication that government should follow the lead of the private sector in adopting DC plans overlooks important differences between private and public DB plans and the reasons that some private sector plan sponsors have adopted DC plans. This implication also ignores the resilience DB plans have exhibited among many private sector employers.

Analysis
A closer examination of the private sector trend toward DC plans reveals not only that the extent of this trend is not as great as implied by many advocates of DC plans, but also that many of the factors driving the change toward DC plans are largely irrelevant to the public sector. For example:

- State and local government pension plans are exempt from most of the laws and regulations, known as ERISA, that govern private sector DB plans. ERISA imposes a substantial cost and administrative burden on employers that sponsor a DB plan, and accounts for much of the private sector movement toward DC plans.
- Virtually all the decline in the number of private sector DB plans has occurred among small employers – those with fewer than 250 employees. A majority of large private sector employers continues to offer a DB plan. This is likely attributable to the economy of scale large employers enjoy, enabling them to incur the cost and burden of providing a DB plan; and to the relative ease and low cost of establishing a DC plan.

There are good reasons for employers to retain a DB plan as the primary retirement benefit for public employees:

- A DB plan is an effective tool for recruiting and retaining quality employees. Government's exemption from most federal pension laws creates a rare competitive advantage for state and local government employers.
- Providing a DB plan helps assure a secure source of income for retired employees, reducing the likelihood of these employees relying on public assistance during retirement.
- By creating an incentive to retire, DB plans can facilitate an orderly transition of employees whose effectiveness or productivity may have waned. DC plans provide no such incentive, and may, in fact, serve as a disincentive.

Legal and Regulatory Changes
Analysts attribute much of the increase in the number of DC plans in private industry to ERISA, the Employee Retirement Income Security Act, which became effective in 1975. ERISA established standards for DB plan participation, vesting, retirement, and reporting; and imposed a tax on DB plans to fund the Pension Benefit Guaranty Corporation (PBGC). State and local government pension plans are not subject to

most ERISA regulations, and public plans are not required to make payments to the PBGC. As a result, the primary factor—ERISA—driving the private sector toward DC plans does not apply to state and local government plans. In lieu of ERISA, public pension plan sponsors (state and local governments) establish their own governing standards and rules. One beneficial outcome of this arrangement has been a wide range of policies and benefit structures, each suited to the unique needs of their plan sponsors.

ERISA amendments, particularly the Multiemployer Pension Plan Amendments Act of 1980, the Tax Equity and Fiscal Responsibility Act of 1982 and the Tax Reform Act of 1986 – reduced or eliminated incentives to private sector employers offering DB plans, and increased the liability, expense, or regulatory requirements of maintaining a private sector DB plan. The rate of decline in the number of private sector DB plans was considerably more pronounced in the years immediately following these tax law changes, than it has been since.

Evidence suggests that recent legislative changes are encouraging a return of DB plans to smaller private sector businesses. According to *Plan Sponsor*, starting in the late 1990's, Congress relaxed some restrictions on DB plans. For example, in 1999, Congress eliminated contribution limits under section 415(e) of the tax code, which had restricted tax-deferred contributions and pension accruals for pension participants when a plan sponsor offers both a DB and a DC plan.

Large vs. Small Employers

Enactment of ERISA and subsequent amendments have especially affected smaller employers, which is where the vast majority of the reduction in DB plans has taken place. But most large employers continue to use DB plans. 346 of the S&P 500 offer DB plans as their primary retirement plan. A recent Watson Wyatt analysis[1] of Fortune 100 companies, which are many of the nation's largest employers, found:

- 50 percent provide a DB plan as their primary retirement plan option; of these, most offer a supplementary 401(k) plan.
- One-third offer a "hybrid" plan, which combines elements of DB and DC plans.
- Only 17% offer a DC plan as their primary retirement benefit.

This survey also found that during the two-year period 2000-2001, the trend away from DB plans virtually stopped, and the number of companies offering a DC plan as the primary retirement benefit held steady. This trend is consistent with other studies indicating that most of the reduction in private sector DC plans during the past 25 years took place among smaller employers, and in the wake of the enactment of ERISA and subsequent amendments.

The Watson Wyatt survey also is consistent with the findings of an EBRI study that found that since 1985, the number of employers with 10,000 or more employees offering a DB as their primary retirement plan has actually *increased*.[2] That this increase has taken place during a period of many corporate mergers of large firms (which reduces the total number of employers in this category) makes it even more notable.

Most public sector employees work for governmental entities that are large

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[1] "Trend Toward Hybrid Pensions Among Largest U.S. Companies Slows Considerably," Watson Wyatt, May 3, 2002

[2] David Rajnes, Employee Benefit Research Institute tabulations of 1985, 1993, and 1998 Form 5500 annual reports filed with the Internal Revenue Service, "An Evolving Pension System: Trends in Defined Benefit and Defined Contribution Plans," September 2002

employers, and government as an employer should be compared with large private employers. A majority of these employers continue to offer DB plans to their employees. While many factors determine the type of retirement benefit an employer provides, these large private employers recognize the important role a DB plan plays in attracting and retaining quality employees.

As an employer, government has an opportunity to directly affect the retirement income security of its employees and to exploit one of the few competitive advantages government enjoys over private sector employers. Providing a benefit that assures workers a level of retirement income that is consistent with their tenure and salary is an effective way to exploit this advantage.

The Myth: "DC plans are better because they offer greater portability than DB plans."

Summary

DC plans do offer greater portability than DB plans. Unfortunately, this often leads to less retirement income security, not more.

Studies and experience show that a majority of terminating employees with a DC plan as their primary retirement benefit, cash out their assets rather than rolling them to another retirement plan. Retirement assets that are cashed out usually are subject to federal and state taxes and sometimes a penalty. Cashing out retirement assets defeats the purpose of having a retirement plan, yet DC plans provide little defense against such "leakage" of retirement assets.

An important objective of providing a retirement benefit is to retain quality employees. DC plans do not support this objective because they do not reward or encourage longevity. Because DB plans do reward longevity, they are an important element in retaining quality employees.

Analysis

Rather than make a wholesale conversion from a DB to a DC plan, many DB plan sponsors have responded to the needs of short-term, mobile, and other employees seeking portability, by providing a voluntary, supplemental DC plan option and by increasing the portability features of their DB plan. In fact, DB plan sponsors have incorporated a remarkable range and variety of innovative portability features, while preserving the core features of a DB plan. In doing so, DB plan sponsors provide a retirement benefit that offers the best features of both plan types.

Following are some examples of the flexibility and portability that state and local pension plans have added to DB plans during the past decade:

- Reduced vesting periods
- Paying to terminating or retiring employees all or part of the employer's contributions
- Paying interest on distributed employee and employer contributions
- Sharing investment gains with participants
- Matching employees' contributions to a supplemental DC plan
- Adding alternatives to the traditional life annuity payment options made to terminating and retiring employees
- Allowing hardship withdrawals
- Allowing members receiving a pension to continue working or to return to work
- Service purchase options that feature:
  - a variety of types of service for which credit may be purchased (e.g., other public service, service only in the same state, non-public service, etc.)
  - purchase of service using pre-tax dollars
  - availability of installment payments and automatic payroll deduction to purchase service
  - direct transfers of service credit from one retirement plan to another, in lieu of payments
  - allowing other retirement assets, such as those in 457 and 403(b) plans, to purchase service on a pre-tax basis
- Establishing and expanding deferred retirement option plans (DROP), that

allow members who qualify for retirement to continue working while accumulating assets in a separate retirement account
- Incorporating a "deferred augmentation" feature, which grows pension benefits for participants who terminate prior to reaching retirement eligibility.

Reduced vesting periods
One concern DC advocates have cited about the lack of portability in DB plans is their long vesting period. Ten years ago, a majority of public pension plans had a vesting period of ten years. This has changed: one of the more notable trends among public DB plans during the last decade has been the reduction in vesting periods.

According to the Wisconsin Retirement Research Committee's *2000 Comparative Study of Public Retirement Systems*, a biannual survey that compares features of 85 of the largest public pension plans in the United States, "[t]he trend appears to be toward five-year vesting or shorter, perhaps reflecting federal [ERISA] vesting requirements that apply to private pension plans." Including changes made since publication of the Wisconsin report, 58 of the study's 85 plans (68%) have vesting periods of five years or less.

Service purchase options
Service purchase provisions accommodate workers who move from one employer to another, or who terminate and "cash out" their assets, then return to work with the same employer or one with the same retirement plan. A service purchase plan allows these employees to purchase retirement service credits in their DB plan.

The expansion of service purchase provisions has been a leading legislative trend affecting public pension plans during the past decade. More than two-thirds of the plans participating in the 2001 Public Pension Coordinating Council (PPCC) *Survey of State and Local Government Employee Retirement Systems* offer some type of service purchase option, and of the plans that do not offer service purchase, nearly half are dedicated to firefighters, police officers, or judges, whose members are predominantly career employees or who are less likely than other employee groups to terminate prior to retirement.

Other examples of DB plan flexibility and portability
During the past decade many large public DB plans have incorporated a variety of features increasing flexibility and portability, while retaining DB plan features. For example:

- Most new public employees in Washington state now participate in a hybrid plan, in which the employer funds a DB benefit more modest than that provided to longer-tenured employees, and the employee contributes to a DC plan.
- The Arizona State Retirement System offers participants with five or more years of service a portion, up to 100%, of the matching contributions made by their employer. Terminating employees with five years of service are entitled to 25% of the employer contributions made on their behalf, rising to 100% for terminating employees with ten or more years of service. Participants terminating with less than five years of service receive their contributions plus accrued interest.
- The Colorado Public Employee Retirement Association matches fifty percent of employee contributions withdrawn by non-vested employees who terminate.
- Many states provide an employer match to employee contributions made to a supplemental DC plan, such as a 457 or 403(b).
- Participants in the Public Employee Retirement System of Idaho share a portion of the system's investment gains, which are deposited into individual DC accounts. Participants may make also

elect to make contributions to these DC accounts.

- The Wisconsin Retirement System and Ohio PERS provide a hybrid retirement benefit, basing participants' pension on a combination of DB and DC plans.

These are just a few of many examples of public DB plans offering flexibility and portability while retaining the central feature of a DB plan: a guaranteed source of retirement income that reflects the worker's salary and length of service.

Portability caveat

An important concern about retirement plan portability is that many terminating employees do not transfer their retirement plan assets to another plan, such as an Individual Retirement Account or a future employer's plan. Studies indicate that a majority of terminating DC participants spend their retirement savings rather than rolling them into other retirement accounts.

A good example of terminating participants spending, rather than saving, their retirement assets is in Nebraska, where state and county government employees historically have participated in a DC plan. A recent study of the Nebraska Public Employees Retirement System, conducted by a national actuarial consultant, found that 68% of terminating participants cashed out their assets rather than rolling them over to another retirement plan. This finding is consistent with a Hewitt Associates study which found that more than two-thirds of participants terminating from DC plans cash out their lump sum distributions rather than rolling them to other retirement accounts.

Such "leakage" of retirement assets from individuals' retirement accounts increases future costs of providing retirement. This is because the assets that are spent, rather than saved and invested, must be restored eventually, either by the employee or the employer, or both.

In testimony before Congress, the president of the Employee Benefits Research Institute, said: "Preservation (of retirement assets) in the presence of portability is, in my mind, the largest single issue in the system today in terms of determining how much money will actually be available to provide retirement income in the 21st century. ... Policymakers cannot fairly assess the portability issue unless they fully consider the consequences of money leaving the system versus money staying within the system."[3]

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[3] "The Future Role of Pensions in the Nation's Retirement System," Tuesday, July 15, 1997 - Panel Discussion General Accounting Office Conference Retirement Income Security in the 21st Century

The Myth: "DC Plans are better because they allow employees to manage retirement assets themselves"

Summary

Some employees do wish to manage their own retirement assets, and most DC plans not only allow, but require participants to manage their retirement assets. DC plans also shift the risk of managing retirement assets from the plan sponsor to individual participants. Unfortunately, most employees are at best mediocre investors, unlikely to generate an investment return that will ensure an adequate level of retirement income.

DB assets have a longer time horizon, enabling them to withstand market volatility better than individuals. DC investors have a shorter investment horizon, requiring them to hold a more conservative portfolio, which leads to lower returns and less retirement income.

NASRA believes that a DB plan should constitute an employee's basic retirement benefit, and should be supplemented by a voluntary DC plan. This arrangement satisfies the objective of providing a guaranteed pension benefit, while giving employees, especially those wishing to manage their own assets, the opportunity to save and invest in accounts they manage and direct.

Analysis

A key difference between DC and DB plans is that DC plans provide the opportunity to create retirement wealth, while DB plans provide income security. The purpose of a retirement plan is not to empower employees, or to create sophisticated investors, or to make participants wealthy. The chief purpose of a retirement plan should be to promote financial security in retirement.

Requiring individual employees to bear the entire risk of assuring an adequate level of retirement income ignores the fact that most employees lack the knowledge of investment concepts and practices needed to succeed. When employees fail to save enough for retirement, they and their dependents may face indigence in their elder years and may be required to work in retirement. Some will become dependent on the state for public assistance.

The eighth annual John Hancock Financial Services Retirement Survey[4] of DC plan participants, published in May 2002, stated "many have a cockeyed view of how investments work across the board." John Hancock researchers said most DC plan participants will fall well shy of the estimated 75% of pre-retirement income needed to maintain the same lifestyle in retirement. The survey also documented numerous examples of ignorance of basic investment principles among DC plan participants.

The Nebraska Public Employee Retirement System had a similar experience. Despite considerable, sustained efforts to educate participants, public employees in Nebraska were directing 90% of all contributions to just three of the eleven available fund choices, and more than 50% of the DC plan assets were invested in the stable value fund.

[4] "Eighth Annual John Hancock Financial Services Retirement Survey," January 2002

A 2003 Pension Research Council Working Paper found that "a significant group of workers lacks the psychological attitudes or interests needed to maximize retirement security."[5]

The Investment Company Institute reported in 2004 that one-half of all 403b plan assets (owned primarily by public employees) were held as annuity reserves in life insurance companies. Another 30 percent was held as variable annuities with mutual fund companies.

DB assets are invested on the basis of a long time horizon, enabling them to be invested more aggressively than DC assets, resulting in higher long-term returns. By contrast, DC participants, who are not professional investors and as a group tend to be risk-averse, must assume increasingly conservative allocations as they near retirement, resulting in lower returns during both their working years and in retirement. The long investment horizon and professional investment of DB assets generate higher returns that compound, creating substantially greater returns over the long-term.

Ninety percent of public employees participate in a DB plan, and a supplemental, voluntary DC plan is available to nearly all public employees. NASRA believes this arrangement accommodates those employees who wish to manage their own assets, while still assuring a pension benefit for all participants.

[5] ""Money Attitudes' and Retirement Plan Design: One Size Does Not Fit All, MacFarland, Marconi and Utkus, Pension Research Council Working Paper 2003-11

The Myth: "An employee must spend his entire career with the same employer to benefit from a defined benefit plan."

Summary

DB plans reward workers who remain with their employer long enough to become vested members. DB plans are intended to reward long-term employees: encouraging longevity among quality employees is a primary retirement plan objective—one that DB plans help promote, and that DC plans do not.

However, an employee does not need to spend his or her entire career with the same employer to benefit from a DB plan. A DB plan provides a guaranteed retirement payment for vested participants; in most public retirement plans, vesting takes five years or less. Many public retirement plans allow participants to transfer or purchase service credit from other plans. Most public plans pay interest on participant contributions, and some entitle terminating participants to their employer contributions.

