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ACTUARIAL FUNDING POLICY

A. Introduction

The purpose of this Actuarial Funding Policy is to record the funding objective and policy set by the Board of Trustees (Board) of the Illinois Municipal Retirement Fund (IMRF). The Board establishes this funding policy to help ensure the systematic accumulation of assets needed to pay future benefits for members of IMRF.

This funding policy shall be reviewed by the Board of Trustees every three years in conjunction with the triennial experience study conducted by IMRF's actuaries.

The actuary shall prepare annual actuarial valuations and calculate future employer contribution rates based upon calendar-year data. As required by statute, it shall conduct a triennial experience study to review actuarial assumptions and to recommend appropriate changes.

Summary of Key Actuarial Assumptions:

- Entry-Age Normal Actuarial Cost Method
- Utilize a 5-year Smoothing Period, subject to a 20% Market v. Actual Corridor
- Amortize over/under funding over a closed period. 30-year closed period until the remaining period reaches 15 years. After that point (in 2029) a single, rolling 15-year period shall be used for all unfunded liabilities that develop after that point and the schedule for the pre-existing liabilities shall continue until those liabilities are fully extinguished.
- Funding Target of 100%
- Economic Assumptions:
  - Price Inflation: 2.25%
  - Wage Inflation: 2.75%
  - Investment Return: 7.25%
- Mortality Assumption: Pub-2010 projected to current year and MP-2021 projected to current year with administrative factors to be implemented by the actuary when appropriate.

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B. Funding Objectives

1. Maintain adequate assets so that current plan assets plus future contributions and investment earnings will be sufficient to fund all benefits expected to be paid to members and beneficiaries when due.

2. Make consistent progress towards 100% funding and maintain 100% funding once it is obtained. In particular, continue progress of systematic reduction of the Unfunded Actuarial Accrued Liabilities (UAAL) through use of the Actuarial Determined Employer Contribution Rate (ADEC).

3. Maintain stability of employer contribution rates, consistent with other funding objectives, and avoid sharp increases or decreases due to specific events.

4. Maintain public policy goals of accountability and transparency, meaning that each policy element is to be clear in intent and effect, and each should allow an assessment of whether, how and when the funding requirements of the plan will be met.

5. Monitor material risks to assist in any risk management strategies the Board deems appropriate.

6. Promote intergenerational equity. Each generation of members and employers should incur the cost of benefits for the employees who provide services to them, rather than deferring those costs to future members and employers.

7. Provide a reasonable margin for adverse experience to help offset risks.

8. Review investment return assumption in conjunction with the periodic asset liability study and in consideration of the Board's risk profile.

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C. Elements

1. Actuarial Cost Method (i.e. Contribution Budgeting)

An aggregate entry age actuarial cost method of valuation will be used in determining most liabilities and normal cost. An individual entry-age employer normal cost will be determined for each benefit group (Regular Tier 1, Regular Tier 2, SLEP Tier 1, SLEP Tier 2, ECO Tier 1, ECO Tier 2) as a percent of payroll. The normal cost for each employer will be calculated based on the aggregate Tier 1 and Tier 2 normal cost, weighted on the expected payroll of Tier 1 and Tier 2 members for the given employer. The aggregate normal cost rate is then multiplied by the present value of future salary to determine the present value of future normal cost for each employer. The actuarial accrued liability is then calculated by subtracting the present value of future normal cost and present value of future employee contributions from the present value of future benefits.

Differences in the past between assumed experience and actual experience ("actuarial gains and losses") will become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are to be amortized to produce payments (principal & interest) which are level percent of payroll contributions.

Liabilities for lump sum death benefits and temporary disability benefits will be determined using a term cost approach. Under this approach, the funding objective is to receive contributions each year that approximately equal the benefits being paid.