Depending on the age of the participant when beginning and terminating employment, a DB plan can provide a retirement benefit that is greater than the benefit from even a well-invested DC plan, even for employees who work only for a short period of time.

Analysis

By rewarding longevity, DB plans assist employers in retaining quality employees and encouraging longevity. This feature is especially helpful in the public sector, where salaries often lag behind the private sector, requiring employers to compensate in other ways. One of the chief arguments in favor of DC plans—their portability—can work against employers seeking to retain quality employees.

Yet it is misguided to believe that a DB plan benefits only those who spend many years or an entire career with the same employer. A chief strength of DB plans is that they offer participants a guaranteed retirement benefit funded with assets that are professionally invested.

By contrast, the benefit created by a DC plan is uncertain, determined largely by the participant's investment decisions and ability to resist cashing out retirement assets prematurely. These are uncertain factors on which to base a worker's retirement income security. When a DC plan is an employee's primary retirement benefit, such uncertainty may fail to fulfill the purpose of a retirement plan for both the employee and the employer.

Even for long-term employees, a DC plan provides no assurance of a retirement benefit that exceeds or

even meets the benefit provided by a DB plan. This is because DC plans place the investment risk on the employee, and employees whose investment returns are sub-par over the course of a working life are likely to experience a lower retirement benefit than under a DB plan. The chapter *Employees want to manage their own retirement assets* addresses the likelihood of the typical DC participant achieving an investment return high enough to generate sufficient retirement savings.

Differences in benefit levels provided by DB and DC plans vary, and are determined by many factors, including the age of the employee when entering service. For example, assuming typical contribution rates and rates of investment return, an employee beginning a job at age 50 is better off in a typical DB plan regardless of how long he or she works. An employee entering service at age 45 will be better off in the DB plan after five years of service. This trend continues down the age scale—the younger the employee, the more time a DB plan needs to be relatively advantageous.[6] This analysis is based on the attainment of investment return assumptions and the use of lump-sum distributions, two factors that endanger long-term retirement income security.

The chapter on portability addresses the growing use of service purchase provisions, which allow employees who move from one state to another to transfer their DB service credit with them. Similar provisions permit employees who terminated and cashed out their DB assets in previous years, to purchase those back when they re-enter employment. These and other public plan provisions accommodate employees who relocate or who move in and out of public employment.

Today's workforce is older than it was twenty years ago, and older workers are more aware of their retirement income needs. This awareness promotes an understanding of and appreciation for DB plans. A DB plan helps employers, including government, to recruit and retain quality employees in today's competitive labor market.

[6]ORP Alternatives, Gary Findlay, presented to The Southern Conference on Teacher Retirement, 5/24/00

The Myth: "Public employees in defined benefit plans need to worry about politicians mishandling their funds, creating unfunded liabilities, and cutting benefits."

Summary
Defined benefit public pension funds are trusts, typically administered by a governing board whose members are fiduciaries, or by a sole trustee who serves as a fiduciary. Every state has established prudence standards to govern the investment and management of assets, and most public pension plan administrative officials typically prepare financial statements in accordance with generally accepted accounting principles that are subjected to independent audits in accordance with generally accepted auditing standards.

Federal constitutional provisions governing contracts and property rights are generally perceived to protect pension benefits from diminution. In addition, some state constitutions explicitly prohibit reductions in pension benefits; most other states employ statutes or case law to prohibit or limit efforts to reduce public employee pension benefits.

A legislature wishing to reduce retirement benefits can do so more easily under a DC plan than with a DB plan. DB plans have liabilities for which plan sponsors are responsible; DC plans do not.

Further, the idea that public employees must worry about elected officials creating and then ignoring unfunded liabilities is not realistic. Typically, political jurisdictions are legally obligated to pay off any unfunded the liabilities of the DB plans within their purview. Any jurisdiction not responsibly financing its DB plan ends up with a net-pension obligation that must be disclosed in the plan sponsor's financial statements. Accordingly, plan sponsors are motivated to ensure that plans are properly financed, because disclosure of a net pension obligation can negatively impact a jurisdiction's credit rating.

Analysis
Mishandling Public Funds
First, once contributed to the pension trust, they are no longer "public funds." The ability of elected officials to "handle" public pension funds is very limited. Most members of pension plan governing boards are appointed, not elected officials, and many are also members of the plan. All pension plan trustees are fiduciaries, including those who are elected officials, and are subject to fiduciary standards. An overarching theme of fiduciary standards is that the fiduciary must carry out his or her duties in the sole interest of plan participants, consistent with applicable laws, regulations, and policies.

In every state, fiduciary standards that govern the investment of assets include either a prudent person rule, a prudent investor expert rule, or a blend, or a variation of one or both.

The prudent person rule states that the fiduciary "is under a duty to the beneficiary to make such investments and only such investments as a prudent man would make of his own property having in view the preservation of the estate and the amount and regularity of the income to be derived..."[7]

The prudent expert rule, prescribed in ERISA as the standard for private sector pensions, requires that the pension plan fiduciary discharge the duties of that position "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims."

None of the standards permit elected officials to "mishandle" public trust funds.

Creating Unfunded Liabilities
Simply expressed, states are responsible for covering the liabilities of the pension plans they sponsor. An unfunded liability is the result of the actuarial cost of benefits (liabilities) exceeding the actuarial value of assets. Elected officials can create an unfunded liability by authorizing benefits without providing immediate assets sufficient to pay for them; by not making adequate contributions to the retirement plan; or by managing or directing investments that result in returns lower than the actuarially assumed return rate. If a legislature creates pension liabilities, the state is still legally required to meet its pension obligations.

Contradicting the assertion that public employees need to worry about elected officials creating unfunded liabilities, the overwhelming majority of state and local pension plan sponsors traditionally have made all required contributions to their pension plans. One result of this has been that public pension plans as a group have amortized their pension liabilities in a manner similar to how a homeowner pays off a mortgage. Public plans covering a large percentage of public employees are now fully funded, and plans covering most other employees are nearly fully funded.

Cutting Benefits
Most states protect public employees pension benefits through their constitution, statutes, or case law. Public pensions also enjoy protections provided through property rights law: "Under federal and state constitutional law notions of due process, property or a property right cannot be adversely impacted or taken by a governmental entity without observing procedural considerations. Pension benefit coverage and entitlement will

[7] Calhoun and Moore, "Governmental Plans Answer Book," Panel Publishers

generally be considered to be property bringing due process protections."[8]

A DB plan actually is an effective vehicle for reducing the possibility of arbitrary benefit reductions, because inherent in a DB plan are liabilities for which the plan sponsor is responsible. If a legislature wished to reduce future benefits for current or future employees, it would be easier to do so with a DC plan, as there are no employer liabilities associated with that type of plan. If "politicians cutting benefits" is a concern, a DB plan is a more effective means of preventing such actions.

[8] Lawrence A. Martin, "Legal Obligations of Public Pension Plan Governing Boards and Administrators," published by the Government Finance Officers Association

The Myth: "DC Plans Cost Less than DB Plans"

Summary
Retirement plan expenses fall into one of two categories: administrative expenses, which include recordkeeping and investment management; and the cost of the benefit itself, reflected in the form of employer contributions. In almost every instance, the administrative cost of a DC plan is higher—often much higher—than that of a DB plan. The difference between these plan types is in who pays the administrative cost: the employer usually incurs most of the cost of a DB plan; the participating employee normally pays all or most of the administrative cost of a DC plan.

If an employer seeks to reduce the costs of its retirement plan by lowering contributions, the result will be a lower level of assets available for benefits. In addition, by diverting participants from an existing DB plan to a DC plan, DB plan costs in many cases will rise, and the employer will likely be required to continue to maintain its DB plan, mitigating or nullifying any expected budget savings.

Analysis
Administrative Costs
Although the administrative cost of each retirement plan varies, in almost every instance, DC plans cost more—usually much more—than DB plans. Two factors account for most of the difference in DC and DB plan expenses. First, unlike DB plans, DC plans maintain individual accounts that are typically updated daily with information that is made accessible to the participant. Secondly, the size of DB plans covering most public employees creates an economy of scale, lowering the cost of administration and investment management.

Most DC plans use mutual funds or similar instruments as investment options. The average expense ratio for a stock mutual fund is around 1.5% of assets; the typical bond fund expense ratio is approximately 1.1% of assets. When costs for recordkeeping, participant education, and other administrative expenses are added, the annual cost of a DC plan can rise to as much as 2% of assets. This rate does not include the start-up costs needed to create a new DC plan; start-up costs generally are borne by the employer, either through expenses from the general operating fund or by drawing on assets from an existing retirement plan.

By contrast, a review of 12 of the nation's largest public DB plans, which provide pension coverage for more than one-third of all active state and local government employees, found an average annual expense ratio of 0.25%, including costs for administration and investment management. Corroborating this finding is a California state law that

places a limit of 0.18% on the administrative expenses of county pension plans. When expenses are included for investment management and other activities outside the allowed limit, the total cost of these California county plans is well under one percent. Although smaller public pension plans are likely to have higher relative costs than larger ones, we can safely conclude that a substantial majority of public DB plans have an expense ratio that is considerably less than that of a typical DC plan.

Public DB plans are able to reduce their costs through economies of scale attained by their size, by negotiating favorable investment management fees, and in some cases by investing some assets using internal staff rather than external managers. Also, DB plans do not provide some services that drive DC plan costs higher, such as updating participant accounts on a daily basis and distributing quarterly statements.

Lower expenses have the same end result as higher investment returns. Higher returns increase the pool of assets available for pension benefits, and reduce required contribution rates. Higher investment costs have the opposite effect. Lower returns reduce the assets available for retirement benefits. For example, a DC plan with an expense ratio of 1.5% will reduce a participant's 8% investment return to 6.5%. Compounded over time, this difference will have a substantial negative effect on the value of a retirement account.

In his essay, *In Defense of the Defined Benefit Plan*, Gary Findlay presents the basic retirement benefit equation:

> Reduced to its simplest form, the financial mechanism behind the operation of both types of plans may be described by the formula:
>
> $$\mathbf{C + I = B + E}$$
>
> Where:
>
> **C** = Contributions (employer, employee, or both)
> **I** = Income from investments
> **B** = Benefits paid
> **E** = Expenses for plan administration

Findlay then explains the effects of expenses on each plan type:

> In a conventional DB plan, the amount of 'E' will usually be a small fraction of a percent of the assets under management. The amount of 'E' will increase the amount of the employer's 'C', but will not have an impact on 'B'.
>
> In a DC plan, with investment vehicles being individually selected by employees, it is not unusual for 'E' to be in the range of 1% to 2% of assets under management. The amount of 'E' will not affect the employer's 'C', but will have an impact on 'B'. (The greater the expenses, the less there is available for benefits.)

Findlay's formula is illustrated by the following example:

An employee begins working at age 25, and leaves his employer at age 35 with a retirement account balance of $50,000. If this balance earns 8% (8.5% minus 0.5% for expenses) the account value will be $437,000 when the employee reaches age 65. The same starting balance earning 7% (8.5% minus 1.5% for expenses) will have a value at age 65 of $330,000, a difference of $107,000, or 25% less.

A DB plan typically does not pay benefits on the basis of individual participants' account balance. However, the effect of higher fees is fundamental: they reduce the amount available for pensions and other benefits; or they increase required contributions.

Costs and consequences of switching from a DB to a DC plan

Attempts to reduce costs by replacing a DB plan with a DC plan are unlikely to produce the anticipated level of budget savings. As described by Cynthia Moore in *The Preservation of Defined Benefit Plans*, laws governing public pension plans generally protect pension benefits from diminution. This prohibition against reducing benefits requires a public employer to continue administering its DB plan at least for existing plan participants. If a DC plan also is established, the employer will need to administer both plans, limiting any budget savings.

Also, some methods used to value public pension plan liabilities rely on continuous flow of new, younger members to help fund the cost of the plan's liabilities. For plans that use such valuation methods, diverting future employees from a DB to a DC plan can increase the cost of the DB plan.

One predictable consequence of a DC plan whose benefits prove inadequate is political pressure to create or revert to a DB plan. This situation recently occurred in Nebraska, where the DC plan failed to create a sufficient level of retirement income security for plan participants. Nebraska switched to a cash balance plan. Switching from a DC to a DB plan can result in shifting pension plan costs to future taxpayers, as insufficient pension accruals under the DC plan are funded.

DC plans offer certain advantages, including greater portability, the opportunity for participants to manage their own investments, greater access to account information, and a chance to directly benefit from investment returns that exceed market averages. But these advantages come with risks: investment risk that is borne entirely by the participant; the risk of leakage, when assets are cashed out and spent before retirement; longevity risk, when participants outlive their retirement assets; and the risk of diminished retirement savings as a result of high administrative expenses.

The Myth: "Workers want a defined contribution plan as their primary retirement benefit."

Summary
The reality is that most workers are unfamiliar with the differences between defined contribution and defined benefit plans. To the extent that employees have preferences for a retirement benefit, they are more likely to be for the *features* of the benefit rather than for a particular plan *type*; workers understand features like value, portability and flexibility, investment risk, and retirement income security.

A DB plan offers considerably more opportunity than does a DC to design a retirement benefit with features that are attractive to employees. In doing so, the DB plan facilitates a key objective for offering a retirement benefit: assisting employers in attracting and retaining quality workers.

As evidence of employee preferences for their retirement benefit, in recent years, when given the opportunity to choose between a DB and a DC plan, preponderant majorities of public employees have chosen the DB plan.

Analysis
Over the past two decades, many Americans have become familiar with the term *401(k) plan.* In the wake of more than three years of equity market declines and corporate accounting scandals, the 401(k) plan also is perceived as a risky and unreliable retirement benefit arrangement.

401(k) plans are only the most popular and recognized of several forms of defined contribution plans. Among public employees, 403(b) and 457 plans are common. Regardless of which plan type is available, recent equity market declines have heightened participant sensitivities about some plan features when a DC plan is an employee's primary potential source of retirement income. These pitfalls include:

- retirement plan account balances can decline, and sometimes they decline significantly
- these plans offer no assured retirement benefit
- plan assets can be exhausted well before death
- requiring amateur investors to make their own investment decisions can result in poor returns, even in a rising market
- market conditions at the date of retirement can significantly affect the level of retirement income available

The abstract notion, which may have peaked during the late 1990's, that a DC plan can generate considerable wealth, has given way to a more sober and realistic perception that a DC plan by itself is an unreliable and precarious method for attaining retirement income security. Although DC plans have many positive attributes, this plan type is limited in its ability to include features that meet important employer objectives and that are attractive to employees.

By contrast, a DB plan design lends itself to extensive creativity to accommodate employer needs, including attracting and retaining quality employees. Some features that are attractive to employees and that can be designed into a DB plan include value, portability and flexibility, reducing investment risk, and increasing retirement income security.

Value

As with any other form of compensation, value is a primary consideration when assessing a retirement benefit. A worker's perception of value in a retirement benefit may take several forms, perhaps most notably the presence and size of an employer contribution, and some protection against loss of principal.

Nearly all DB plans offered to public employees provide an employer contribution; in some cases, public employers fund the entire cost of the DB plan. This increases the ability of employees to contribute to a supplemental DC plan account or other savings plan.

By definition, a DB plan protects participants' principal. Vested DB plan participants qualify for a retirement benefit that is assured regardless of market performance. By contrast, DC plans typically provide no protection against market losses: even the most generous employer contribution to a DC account can be eroded through poor investment returns.

Portability and Flexibility
This paper's chapter on portability highlights the progress DB plans have made toward providing portability to plan participants, including reduced vesting periods, distributing employer contributions to terminating participants, and paying interest on participant accounts.

DB plans also offer flexibility. For example, a growing number of DB plans feature PLOP's—partial lump sum option plans. A PLOP allows retiring participants to take a portion of their retirement annuity as a lump sum. DROP's – deferred retirement option plans—also make DB plans more flexible and portable by allowing employees to postpone retirement and accumulate a cash balance that supplements their retirement annuity.

Most DC plans offer more portability than DB plans. Yet as discussed in the chapter on portability, too much portability can damage long-term retirement income security. Evidence shows that a majority of terminating participants cash out their DC plan assets, rather than rolling them into another retirement account. This defeats a fundamental retirement benefit objective—providing a source of retirement income.

Similarly, portability challenges retiring DC plan participants, as retirees have no assurance their assets will last the remainder of their lives. Retirees may spend all their assets at once, or at a rate that exhausts the assets well before their death.

In theory, *portability* and *flexibility* are salutary features of a retirement benefit, and to some extent, these features add value. Prudent retirement plan design, however, which considers the long-term retirement income security of plan participants, suggests there should be some limit on the extent of the plan's portability and flexibility.

A DB plan enables employers to balance the plan's portability and flexibility while protecting participants' long-term retirement income security needs. There are restrictions to offering such balance through a DC plan.

Investment Risk
The opportunity to manage their own retirement assets appeals to some employees. Most public employees have access to a voluntary DC plan that supplements their DB plan, enabling those who wish to manage a portion of their own retirement assets to do so.

As discussed in a previous chapter, most employees do not consider themselves to be knowledgeable about investments. Experience demonstrates that employees engage in a variety of practices resulting in investment returns that often fall well short of both market returns and returns of professional investment managers. This is a primary reason for NASRA's support of a DB plan as an employee's primary retirement benefit arrangement, supplemented by a voluntary DC option.

The Experience of Employee Choice
Since 1997, large numbers of public employees in Michigan, Florida, Ohio, and South Carolina have been given an opportunity to participate in a DC plan as their primary retirement benefit. The experience in these states creates a persuasive case study of employee retirement benefit preferences.

In each case except Michigan, the employer contribution equaled or exceeded the contribution to the DB plan; in Michigan, the employer contributes four percent of salary plus a matching amount of up to an additional three percent.

In each state, an overwhelming majority—more than 90%—of those eligible to switch elected to stay with the DB plan.

This experience is consistent with a survey conducted by the Ohio Public Employees Retirement System of its members with less than five years of service credit. The purpose of the survey was to determine these employees' attitudes and preferences for a retirement benefit. The findings of Ohio survey included the following:

- When members were asked to rank the importance of 17 plan design features, the ability to direct money to a private investment company ranked 16 out of 17. Among the highest ranked features overall were portability, guaranteed monthly benefit after retirement, and health care coverage.
- A majority of members did not consider themselves to be knowledgeable about investments.
- More than half of the members surveyed (56%) expressed a preference for the DB plan, and an additional 32% said they would select the Combined Plan, which combines features of a DB and a DC plan. 6.4% said they would select the DC plan.

The Myth: "Workers in defined contribution plans will receive substantially higher benefits than those offered by defined benefit plans."

Summary

Although accumulating wealth is an admirable objective, the chief purpose of an employer-sponsored retirement plan is not to make workers rich. Rather, the central purpose of an employer-sponsored retirement plan is to promote workers' retirement security.

Among participants whose primary retirement benefit is a defined contribution plan, some will, in fact, receive substantially higher benefits than they would under a defined benefit plan. However, many workers will fare worse under a DC plan, and some DC plan participants will have no retirement assets at all.

By providing an assured benefit whose value is known in advance of retirement, a DB plan meets the fundamental and imperative objective of a retirement benefit: to promote retirement security.

Analysis

Proponents of establishing a DC plan as workers' primary retirement benefit contend that simple math illustrates a compelling argument in their favor: by calculating the contributions an employee and his employer will make during the employee's working life, and factoring in projected investment returns, a DC plan will generate a larger annual benefit than would be available through a DB plan.

The problem with this argument is that it ignores decisions made by plan participants that can reduce and even eliminate the value of a DC plan. Some of these decisions are discussed in greater detail previously in this paper, and are summarized briefly below.

Factors Limiting the Value of a DC Benefit

- Many DC plan participants "cash out" their retirement savings when changing jobs, instead of transferring those assets to another retirement savings plan. A recent study by Hewitt Associates found that 42% of 160,000 401(k) plan participants who terminated employment cashed out their assets, rather than rolling them to an IRA or to a future employer's retirement plan. This paper's chapter on portability presents substantial empirical evidence of pervasive "leakage" from retirement savings accounts.

- Most workers make poor investors, resulting in investment returns well below the level needed to ensure retirement security. The chapter on DC plan participants managing retirement assets themselves describes workers' lack of knowledge and financial acumen necessary to generate investment returns anywhere near those assumed by DC plan advocates. The studies cited in this chapter describe a litany of harmful investment strategies engaged in by DC plan participants, such as taking on excessive or inadequate investment risk, market timing, borrowing from their retirement savings, and following trends, rather than establishing and staying with an appropriate asset allocation.

- Contrary to the theoretical models presented by DC proponents, every worker does not promptly enter the workforce in a full-time job after completing high school or college, and continue working until reaching retirement age. A substantial body of research has described the growth in so-called non-standard work arrangements, in which many jobs are seasonal, part-time, temporary, contract, or otherwise not permanent and full-time. The *2002 Census of State and Local Government and Payroll* found that state and local governments employed 13.8 million full-time employees and 4.5 million part-time workers. Whatever pension arrangements are in place for these part-time workers, their contributions are undoubtedly less than those implied in the models used by DC plan proponents.

  Non-standard work arrangements are especially prevalent among workers under the age of 35, a time when making contributions and taking advantage of compound interest is critical to accumulating sufficient assets to ensure retirement security.

  Similarly, many employees move into and out of the workforce for a variety of reasons, such as to have and raise children, for other family reasons, and for retraining or to increase their education. Some workers stop working before reaching normal retirement due to health reasons. In each of these instances, contrary to the assumptions of DC plan advocates, DC plan contributions are not being made.

Each of the factors listed above results in fewer assets available to plan participants at retirement. A worker who experiences one or more of these factors is likely either to have lower benefits in retirement than those offered by a DB plan, or to be required to work longer than they would if a DB plan were their primary retirement benefit. The idea that DC plan participants will retire with higher benefits is simply untrue for many workers.

Effects of Longevity and COLA's

Even for a DC plan account with an initial retirement benefit that is greater than the benefit the worker would receive under a DB plan, there is good chance that the real purchasing power of the benefit will fall below that of a DB plan during the worker's remaining life. There is also a chance that the worker will outlive his or her assets.

The median life expectancy of a 65 year-old American is 85. One-fourth of all women in America age 65 will reach 93; one-fourth of American men who are 65 will live to be 88. Most DC plans contain no cost-of-living provision. Yet, an annual inflation rate of 2.5 percent from age 65 to 93 will reduce the purchasing power of a retirement benefit by more than half.

Even worse than a benefit that is deteriorating due to inflation is a benefit that is exhausted before death. Yet this is a very real possibility for retirees with a DC benefit who live long enough, or who spend their assets quickly enough.

Thus, even in cases where a DC benefit initially exceeds the amount that would be provided by a DB benefit, that advantage is likely to disappear during a worker's retired life. For these reasons and others described throughout this paper, NASRA supports a defined benefit plan as a worker's primary retirement benefit, supplemented by a voluntary defined contribution benefit.

Funding Public Pension Plans

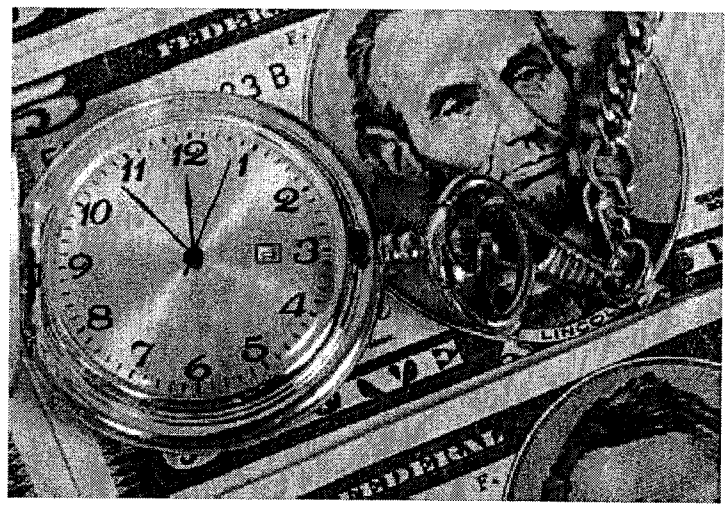
MOST PUBLIC PENSION PLANS are in good shape, and traditional actuarial methods seem to work relatively well under many conditions. But they may not be sufficient in all cases, such as when the funded share falls below 60 percent. To strengthen these plans, there's a need for rules that require plan sponsors to make progress toward full funding without actually mandating it.

For mature public plans that are less than 60 percent funded, the amortization payment should be based on a descending period, with a minimum payment of the interest on the unfunded actuarial accrued liability (UAAL). As a starting point for discussion, consideration should be given to requiring an overriding minimum contribution (OMC) and a recommended contribution that is the greater of the amount determined using traditional actuarial methods and the OMC.

To ensure that public pension plans are more accurately reviewed for fiscal soundness, I would recommend the following for regulating cost, asset, and amortization:

- The cost method should calculate liabilities on a projected basis, including pay increases and cost-of-living adjustments (COLAs). It should calculate benefits on a projected basis and reflect all plan provisions in the liability calculations. Unlike projected-unit-credit and entry-age-normal methods, the unprojected-unit-credit method doesn't reflect projected benefits in the liability and isn't a reasonable actuarial cost method for ongoing pay-related plans with active members. Any method that excludes benefit features such as deferred retirement option plans, overtime included in the benefit calculation, or regularly granted COLAs shouldn't be considered reasonable. It would be preferable to have liabilities for contingent COLAs based on investment gains included in the liabilities for funding purposes, but if that isn't the case, the liability for contingent COLAs should still be calculated and disclosed.
- The asset method should minimize the smoothing of investment gains and losses. I would recommend limiting the period for smoothing gains and losses to five years and setting the value range from 80 to 120 percent of market value.
- The amortization method should provide for amortizing the UAAL over a closed or fixed period or by a fixed date. Otherwise, the UAAL grows to infinity and the responsibility for paying it is passed on to future taxpayers.

MARTIN MCCAULAY serves as the deputy executive director for the Texas State Pension Review Board in Austin and can be reached at martinmccaulay@hotmail.com.



The point is to make progress on funding the UAAL. Traditional public plan methods work for closed groups, but the payroll growth assumption in open groups, combined with constant resetting of the amortization period, can lead to perpetual negative amortization in which payments are never sufficient to pay the interest on the UAAL. This is analogous to a nontraditional mortgage product in which a borrower makes payments that are less than the interest, except that the mortgage has a property serving as collateral for the debt while the UAAL has no such underlying asset. Also, most mortgages that did allow negative amortization had limits. Many of these mortgages allowed negative amortization for only five years or less and had terms to recast the payment to a fully amortizing schedule if the principal grew to a pre-specified amount, such as 110 to 125 percent of the original balance.

Determining the OMC

Contributing either the annually required contribution (ARC) or the recommended contribution under traditional actuarial methods will not necessarily ensure a plan's actuarial soundness. Guidance from the Governmental Accounting Standards Board and the Actuarial Standards Board allows for methods and assumptions that can result in no progress being made on the amortization of the UAAL

in about two basis points for portfolios with standard deviations less than 17 percent. Standard deviations that are greater than 17 percent are found in portfolios that are more than 90 percent invested in equities, an uncommon occurrence in pension funds.

Annual Compounded Rate of Return
= Expected Annual Return – [0.46 (Variance)]
$= \mu_p - .46\,\sigma_p^2$

For example, a sample portfolio of 100 percent equities with an annual expected rate of return of 10 percent and a standard deviation of 20 percent would have variance drain of about 200 basis points, and the compounded expected return would be about 8.2 percent before expenses.

The best-estimate range of the expected return is the range in which the results are more likely to fall. This is the range from the 25th to 75th percentile, or the inter-quartile range. The inter-quartile range would be constructed using the long-term expected standard deviation, which will decrease over time. The inter-quartile range for the 50-year compounded rate of return would be the return plus or minus the standard deviation, divided by 10.

A formula exists for the amount of reduction in the standard deviation over time. After 50 trials, the standard deviation will be reduced by dividing the original standard deviation by 50½. Using Chebyshev's theorem, the half of the results that fall in the inter-quartile range must be within 1/(2½) standard deviations of the mean. The formula for the corridor for the inter-quartile range after 50 years is 1 divided by the product of 50½ times 2½, or 1 divided by 100½, 100½ equals 10.

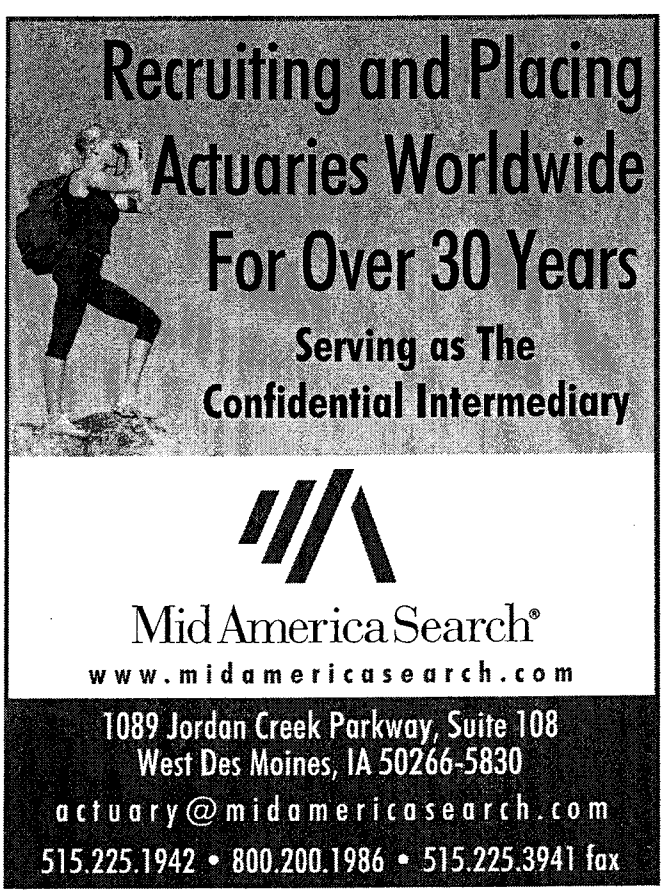
Based on the asset mix, the expected compounded-return assumption before expenses can be developed by taking the expected annual return and subtracting about one-half, or 0.46, of the variance. The inter-quartile range can be developed by using a corridor within one-tenth of a standard deviation around the expected compounded return.