C. Elements

2. Asset Smoothing Method

The Funding Value of Assets will recognize assumed investment return fully each year. Differences between actual and assumed investment income are to be phased-in over a closed 5-year period subject to a 20% corridor (intended to prevent excess divergence between actuarial and market values). The method also limits the adjustment to the expected actuarial return to the maximum amount of unrecognized gains or losses not yet reflected in the actuarial value of assets. In any year in which the actuarial value minus the market value of assets switches from a positive value to a negative value, or vice-versa, any prior gain/loss bases are to be eliminated and the smoothing mechanism restarts.

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C. Elements

3. Amortization Method

a. General

Financing Liabilities and Overfunding

The following procedures will be applied to financing liabilities.

i. Instrumentalities: 10-year rolling period.
ii. Early Retirement Incentive ERI) Plan liabilities: a period up to 10 years selected by the Employer upon adoption of ERI.
iii. For taxing bodies (Regular, SLEP and ECO rate Groups): 30-year closed period until the remaining period reaches 15 years. After that point a single, rolling 15-year period shall be used for all unfunded liabilities that develop after that point and the schedule for the pre-existing liabilities shall continue until those liabilities are fully extinguished. In the event that a single rolling 15-year period results in negative amortization, the board shall select a lesser period such that negative amortization does not occur.

The following procedures will be applied to financing overfunding.

i. Instrumentalities: 10-year rolling period.
ii. For taxing bodies (Regular, SLEP and ECO rate Groups): 30-year closed period until the remaining period reaches 15 years. After that point a single, rolling 15-year period shall be used for all assets exceeding liabilities.
iii. Assets exceeding liabilities can be used to satisfy Early Retirement Incentive (ERI) costs so long as the reserve balance (on an actuarial basis) does not drop below 100%. Those assets shall be applied to the extent they are available only at the employer's request. If those assets are insufficient to satisfy the ERI costs, then the remaining balance will be amortized for a period up to 10 years as selected by the employer.

b. SLEP Supplemental Liabilities (Public Act 94-712)

Amortize supplemental liabilities over a closed 30-year period, with an employer option of selecting a period of either 35 or 40 years.

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4. Assumed Investment Return

The assumed rate of return is 7.25%, net of all administrative and investment expenses.

C. Elements
5. Funding Target

The targeted aggregate funded ration shall be 100%.

C. Elements
6. Computation of Employer Contribution Rates

The Board shall determine the employer contribution rate annually in consultation with the actuary, based upon the actuarial valuation for the most recent completed calendar year. The rate shall be calculated and communicated to the employer as soon as practical in the following year (known as Preliminary Rate Notice) and finalized by year-end (known as Final Rate Notice). Each rate shall remain in effect for one calendar year.

Annual employer contributions will be calculated utilizing the Actuarially Determined Employer Contribution rate (ADEC). It will be expressed as a percentage of payroll to be calculated so as to include a factor for normal cost for current service for each eligible plan and tier (based upon the benefit provisions in the Illinois Pension Code) and a factor to collect or refund any under or over funded amount.

In situations where the annual contributions based upon the ADEC times employer payroll are deemed insufficient to extinguish an unfunded liability over the course of an amortization period, a minimum contribution will be calculated which will pay down the unfunded liability by the year 2043.

Economic Assumptions:
- Price Inflation: 2.25%
- Wage Inflation: 2.75%
- Investment Return: 7.25%

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Non-Economic Assumptions will be based upon the latest applicable triennial experience study include:

- Rates of separation from active member status
- Rates of disability among actives
- Patterns of merit and longevity increases among actives
- Rates of retirement

Mortality Assumption:

- The Pub-2010 mortality tables with adjustments for IMRF experience and the MP-2021 projection scale with administrative factors to be implemented by the actuary when appropriate.