Best-Estimate Range of Annual Compounded Rate of Return
= Expected Annual Return – [Variance/2] ± [Standard Deviation/10]
$= \mu_p - .46\,\sigma_p^2 \pm [\sigma_p/10]$

For example, for a sample portfolio with 60 percent in equities and 40 percent in fixed-income investments, with an annual expected return of 8 percent, a standard deviation of 12 percent, and expenses of 30 basis points, the net expected compounded return is in the 5.8 to 8.2 percent range, with a best estimate of about 7 percent.

To sum up, we should consider making the recommended contribution for funding public plans subject to an OMC calculation. When determining the actuarial value of assets, I would recommend limiting the period for smoothing gains and losses. I would also recommend limiting the corridor or range around the market value to prevent excessive smoothing from distorting the results. Regarding actuarial cost methods, all of the plan provisions should be reflected in the liabilities. I believe that the OMC would be sufficient to keep plans progressing toward full funding. ●

This article is solely the opinion of its author. It does not express the official policy of the American Academy of Actuaries; nor does it necessarily reflect the opinions of the Academy's individual officers, members, or staff.



INTRODUCTION

The financial stability of the City of Springfield Police Officers' and Fire Fighters' Retirement System has declined significantly over the last several years. A number of factors have led to this problem including lower than projected returns, the amount of the contributions made by the City of Springfield and changes in the demographic assumptions. Although efforts have been made to remedy the problems, the situation is likely to continue to deteriorate without significant intervention.

At the present time, the Plan has approximately half of the assets needed to pay for promised benefits. The number of active employees supporting retirees has declined from 1.36 in 2004 to1.14 in 2007. Over this same time period, the City's contribution has increased 38% to the current contribution rate of 28.88% of salary. However, the contribution rate recommended by the actuary is 50.21% of salary. While the rate of return on investments has significantly increased due to changes made to the investment policy, increased investment returns will not solve the long-term problem.

The management of the Plan is established by City Council and carried out by the Board of Trustees. The Board of Trustees administers the Plan according to the ordinances passed by City Council and manages the investments. The Trustees take these responsibilities seriously, as well as our fiduciary duty to act in the best interest of the Plan. We feel it is appropriate to express our concern to the members of City Council and to offer a proposed solution for your consideration.

BACKGROUND

Milliman, the Plan's actuary consultants, commented in their 2006 actuarial valuation on the steady erosion of the funded status of the Plan. The report listed four ways to improve the Plan's funded status: improve investment returns, increase contributions, reduce future benefit liabilities or some combination thereof.

- In 2005 the Board of Trustees contracted for an independent performance audit to evaluate the Plan's investment performance. All of the recommendations have been implemented. The return on investments has improved and investment fees in the Plan have been reduced by 30%.

- The City has increased the contribution rate from 23.83% of salaries in 2005 to the current rate of 28.88%.

- In addition to increasing the annual contribution rate, the Council directed an additional $500,000 lump sum contribution to the Plan in the 2008 budget. Also, $500,000 of the settlement received from a recent lawsuit was put in the Plan.

- The City has addressed some of the demographic issues that were contributing to the need for additional funding. Unlimited accumulation of vacation was capped

in 1995 at two times the annual accrual rate. Holiday pay amounts were capped in 2004. Additionally, employees hired prior to 1995 are not allow to accumulate more vacation leave than the balances they had in 2005 if they were over two years of accumulation. Lastly, employees hired after June 1, 2006 are not able to include any leave payouts into their pension calculations. These changes are already beginning to decrease the spike in retirement pay and will continue to positively impact the fund in the future.

- Despite these efforts, the funded ratio of the Plan is continuing to deteriorate. A significant amount of cash is needed, in addition to the ongoing contributions to return the Plan to a healthy condition. To reach an 80% funded ratio, $83.4 million is needed. A 90% funded ratio requires $111.2 million.

The long- term viability of the Plan depends on an increase in funding. Improving investment returns alone will not fix the Plan.

- A subcommittee report to the City Council dated February 14, 2006 noted that returns above the assumed rate due to the new investment strategy "will begin to contribute to [improvement of] the overall problem, but will fall short of fixing the problem." The report went on to conclude that the funding "gap will continue to grow unless steps are taken to find ways to address the shortfall."

- An actuarial report dated November 2005 stated, "The City has substantially increased contributions to the Fund in the last few years. [However,] even more substantial contributions increase will be required to improve the funded ratio in a significant way."

LEGAL CONCERNS

- The City is required to provide the actuarial recommended contribution rate for at least one of the next five years or the State will withhold up to 25% of the revenue due to the City. For fiscal year 2009, this means the City would have to increase its contribution by $5.1 million or 7% of the general fund budget. This would require significant budget cuts.

- It is unlikely a budget can be developed that appropriates the required contribution without cutting vital services to the community. Cutbacks would likely include public safety positions, since this comprises 51% of the general fund budget. Staff reductions in other departments would also be required.

- Staffing reductions in the Police and Fire Departments will result in fewer active employees supporting more retirees in the Plan, only making the pension problem worse.

- Assuming the above-described cuts could be carried out this year, the actuarial assumptions for succeeding years will require even greater cuts in order to meet the actuarial recommended contributions. This means there is no "one-time cut" that will fix the Plan.

- Funding the plan solely from the General Fund will limit the City's ability to provide adequate pay to all City employees. Additionally, if the City is not able to provide regular cost-of-living raises, this will negatively affect the pension plan and will require a higher contribution rate.

- The long-term impact to the citizens' businesses in the community would be detrimental not only to the quality of the services provided, but also financially. If staffing is cut, the fire department's ISO rating will be negatively impacted and would likely result in increased insurance rates to business owners.

- Cuts to the budget, at the level that would be necessary, would impair city services and would also demoralize city employees. The ultimate result would be a decline in the quality of employees the city will be able to hire and retain without resulting in any significant permanent benefit to the Plan.

ANALYSIS OF PLAN

The Board is interested in a solution that will fix the Plan permanently and not one that will only delay the crisis for a few more years. The Board asked the actuary to analyze the impact on the funded ratio of the Plan using a City contribution rate of 28.88% and additional funding from a public safety sales tax.

- If the City does not increase the 28.88% contribution rate and no additional funding is put into the Plan, the Plan will be depleted in about 20 years.

- If the City makes 100% of the required contribution every year, the Plan will be 80% funded in 2023 and 90% funded in 2031. A previous actuarial study showed the City's contribution rate would increase to 80% of payroll in 2015 and only achieve a 70% funded ratio. The fund would not be healthy for a number of years and would be subject to changes in the market that may adversely impact the funded ratio over this period of time.

- If a sales tax is passed to provide additional funding to the Plan and the investment assumptions are realized, the following ratios are estimated.

Tax Rate	90% Funded Ratio
1%	12 years
.50%	8 years
.25%	19 years

- The funded ratio was projected using a .375% tax rate and a .50% rate and discontinuing the tax when the funded ratio reached 80%. In both cases, the funded ratio started to drop when the tax ended.

- The Board considered issuing bonds to provide one-time cash injection into the Plan. The bonds would be repaid with the revenue from a public safety sales tax. The Board determined this approach was too expensive and would require the tax remain in place for a longer period of time.

- We were surprised to learn there is little difference in the funded ratio if the Plan remains open or if it is closed to new participants. The Board recognizes the decision to leave the Plan open, or close it, is a policy decision of City Council. We offer the following points for Council's consideration. The demographics of a closed plan are different than an open plan. As the number of participants age and are closer to retirement, the asset allocation will have to become more conservative. The investment returns will be likely be lower as a result, adding further pressure to the long term viability of the Plan. If the Plan remains open, safeguards should be implemented before any benefit increases are approved. Benefit increases that cause the funded ratio of the Plan to drop below 90% should not be approved. Retroactive benefits should not be granted and the actuary should cost out all benefit increases separately. Additionally, the City should always fully fund the cost of any benefit increase.

  We encourage the Council to fully explore the impact of both alternatives before making a decision.

RECOMMENDATIONS

The Board believes a dedicated tax is needed for the Plan to be healthy and sustainable so that the benefits promised to employees can be delivered. The Board recommends the City Council put forth a ballot issue for a public safety sales tax.

- The Public Safety Sales Tax and the existing level of City contributions would be dedicated to making the required contribution to the Plan.

- The tax should be set at a level to reach and maintain a 90% funded ratio. The tax should be sunset in the number of years estimated to reach this funded ratio.

- A minimum of .50% sales tax is needed if the funded ratio is to be reached in a reasonable amount of time. If the tax is set at 1%, the Plan could reach 90% in 4 years. The quicker the funded ratio is achieved, the less exposed the Plan is to market volatility.

- In addition to the tax, the City would commit to continuing the current level of contributions of 28.88% of payroll, at a minimum, as long as the tax is in place. The Public Safety Sales Tax would not supplant the existing funding. When the tax ends, the City will commit to making the actuarial recommended contribution annually to maintain the funded ratio at 90%.

- The City should direct a portion of all future funds received from settlement of lawsuits with the cell phone providers to the Plan.

- The Board believes it is important for the City to reduce expenses in the general fund as much as reasonably possible without impacting the core services and public safety. This will assist in providing additional funding of the Plan.

- The City needs to redefine disability. The City does not have any modified job descriptions that allow a police officer or firefighter, who has been injured but can still perform most aspects of the job, to remain as an active employee. If accommodations could be made, the disability rate would decline and have a positive impact on the contribution rate.

RETIREMENT BENEFITS

The members of the Board of Trustees strongly believe the retirement security of the police and fire employees is critical. Employees have planned their careers and retirement based on these benefits and the City of Springfield has a responsibility to deliver the benefits promised.

It should be noted that the Board is strongly opposed to any reduction in benefits for employees and retirees. Assuming the voters would approve such action, any reduction in existing benefits would not only create a major and lasting breach of confidence and trust with our past and present employees, it would also create a serious barrier to effective recruitment of future employees. An inability to fill existing positions in turn creates a substantial risk to public safety and decreases the money available for the pension fund. Finally, though not least in our estimation, we could not support a breach of faith with those men and women who have placed themselves in harm's way by reducing the financial support on which they depend when the job is done.

The members of the Board of Trustees are committed to working with the members of City Council to develop a solution to improve the stability of the Police Officers' and Firefighters' Retirement System. We feel a dedicated funding source is required and we will work with the members of City Council and Plan participants to explain this need to the community. It is important this issue be resolved timely for both the financial stability of the City of Springfield and the retirement security of the members of the Plan. The longer this issue goes unresolved, the more expensive the solution.

Overview of the Springfield Police Officer’s and Fire Fighter’s Retirement System

Overview

- Background
  - Types of Systems
  - Police and Fire Benefits
  - Plan Structure
  - The Fund
  - Plan Funding
- How did we get here?
- Board Overview and Recommendations

Background Information

Types of Retirement Systems

- Defined Contribution
- Defined Benefit

Why Defined Benefit over Defined Contribution?

- Encourages long-term employment
- Reduces turnover
  - reduces staffing shortages
  - decreases inexperience
  - reduces costs since training is extensive and expensive

Police & Fire Benefits
(Pre-2006)

- Not covered by Social Security
- Multiplier is 2.8% per year of service
- Average final salary is average of 3 highest years of the past 10
- Maximum of 70% of final average salary
- Eligible when any of the following are met:
  - 25 years of service
  - Age 60 (mandatory)
  - 20 years of service and age 50
- 3% COLA after age 56
- Employee's contributions returned upon retirement

Police & Fire Benefits
(Pre-2006)

- Example:
  - Someone starting at age 30 retiring at age 50 with a final average salary of $48,000 per year would receive 56% of their salary. This would be $26,880 per year and would get their first cost of living raise 6 years later.

Police & Fire Benefits
(Post-2006)

- Not covered by Social Security
- Multiplier is **2.5%** per year of service
- Average final salary is average of 3 highest years of the past 10
- Maximum of **75%** of final average salary
- Eligible when any of the following are met:
  - Age 60 (mandatory)
  - **25 years of service and age 55**
- Up to 3% COLA after age 56

Benefit Comparison (Pre-2006)
11-City survey and LAGERS

- Social Security
  - Like Springfield, most do not receive Social Security
- Retirement Eligibility
  - Oldest minimum retirement age
  - Second highest minimum years of service
  - Average minimum years of service/age combination

Benefit Comparison (Pre-2006)
11-City survey and LAGERS

- Multiplier
  - Slightly higher with additional multiplier paid by employees
  - Slightly below average without it
- Maximum Benefit
  - Second lowest

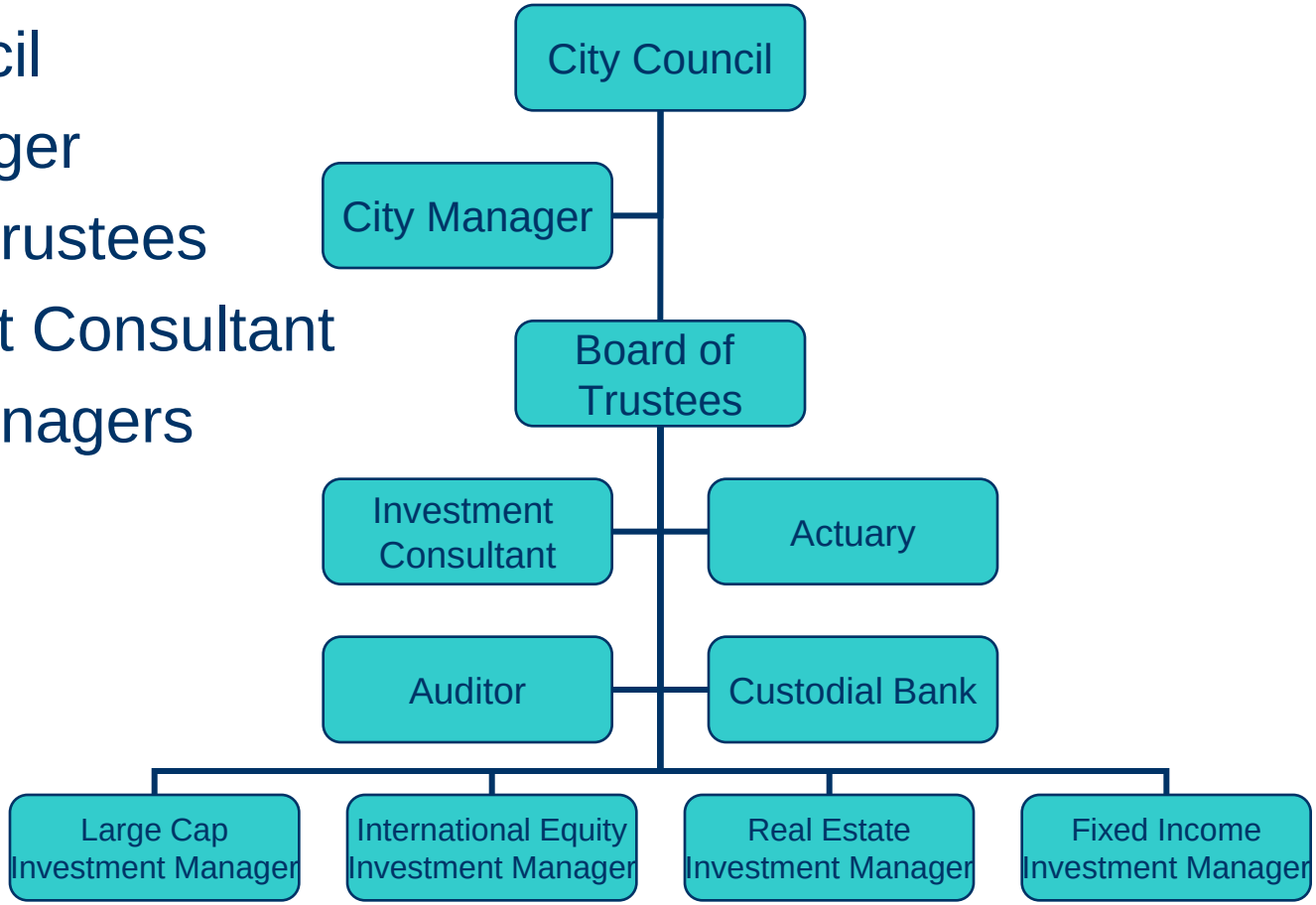
These two factors cause Springfield to reach their maximum benefit quicker