C. Elements

7. Risk Management

a. Assumption Changes

i. The actuarial assumptions used shall be those last adopted by the Board based on the most recent experience study and upon the advice and recommendation of the actuary. In accordance with 40 ILCS 5/7-213, the actuary shall conduct an experience study at least every three years. The results of the study shall be the basis for the actuarial assumption changes recommended to the Board.

ii. The actuarial assumptions can be updated during the three-year period if significant plan design changes or other significant events occur, as advised by the actuary.

b. Amortization Method

The amortization method, Level Percent Closed, will ensure full payment of the UAAL over a finite, systematically decreasing period not to exceed 30 years and not shorter than a rolling 15-year period.

c. Risk Measures

The following risk measures will be annually determined to provide quantifiable measurements of risk and their movement over time.

i. Classic measures currently determined

A. Funded Ratio (assets/liability)

B. UAAL amortization period (years required to pay down the UAAL based on current funding rates)

ii. Dollar standard deviation of investment return/Total Payroll

Measures the risk associated with negative asset returns relative impact on the funded status of the plan. A decrease in this

measure indicates a decrease in investment risk.

iii. Total UAL/Total Payroll
- Measures the risk associated with contribution decreases relative impact on the ability to fund the UAAL. A decrease in this measure indicates a decrease in contribution risk.

iv. Total Assets/Total Payroll
- Measures the risk associated with the ability to respond to asset experience through adjustments in contributions. A decrease in this measure indicates a decrease in asset risk.

v. Total AAL/Total Payroll
- Measures the risk associated with the ability to respond to liability experience through adjustments in contributions. A decrease in this measure indicates a decrease in experience risk. This also provides a long-term measure of the asset risk in situations where the System has a funded ration below 100%.

d. Peer Review (Actuarial Audit)
Conduct a peer review of the Actuary's work every five years.

e. Asset Liability Study
Conduct an asset liability study at least once every five years or as needed due to economic/financial conditions.

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D. Glossary

1. **Actuarial Accrued Liability (AAL):** The difference between (i) the actual present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".
2. **Actuarial Assumptions:** Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
3. **Actuarial Cost Method:** A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefit" between the actuarial present value of future normal cost and the actuarial accrued liability.
4. **Actuarial Gain (Loss):** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used. For example, if during a given year the assets earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in UAAL, or "actuarial gain" as the next valuation. These include contribution gains and losses that result from actual contributions made being greater or less than the level determined under policy.
5. **Actuary:** A person who is trained in the applications of probability and compound interest to problems in business and finance that involve payment of money in the future, contingent upon the occurrence of future events. Most actuaries in the United States are Members of the American Academy of Actuaries (MAAA). The Society of Actuaries is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. It administers a series of examinations leading initially to Associateship and designation ASA and ultimately to Fellowship with the designation FSA.

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D. Glossary (cont'd)

6. **Amortization:** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
7. **Asset Liability Study:** A comprehensive strategic asset allocation review designed to assess the continuing appropriateness of the Investment Objectives and Asset Allocation Policy. It includes a study of future benefit payments, liabilities, required funding, the appropriateness of the actuarial interest rate assumption and the prospective funded status of liabilities. It may also include a study of portfolio design for optimal diversification and comparisons with peer practices.
8. **Corridor:** A range described as a percentage beyond which the market value and actuarial value of assets should not exceed without significant changes to the employer contribution rate.
9. **Entry Age Normal Actuarial Cost Method:** A funding method that calculates the Normal Cost as a level percentage of pay over the working lifetime of the plan's members.
10. **Experience Study:** An actuarial investigation of demographic and economic experiences of the system during the period studied. The investigation is made for the purpose of updating the actuarial assumptions used in valuing the actuarial liabilities.
11. **Funding Value of Assets:** The value of current plan assets recognized for valuation purposes. Generally based on a phased-in recognition of all or a portion of market related investment return. Sometimes referred to as Actuarial Value of Assets.
12. **Market Value of Assets:** The fair value of plan assets as reported in the plan's audited financial statements.
13. **Normal Cost (NC):** The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial liability is not part of the normal cost.
14. **Rolling Period**: An amortization method in which the amortization period is reset each following year for the same period of time.
15. **Unfunded Actuarial Accrued Liability (UAAL):** The positive difference, if any, between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

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E. Appendix

Attached are reference materials which shall be updated from time to time, but which are not part of this Policy. Changes/revisions to the reference materials need not be adopted by the Board of Trustees. Substantive changes to this Policy require Board of Trustee approval.

(Reviewed and approved January 2024.)