Benefit Comparison (Pre-2006)
11-City survey and LAGERS

- Escalation (COLA)
  - Average amount per year
  - Highest minimum age eligible for escalation
  - Most plans are at any age
- Return of Contribution
  - Fairly unique
  - Several others have other types of lump-sum payout
    - DROP
    - Lump-sum in lieu of full monthly benefits

Plan Structure

- City Council
- City Manager
- Board of Trustees
- Investment Consultant
- Money Managers
- Auditor
- Actuary



City Council

- Sets plan provisions and benefit levels
- Sets investment policy
- Determines City contribution level

City Manager

- Recommends amount of contributions for the plan to the City Council through the budget process
- Can appeal Board disability determinations

Board of Trustees

- Administers plan provisions
- Develops investment levels within policy
- Determines actuarial assumptions
- Makes recommendations to City Council on the plan

Board of Trustees – Voting Members

Voting Members

- Deputy City Manager
  - (President)
- Police Representatives
- Fire Representatives
- Retiree Representative
- Citizen Representatives
- Finance Director
- Human Resource Director

Non-Voting

- City Council Member
- City Attorney
- Board Secretary

Portfolio Management

- Investment Consultant – Gino Reina, Segal Inv.
  - Investment Consultant provides advice, but Trustees make all decisions
  - Investment Consultant provides oversight of the Investment Managers
  - Assists with Investment Manager selections
  - Paid a flat-rate, per negotiated, fee schedule

Portfolio Management

- Investment Managers – Vary by Asset Class
  - Study their specific asset class and determine what to buy, when to buy, and when to sell.
  - There are a variety of styles of making those determinations
  - They direct Account Custodian to allow the actual trade to occur
  - Paid based on basis points (bps) which is a fraction of a percent of each dollar under management

Portfolio Management

- Account Custodian – US Bank
  - Where our assets are actually held
  - Includes both cash and investments
  - Works with the Director of Finance in managing the actual bank account
  - Acts at the direction of the Investment Managers
  - Pays all fees associated with the investments

Auditing

- Fund Auditor – Davis, Lynn & Moots, PC
  - CPA audits the fund to ensure
    - Fund is properly represented by financial statements
    - Funds are not missing
    - Funds are invested within the policy
    - Recommends accounting safeguards
  - Prepares an annual audit each Fiscal Year
  - Paid flat-fee

Actuarial Evaluation

- Actuary – Michael Zwiener, Milliman Consultants and Actuaries
  - Uses assumptions to make predications about the future
  - Assumptions are set by the Trustees based upon recommendations of the actuary
  - Estimates future value of assets and liabilities of the plan to calculate the required contribution rate to fund the plan
  - Paid flat fee

The Fund

Plan Fund

- Trustees have full investment discretion within the City Council approved Investment Policy
- Investment Asset Classes
  - Equities (45%-75%)
  - Fixed Income (25%-40%)
  - Alternatives (0%-15%)

Risk

- In general, greater returns require greater risk
- Goal is to maximize risk-adjusted rates of return
- Risk can be reduced through diversification
  - Diversifying between Equities, Fixed Income, and Alternatives
  - Diversifying between domestic and international
  - Diversifying between company size
  - Diversifying between sectors
  - Diversifying between Growth and Value style equities
  - Limiting exposure into any one security

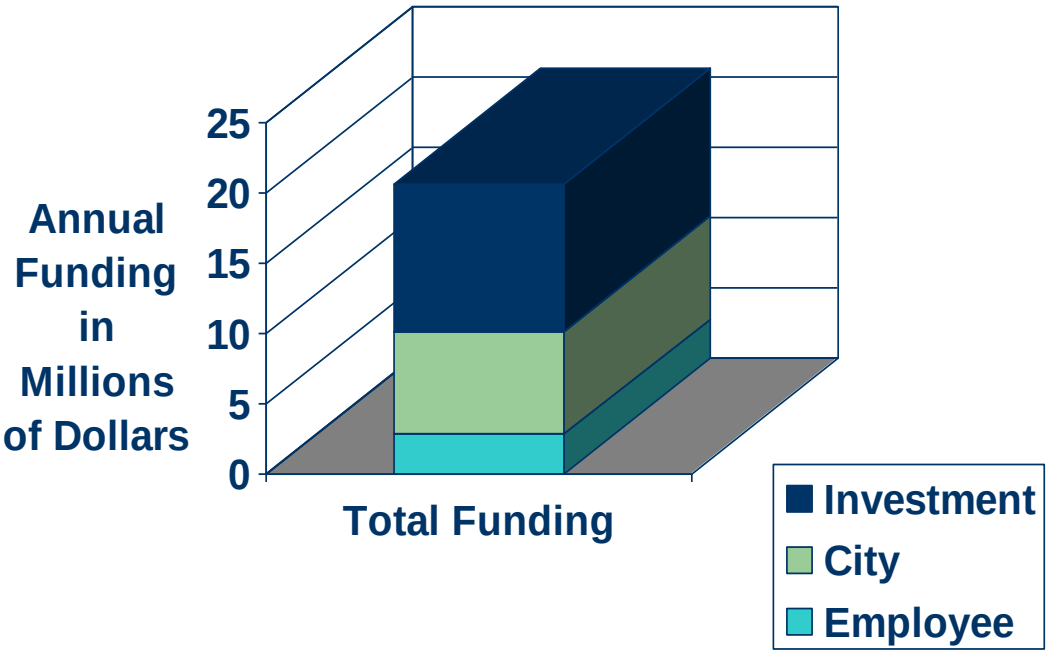
Plan Funding

Plan Funding

- Employees contribute a fixed amount
  - Those hired prior to July 1, 2006 contribute 11.35% of their earnings.
  - Those hired after July 1, 2006 contribute 8.5% their earnings.
- City contributes the actuarially determined rate of payroll to fund the plan, subject to the budget process and approval by City Council.
- The Fund earns returns on invested assets with an assumed rate of 7.5% of assets.

Plan Yearly Contributions

- Employee Contribution
- Employer Contribution
- Return on Investment



Actuarial Evaluation

- Assumptions:
  - Assumed rate of return (ROI)
  - Life spans
  - Retirement rates
    - Normal service
    - Disability
  - Payroll increases
  - Pay increases
- Amortized over 30 years
- 4-year rolling average (smoothing) of returns
- Projections made based upon all currently accrued liabilities.

How did we get here?

Timeline

- 1988 - City Council establishes
  - four-year cycle of reviewing assumptions
  - assumptions including an investment return of 8.0% (raised from 6%)
  - standardized method of valuation
  - funding policy established to include funding to actuarial rate
- 1991-93
  - change in multiplier from 2% to 2.5% per year of service phased in over 3 years
    - 1.5% increase in employee contribution
  - change in assumptions including investment assumption to 8.5%
  - Board votes to allow up to 5% in small cap stock
- 1994
  - Change to equalize disability benefits with normal service benefits
  - Change to payout excessive leave balances

Timeline

- 1995
  - added return of contribution (3.7% cost covered by City)
  - restriction on vacation accumulation for new-hires
- 2000
  - Tech bubble correction
  - Increase in multiplier from 2.5% to 2.8% per year of service. (2.14% cost paid by employee)
  - Change in Board composition removing the Council member and the police or fire chief and adding three private citizens
- 2001
  - Stock market decline (9-11)

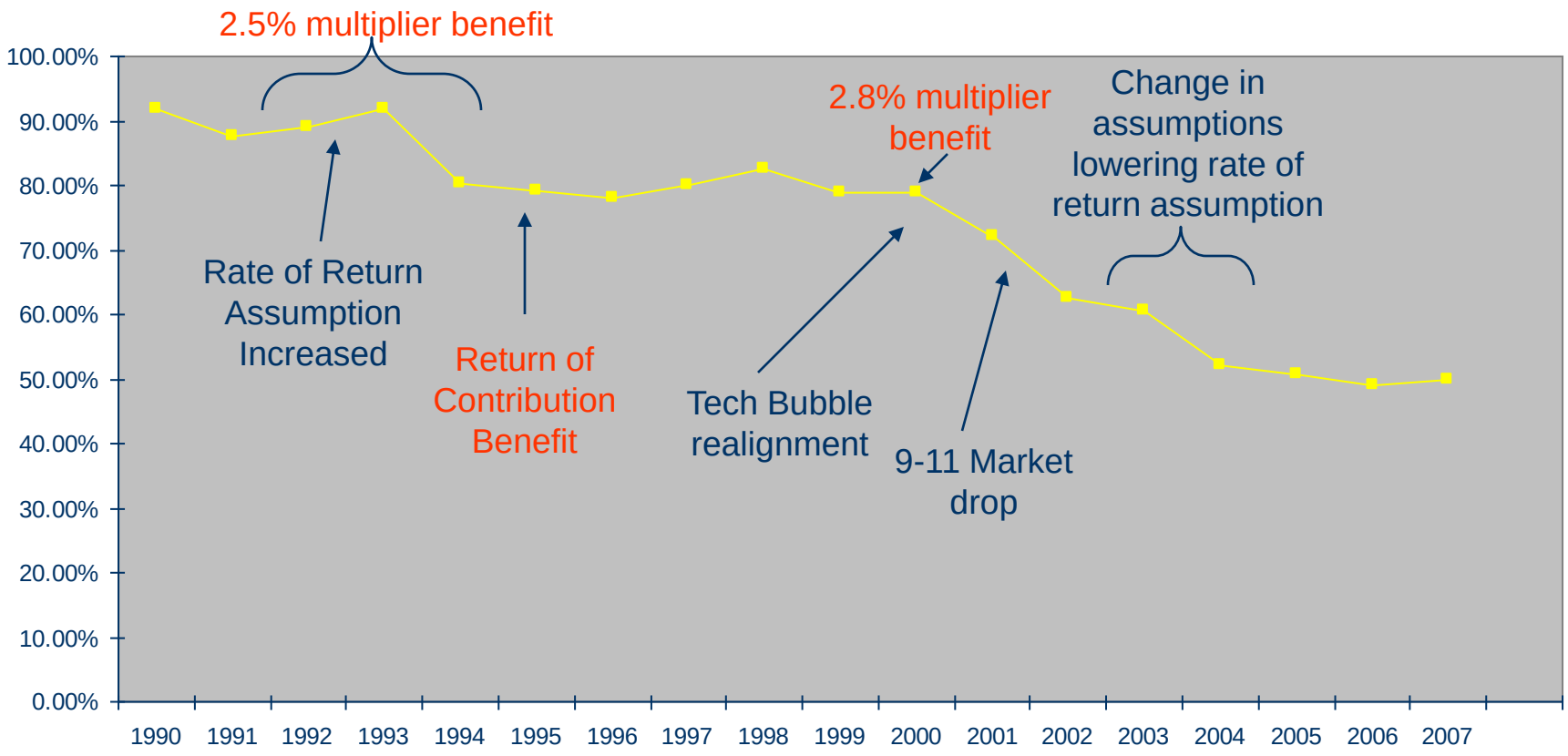
Timeline

- 2003
  - Change in investment policy to allow 40%-60% of fund to be invested in equities
  - Discussed projected contributions w/City management
  - Investment return assumption reduced to 8.25%
  - Change in GASB requirement for 30 year amortization
- 2004
  - Realigned several assumption criteria including reducing the investment return assumption to 7.5%
  - Changed disability loophole unintentionally created in 1994
  - Holiday accumulation caps for all new employees implemented
  - Reduction in holiday accumulation for current fire employees
- 2005
  - City does not fund required contribution rate creating NPO of $523,138

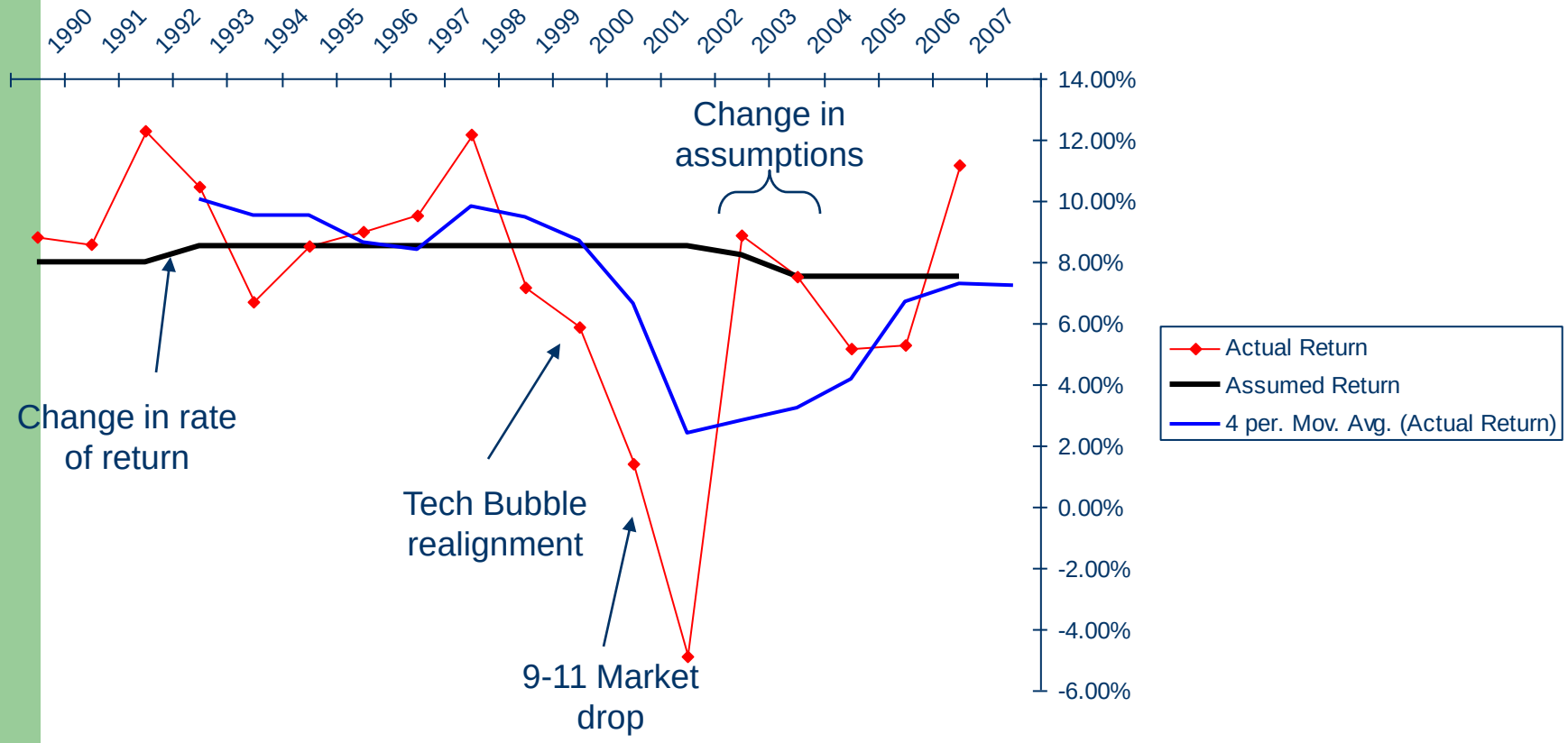
Timeline

- 2006
  - Change in Board composition
    - removing police or fire chief
    - adding Director of Finance, Human Resource Director, and the City Manager or his designee (as President) as voting members
    - adding City Council member as a non-voting member
  - Reduced pension benefits of new-hires
  - Change in investment policy to allow:
    - 45% - 75% in equities
    - 25% - 40% in fixed income
    - 0% - 15% in alternative investments
- 2007
  - State law enacted requiring funds under 60% funded must make the full contribution requirement within a 5 year period

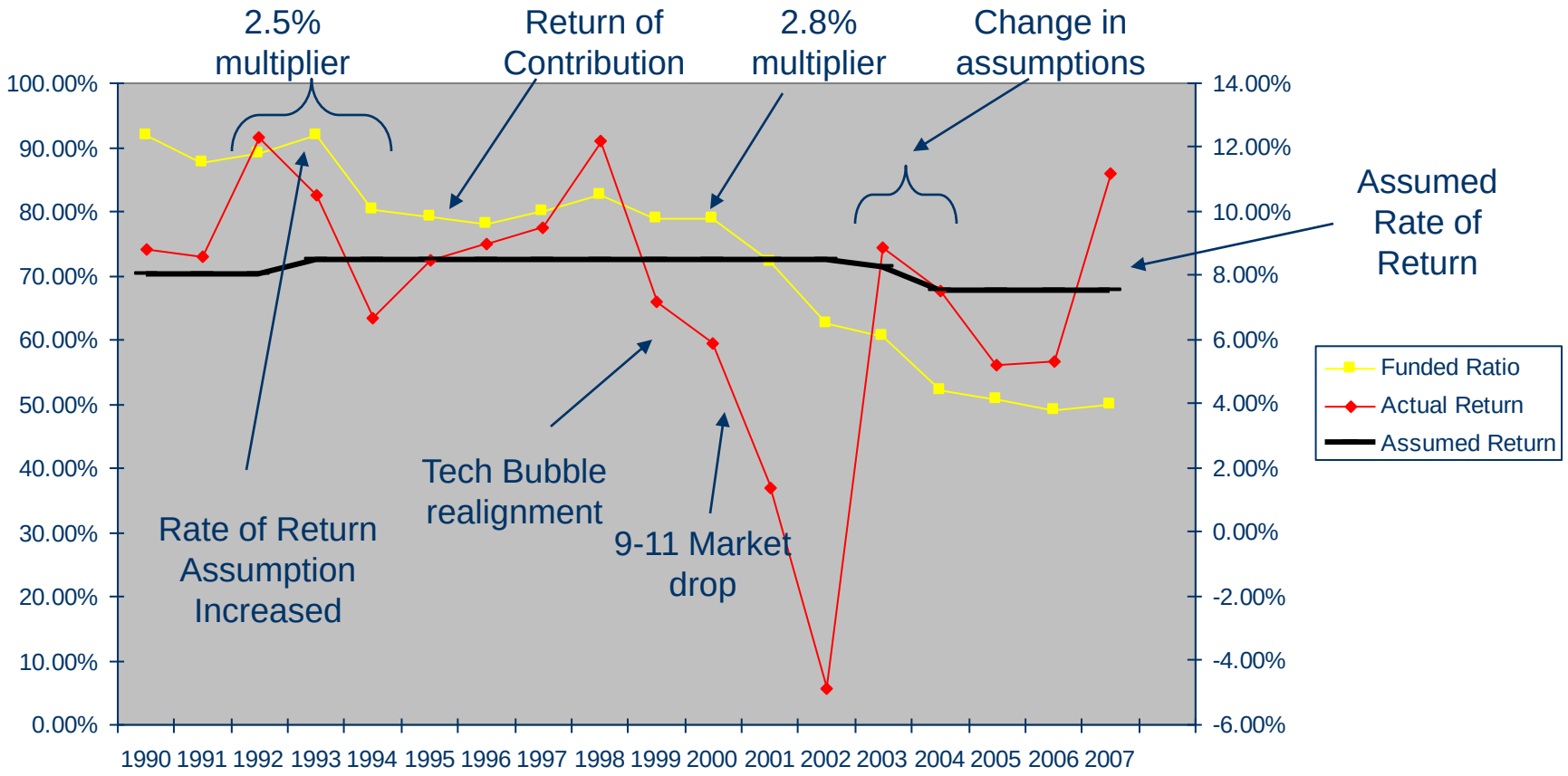
Funded Ratio



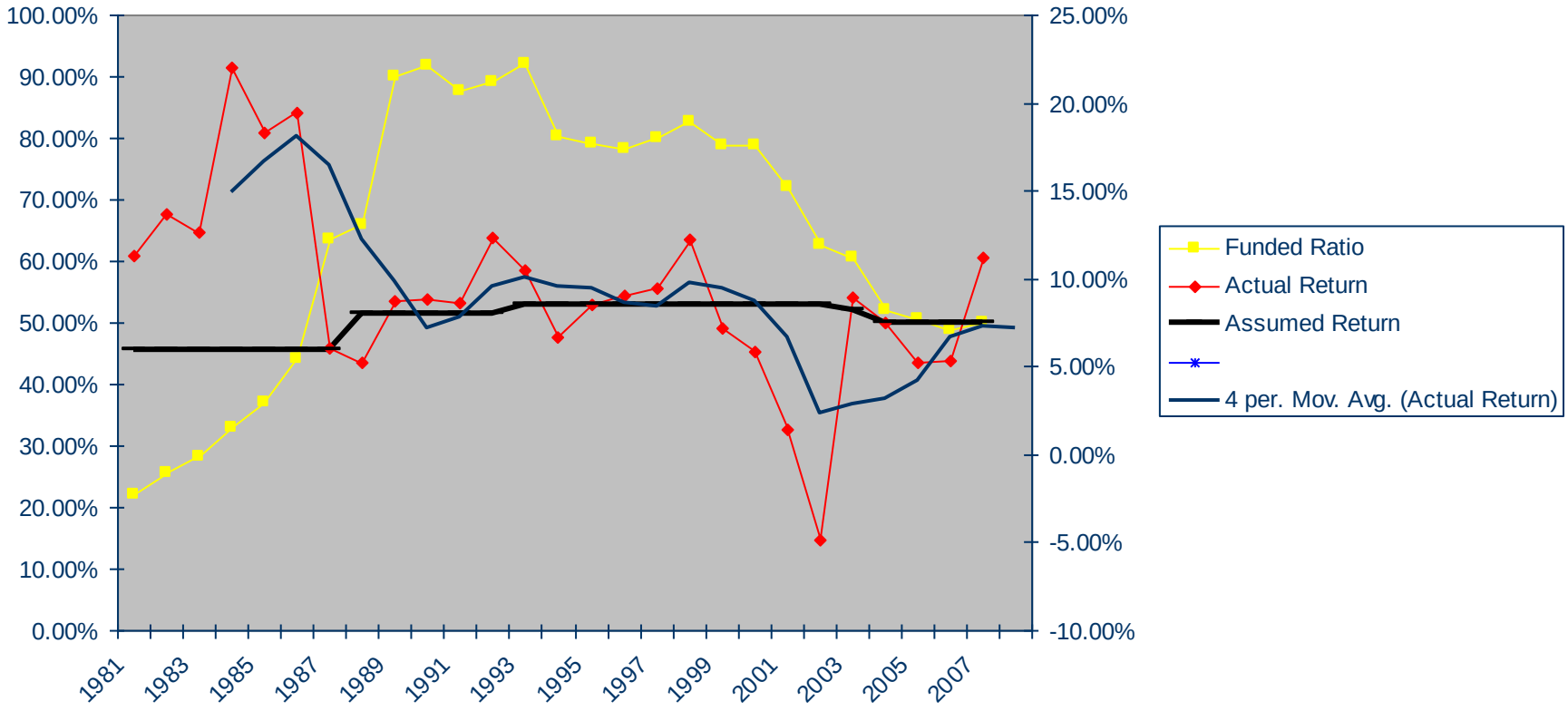
Rates of Return



Funded Ratio



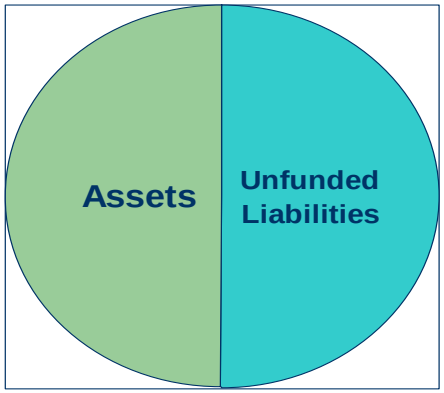
Funded Ratio



Example of Funded Ratio Effects

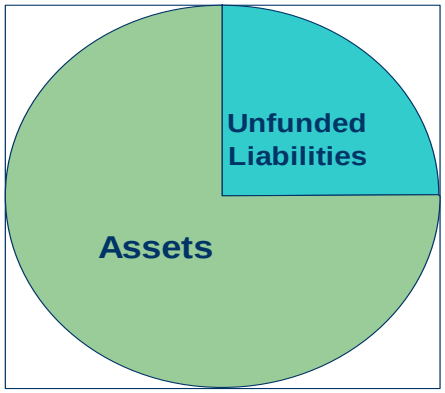
Assuming a plan has $200 million in liabilities

50% Funded Plan



At 50% funded, it earns $7.5 million returns

75% Funded Plan

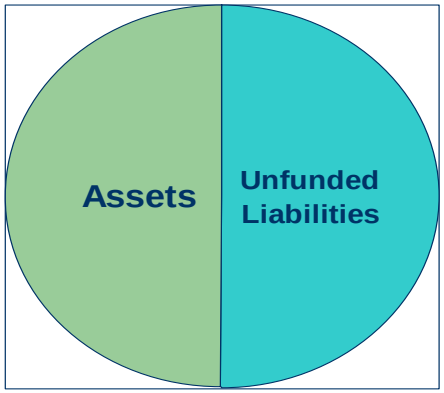


At 75% funded, it earns $10.75 million returns

Example of Funded Ratio Effects

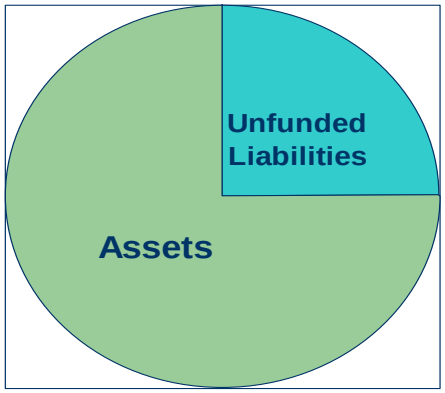
Assuming a plan has $200 million in liabilities
with a 20 year amortization

50% Funded Plan



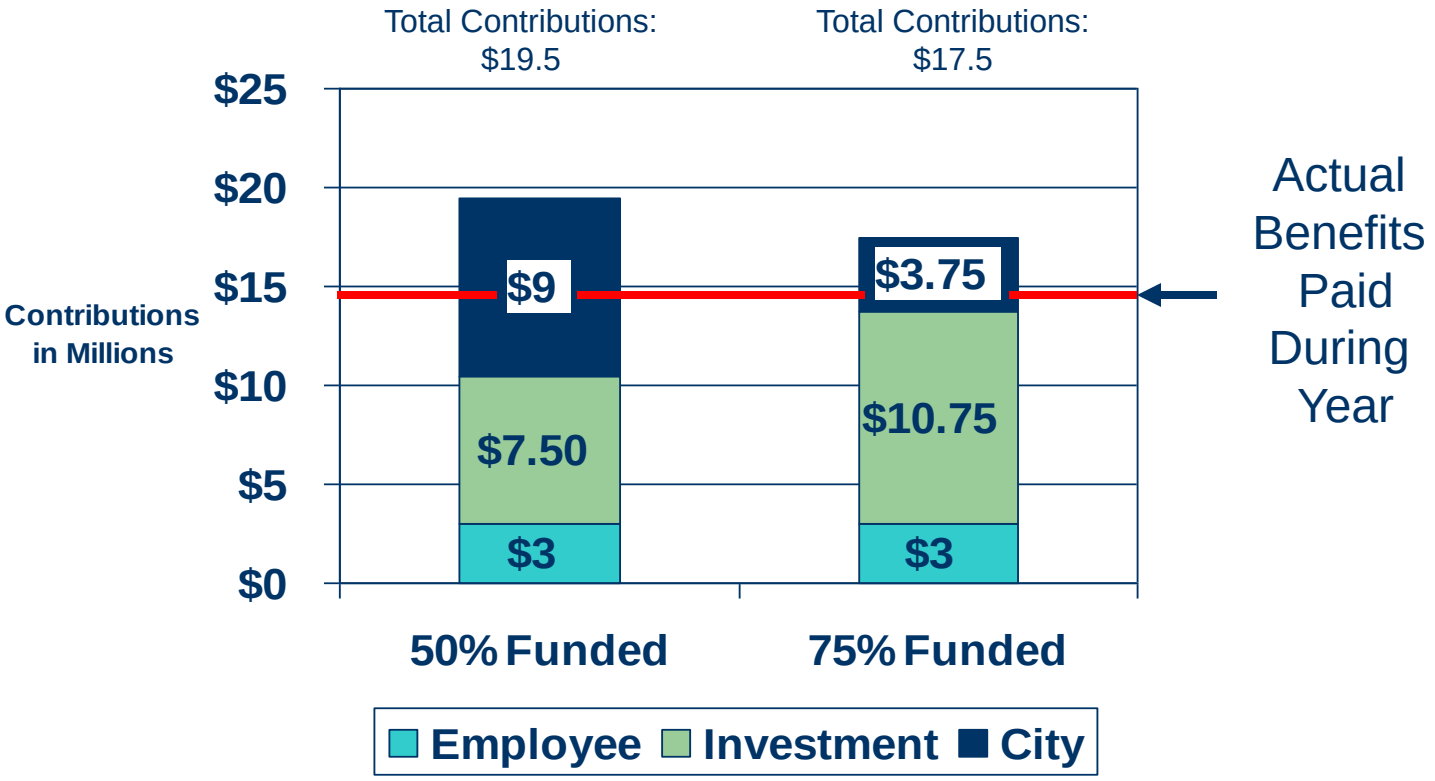
At 50% funded, the amortization principal is $5 million per year

75% Funded Plan

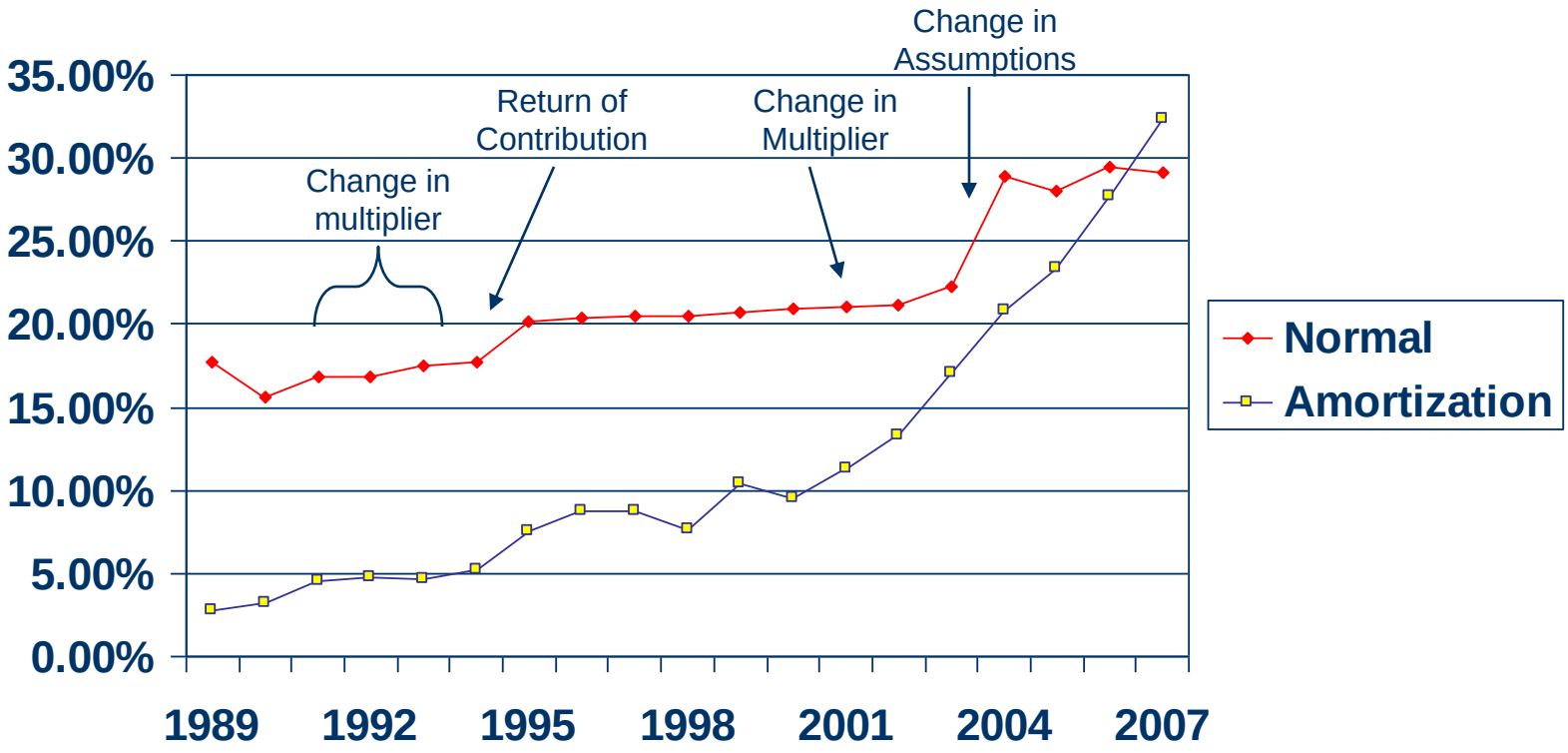


At 75% funded, the amortization principal is $2.5 million per year

Example of Funded Ratio Effects



Plan Costs


Change in Assumptions
Return of Contribution
Change in Multiplier
Change in multiplier
35.00%
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
1989
1992
1995
1998
2001
2004
2007
Normal
Amortization

Board Overview and Recommendations

Board Assessment

- 2005 the Board contracted for an independent performance audit which recommended:
  - Development of Council policies which
    - Delegate responsibility and accountability to Board for investment issues
    - State role of City Attorney and Finance Director in representing the City's interests
  - Have an Asset Allocation or Asset Liability study conducted
  - Upgrade Investment policy
  - Renegotiate vendor contracts to reduce fees

Board Assessment

- 2006 Actuarial valuation listed four ways to improve the funded status
  - Increase investment returns
  - Increase contributions
  - Reduce future liabilities
  - A combination of the above

Actions Taken

- Board has been restructured
- New investment consultant hired
- Asset allocation study conducted
- Investment policy revised
- Investments restructured to increase expected returns
- Investment fees have been reduced by 30%

Actions Taken

- City increased its contribution rate to 28.88%
- Council appropriated an additional $500,000 in the 2008 budget.
- Council appropriated the $500,000 reserve from a settled lawsuit potential on overtime.
- City has addressed issues affecting funding including:
  - Vacation (1995) and Holiday (2004) accumulation caps
- Benefits reduced for those hired after June 1, 2006

Results

- Funded ratio has continued to deteriorate but at a slower rate.
- Everyone has agreed that investment returns alone is not able to fix the plan
- To prevent an NPO, the City contributions were increased to over 50% beginning July 1, 2008 which resulted in substantial budget cuts and reductions in services

Impact of Not Securing Additional Funding

- The contribution rate will continue to grow without an infusion of funds
- More substantial budget cuts in addition to the current cuts
- Impact the City's bond rating
- Staffing reductions
  - result in fewer paying into the plan making the system worse
  - May affect fire insurance ratings
- Inability to provide cost-of-living raises will
  - impact employee recruitment and retention
  - Increase pension contribution rates

Potential Solutions

- If the City only contributes 28.88%, the plan will deplete in about 20 years
- If the City pays the full required contribution rate by 2015 the plan will have reached 70% funded but the contribution rate will reach 80% of payroll and the plan would not reach 90% funded until 2031
- Benefits accrued must be paid. Reductions in future benefits require a vote of the people and would be subject to legal challenges.

Potential Solutions

- The plan could be closed to new participants or left open. Should closing the plan be considered, it should be studied extensively prior to making the decision due to the likelihood of additional impacts. Funding will still be needed.
- Pension obligation bonds could be issued however it is more expensive, requires a longer period to repay, and adds risk.

Potential Solutions

- By meeting assumptions and passing a sales tax, the plan will be funded to 90% in:
  - 1% tax will take just over 3 years
  - ½% tax will take 8 years
  - ¼% tax will take 19 years
- If poor economic returns and passing a sales tax, the plan will be funded to 90% in:
  - 1% tax will take just over 3 years
  - ½% tax will take 16 years
  - ¼% tax will only reach 55% in 30 years

Recommendations

- A sales tax of at least ½% sunsetting when the plan is at least 90% funded
- City commits to maintaining a funding level of at least 28.88% as long as the tax is in place
- After the tax ends, the City is required to make the actuarial required contribution for all future years

Recommendations (cont)

- A portion of all future cell phone settlements should be directed into the plan
- Reductions in the general fund should be revised to a level that does not impact core services
- The City needs to review the disability process by making reasonable accommodations to retain injured employees

Summary

- DB plan increase recruitment and retention
- Springfield provides an average level of benefits
- Funding must be provided to keep the system from running out of funds in 20 years.
- Changes have been made:
  - Benefits for new hires have been reduced
  - Limits implemented for Vacation and Holiday accumulation for current employees
  - Plan management fees have been reduced
  - Asset allocation has been made to increase returns
  - Contributions by the City have been increased

Summary (Cont)

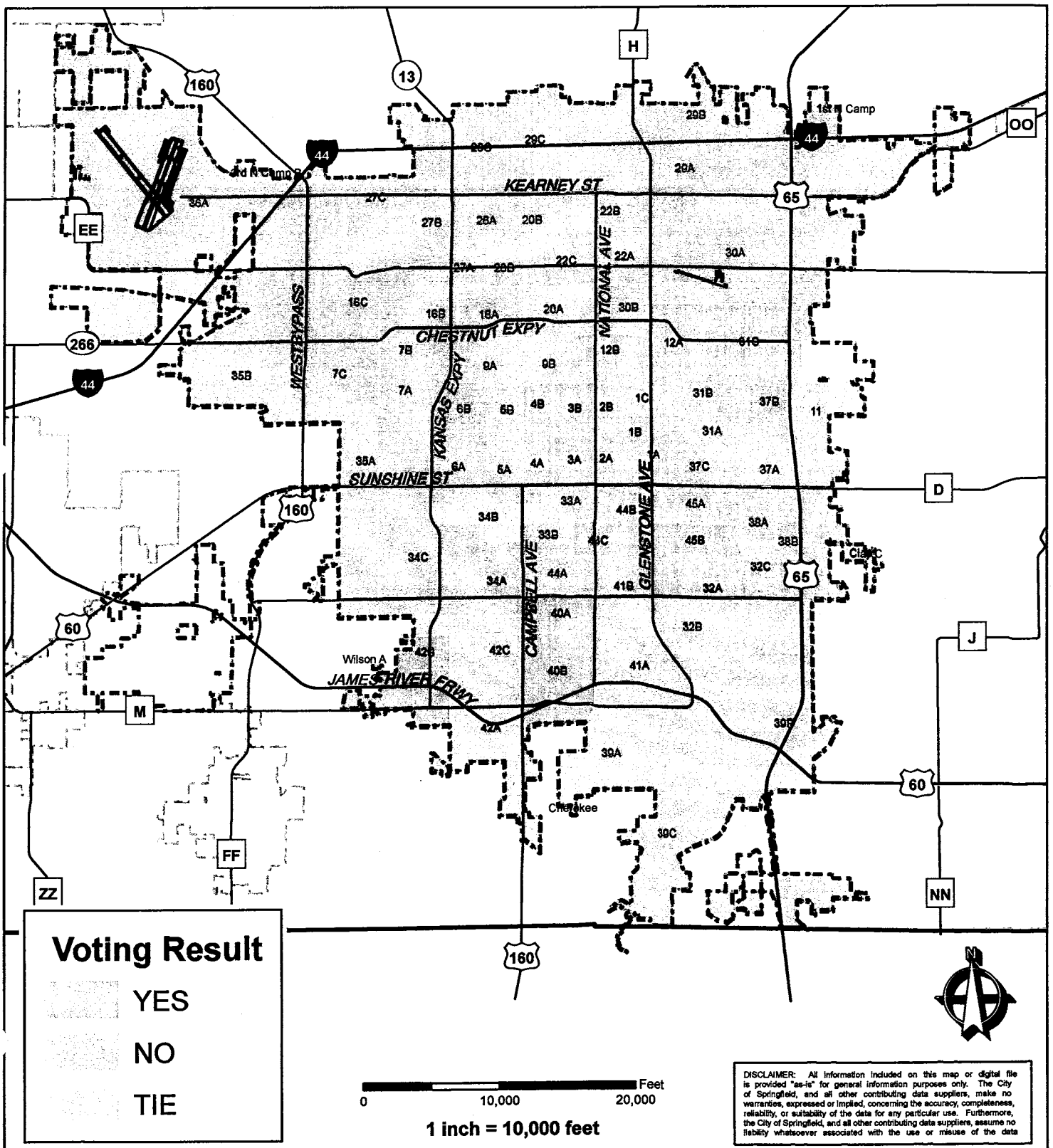
- Significant reductions in service will be required without additional funding
- Solution
  - A sales tax should be passed during which City funding is set at the highest level without impacting core services
  - Any settlement funding should be put in the plan
  - Safeguards should be included to prevent reoccurrences
  - Accommodations should be offered to disabled employees

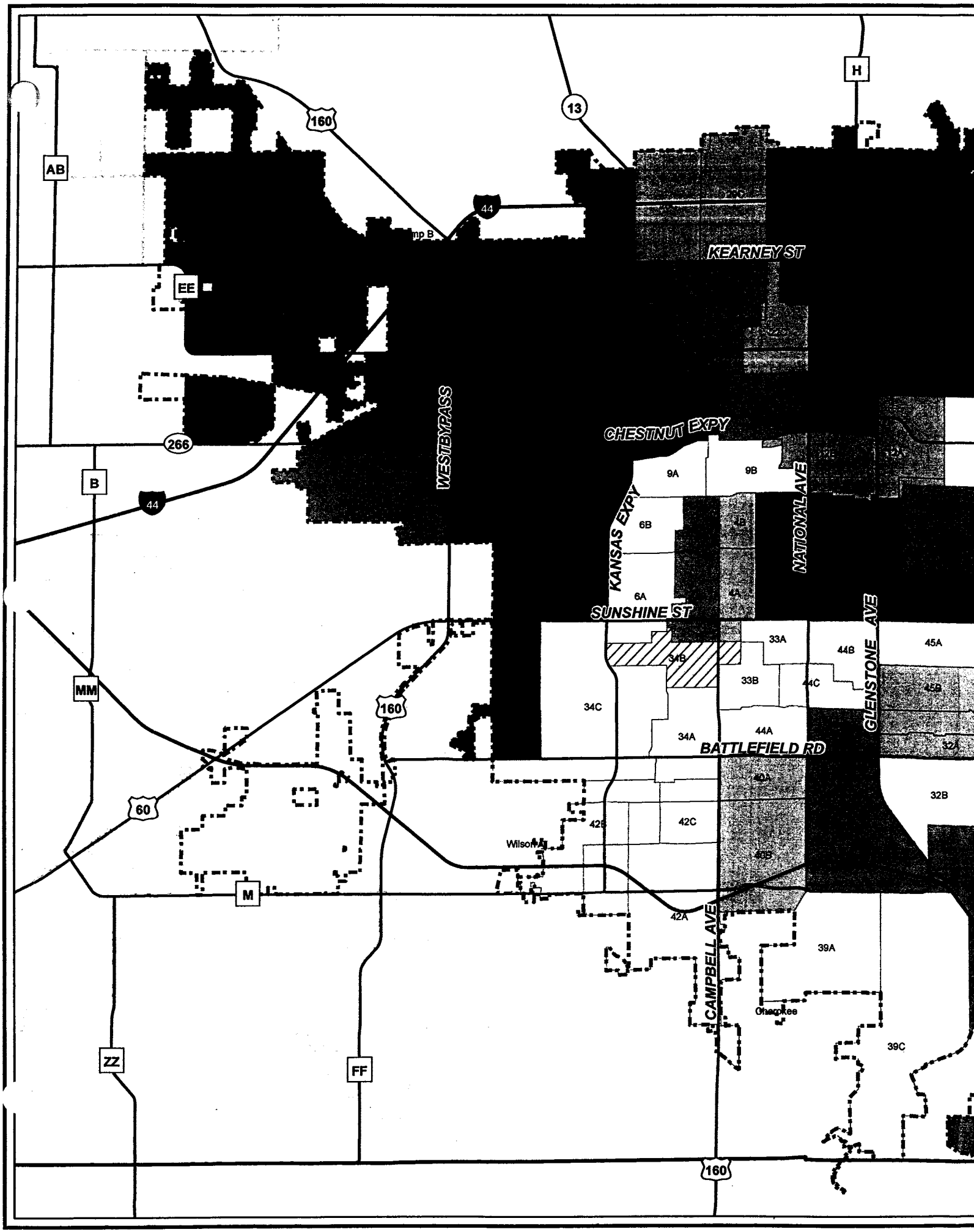
Police Fire Pension Board

Questions?

1 Cent Sales Tax Issue
(Police & Fire Pension)

February 3, 2009




H
13
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AB
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KEARNEY ST
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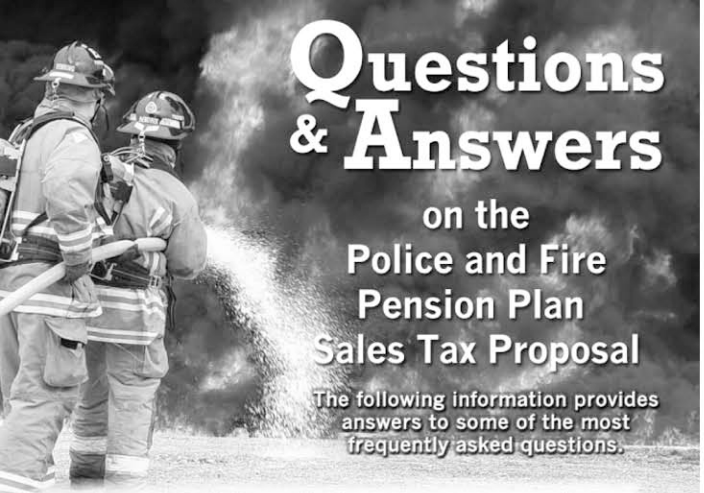
WESTBYPASS
CHESTNUT EXPY
266
B
9A
9B
44
KANSAS EXPY
6B
NATIONAL AVE
6A
SUNSHINE ST
33A
44B
45A
34B
33B
44C
45B
MM
160
34C
34A
44A
GLENSTONE AVE
BATTLEFIELD RD
32A
40A
32B
60
42C
Wilson
M
42A
39A
CAMPBELL AVE
Cherokee
39C
ZZ
FF
160

WARD	yes_vote	no_vote	total	yes_perc	no_perc	Result	Win_Margin
11	436	430	866	50.35%	49.65%	YES	0.69%
12A	162	130	292	55.48%	44.52%	YES	10.96%
12B	162	130	292	55.48%	44.52%	YES	10.96%
16A	102	246	348	29.31%	70.69%	NO	41.38%
16B	102	246	348	29.31%	70.69%	NO	41.38%
16C	59	159	218	27.06%	72.94%	NO	45.87%
1A	302	190	492	61.38%	38.62%	YES	22.76%
1B	302	190	492	61.38%	38.62%	YES	22.76%
1C	302	190	492	61.38%	38.62%	YES	22.76%
1st N Camp	436	430	866	50.35%	49.65%	YES	0.69%
20A	67	93	160	41.88%	58.13%	NO	16.25%
20B	67	93	160	41.88%	58.13%	NO	16.25%
22A	104	167	271	38.38%	61.62%	NO	23.25%
22B	104	167	271	38.38%	61.62%	NO	23.25%
22C	120	94	214	56.07%	43.93%	YES	12.15%
26A	102	147	249	40.96%	59.04%	NO	18.07%
26B	102	147	249	40.96%	59.04%	NO	18.07%
26C	188	168	356	52.81%	47.19%	YES	5.62%
27A	102	246	348	29.31%	70.69%	NO	41.38%
27B	151	237	388	38.92%	61.08%	NO	22.16%
27C	151	237	388	38.92%	61.08%	NO	22.16%
29A	278	418	696	39.94%	60.06%	NO	20.11%
29B	278	418	696	39.94%	60.06%	NO	20.11%
29C	188	168	356	52.81%	47.19%	YES	5.62%
2A	172	105	277	62.09%	37.91%	YES	24.19%
2B	172	105	277	62.09%	37.91%	YES	24.19%
30A	139	223	362	38.40%	61.60%	NO	23.20%
30B	139	223	362	38.40%	61.60%	NO	23.20%
31A	225	260	485	46.39%	53.61%	NO	7.22%
31B	225	260	485	46.39%	53.61%	NO	7.22%
31C	436	430	866	50.35%	49.65%	YES	0.69%
32A	402	282	684	58.77%	41.23%	YES	17.54%
32B	324	348	672	48.21%	51.79%	NO	3.57%
32C	402	282	684	58.77%	41.23%	YES	17.54%
33A	172	181	353	48.73%	51.27%	NO	2.55%
33B	172	181	353	48.73%	51.27%	NO	2.55%
34A	378	383	761	49.67%	50.33%	NO	0.66%
34B	154	154	308	50.00%	50.00%	TIE	0.00%
34C	378	383	761	49.67%	50.33%	NO	0.66%
35A	97	162	259	37.45%	62.55%	NO	25.10%
35B	290	434	724	40.06%	59.94%	NO	19.89%
36A	50	106	156	32.05%	67.95%	NO	35.90%
37A	188	288	476	39.50%	60.50%	NO	21.01%
37B	188	288	476	39.50%	60.50%	NO	21.01%
37C	62	109	171	36.26%	63.74%	NO	27.49%
38A	204	265	469	43.50%	56.50%	NO	13.01%

38B	204	265	469	43.50%	56.50%	NO	13.01%
39A	379	384	763	49.67%	50.33%	NO	0.66%
39B	319	361	680	46.91%	53.09%	NO	6.18%
39C	368	401	769	47.85%	52.15%	NO	4.29%
3A	182	79	261	69.73%	30.27%	YES	39.46%
3B	82	50	132	62.12%	37.88%	YES	24.24%
3rd N Camp B	50	106	156	32.05%	67.95%	NO	35.90%
40A	275	245	520	52.88%	47.12%	YES	5.77%
40B	275	245	520	52.88%	47.12%	YES	5.77%
41A	229	260	489	46.83%	53.17%	NO	6.34%
41B	229	260	489	46.83%	53.17%	NO	6.34%
42A	314	326	640	49.06%	50.94%	NO	1.88%
42B	172	163	335	51.34%	48.66%	YES	2.69%
42C	148	158	306	48.37%	51.63%	NO	3.27%
44A	126	132	258	48.84%	51.16%	NO	2.33%
44B	185	173	358	51.68%	48.32%	YES	3.35%
44C	185	173	358	51.68%	48.32%	YES	3.35%
45A	168	177	345	48.70%	51.30%	NO	2.61%
45B	193	158	351	54.99%	45.01%	YES	9.97%
4A	149	113	262	56.87%	43.13%	YES	13.74%
4B	149	113	262	56.87%	43.13%	YES	13.74%
5A	98	117	215	45.58%	54.42%	NO	8.84%
5B	98	117	215	45.58%	54.42%	NO	8.84%
6A	171	182	353	48.44%	51.56%	NO	3.12%
6B	171	182	353	48.44%	51.56%	NO	3.12%
7A	137	222	359	38.16%	61.84%	NO	23.68%
7B	56	138	194	28.87%	71.13%	NO	42.27%
7C	137	222	359	38.16%	61.84%	NO	23.68%
9A	87	92	179	48.60%	51.40%	NO	2.79%
9B	87	92	179	48.60%	51.40%	NO	2.79%
Cherokee	314	326	640	49.06%	50.94%	NO	1.88%
Clay C	324	348	672	48.21%	51.79%	NO	3.57%
Wilson A	172	163	335	51.34%	48.66%	YES	2.69%



Questions & Answers

on the Police and Fire Pension Plan Sales Tax Proposal

The following information provides answers to some of the most frequently asked questions.

In 1946, citizens voted to create a self-funded pension plan for Springfield Police Officers and Firefighters. This plan replaces Social Security retirement and disability benefits for Police and Fire.

Today, the Police/Fire Pension Plan only has enough assets to pay benefits for about 20 years, while the obligations to the covered employees will last about 70 years. The magnitude of this problem is unprecedented for the City of Springfield, which is required by City Charter to balance its budget.

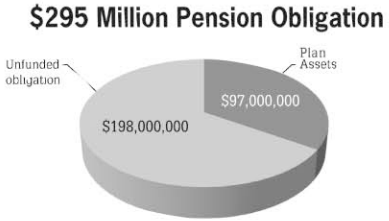
The City Council will ask Springfield voters on February 3, 2009 to consider a 1-cent sales tax to be used solely to restore the pension plan to a healthy funded level. The tax would expire in five years, or earlier if the plan reaches a fully funded level.

This is one element of an overall plan to restore the pension fund to a healthy level for current Police and Fire employees and retirees and put new employees into a larger, statewide retirement plan. The sales-tax question is the only part of this plan that requires voter approval.

What are the numbers?

As of Nov. 30, 2008, the plan had $97 million in assets.

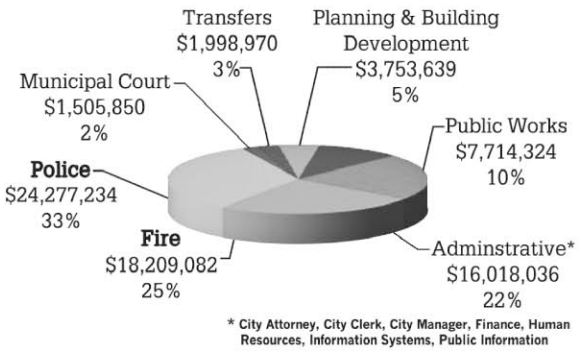
The current obligation – the amount needed to pay benefits to all current and retired participants – is $295 million.



The unfunded liability is $198 million.

The plan's current funded ratio is 33%.

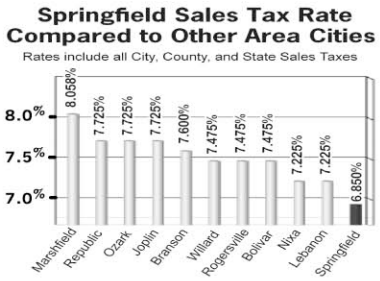
Most Police and Fire services are paid for by the General Fund, which is the core of the City's General Operating budget. The Police and Fire departments make up 58% of this budget. This revenue source also is used to make the City's annual contribution to the Police/Fire Pension Fund. As the recommended pension contribution grows due to the declining ratio of assets to obligations, the City has to cut expenses or add revenue to the General Fund. For the 2008-09 fiscal year, the City's Police/Fire pension contribution was 16 percent of the General Fund. Making that contribution required $5.2 million in General Fund cuts, including 36 Police, Fire, and other positions.



What does a 1-cent sales tax raise?

The 1-cent tax – which means $1 on $100 in taxable sales – raises approximately $40 million a year, about half of which is paid by people who live outside of Springfield.

Here is a comparison of Springfield's sales tax rate compared to other local communities:



How did this happen?

A series of circumstances created the current situation over time. In summary:

- Benefits granted in lieu of pay increases in the '90s began to affect the system and draw down the funded ratio.
- A relatively conservative investment portfolio meant the fund didn't profit as much as other portfolios during the strongest years of the stock market.
- The stock market's decline after the technology bubble bust and the Sept. 11, 2001 tragedy led to lower-than-predicted investment returns; other actuarial assumptions, such as longer lifespans, were re-adjusted, which further lowered the funded ratio.
- As the recommended contribution grew, the City did not make its full contribution during four fiscal years from 2004 to 2007 for a total of $10 million in today's dollars.

Why is this any different than the current stock market's affect on my pension plan?

The Police/Fire Pension Plan is facing these circumstances regardless of the current market; its condition has further deteriorated in the current market, but it was still $167 million underfunded as of June 30, 2008, before the start of the current economic downturn.

The fund's actuary believes that even during normal market times the plan cannot turn around without adding significant revenue to restore a healthy funding level. Once a healthy funding level is achieved, the ongoing City and employee contributions are anticipated to sustain the fund forward.

What other steps have been taken?

The City took a number of steps, beginning in 2005, to address the problem. While those steps have had a positive fundamental impact, the plan's actuary does not believe these improvements alone can restore a healthy funding ratio.

- Police/Fire employees hired after July 1, 2006 have a different benefit plan; they pay a lower percentage of their salary into the plan and will receive reduced benefits upon retirement.
- The Pension Board was restructured; it hired a new investment consultant and reduced costs by 30 percent.
- The investment-allocation policy was revised to provide more investment flexibility.
- Holiday and vacation accumulation was capped.
- The City increased its contribution rate to 50 percent of Police/Fire salaries for FY08-09 (resulting in a $5.2 million budget cut).

Why is the City using a defined-benefit plan?

Under the City Charter, pension benefits already earned cannot be reduced. Pension benefits promised, but not yet earned, cannot be changed without a public vote. This is why the changes City Council made to the plan only affect employees hired after July 1, 2006.

Springfield currently has 974 employees and retirees in the original Tier I plan and 61 employees in the Tier II plan implemented in July 2006. Both are defined-benefit plans, but the Tier II employees have a lower contribution rate and receive reduced benefits.

The national norm for Police Officers and Firefighters is a defined-benefit pension and disability plan because they do not receive Social Security benefits for retirement or disability. It would have a negative impact on recruitment for the City to implement an entirely different type of pension system than job candidates are offered for public-safety positions at local, state and federal levels.

In addition, the statewide LAGERS pension system for all other City employees is a defined-benefit plan. LAGERS has a specific plan for public-safety employees. New Springfield Police Officers and Firefighters would be enrolled in the LAGERS plan if the tax is approved.

What other steps would be taken to restore the healthy funding level if the tax passes?

- The City of Springfield would increase its annual contribution rate by 1 percent, to 29.88 percent of Police/Fire payroll, during the sales-tax increase. This $240,000 a year would be achieved by General Fund budget cuts.
- Police Officers and Firefighters in the Tier 1 plan will contribute a higher percentage of their salaries beginning in 2010. The employee contribution is adjusted every five years.
- If the tax issue passes, new Police Officers and Fire- fighters would go into the statewide LAGERS pension system covering all other City employees. The City's self-funded plan would be closed to new employees, but maintain an obligation to current participants for about 70 years. LAGERS has a specific plan for public safety employees.
- The City would pledge <u>all</u> net revenue from a pending court case with telecommunications companies that owe back taxes to the City. The first $10 million would make "whole" the amount the City underfunded the plan during four fiscal years.

What if this tax issue doesn't pass?

For 2008-09, the City Council cut the annual budget by $5.2 million to make the $12.5 million recommended contribution into the pension fund. The recommended contribution for FY 2009-10 would be $13.2 million, or 52.36 percent of Police/Fire payroll.

The City staff and City Council will inform citizens about the potential budget cuts before the February 3 election.

Potential budget cuts could affect areas like fire-insurance premiums, road and street maintenance, public-safety services, and the city's bond rating through the amount of additional interest the City would have to pay with a lowered rating.

The Feb. 3, 2009 ballot language reads as follows:

"Shall the City of Springfield impose a sales tax at a rate of 1 percent solely for the purpose of providing revenues for the Springfield Police and Firefighters Pension System with said tax to sunset upon the earlier of A) Five (5) years from the date of commencement of collection of this tax or B) the Pension System fund reaching a fully funded (100%) status as determined by an independent actuarial study conducted for the Pension System Board of Trustees?"

For more information ...

On the Web:

Extensive additional information on this issue is available on the City of Springfield Web site: <u>springfieldmo.gov/elections</u>

Those resources include:

- The complete Powerpoint presentation
- Video of City Manager Greg Burris presenting the Powerpoint
- An ongoing list of Frequently Asked Questions
- A link to the Police/Fire Pension Board's Web site with reports, meeting minutes, etc., dating to 2000
- An in-depth questionnaire prepared at the request of the Springfield Area Chamber of Commerce

E-mail: Send queries to city@springfieldmo.gov

Phone: Call the City Public Information Department at 864-1010.

Brochures: For additional copies of this brochure, call 864-1010; a summary of this material will appear as an insert with City Utilities' billing statements in January 2009.

Paid for by the City of
Springfield, MO
Thomas J. Carlson, Mayor

CITY of SPRINGFIELD