Arizona State Retirement System
Strategic Investment Policy (SIP007)

Funding Policy

Purpose:

The intent of the ASRS funding policy is to establish a formal methodology for financing the pension, health insurance (HI), and long-term disability (LTD) obligations accruing under the ASRS. It is intended that current assets, plus future contributions from employees and employers, plus investment earnings, should be sufficient to finance all benefits provided by the ASRS for each of its various plans.

This funding policy is intended to reflect a reasonable approach for each generation of employees and employers to substantially pay the cost of the benefits accrued. This funding policy recognizes there will be volatility with respect to investment returns, plan membership, membership demographics, mortality, and other variables that impact the long-term cost, and allocation of cost, of the programs.

The adoption of a funding policy is recommended by the Government Finance Officers Association (GFOA), the Governmental Accounting Standards Board (GASB), and the actuarial profession. The ASRS also believes it is a prudent action to take.

The ASRS funding policy has 11 components which are subsequently discussed in this policy.

Components #2 through #4 describe the perspectives of the ASRS in determining which approaches should be utilized in meeting the goal and objectives of this funding policy.

Components #5 through #9 describe the consequent approaches the ASRS utilizes in meeting the goal and objectives of this funding policy.

Components #10 through #11 describe the communication and management of this funding policy.

1. Goal and Objectives
2. Time Horizon and Volatility Perspective
3. Inter-Generational Equity (Time Series Equity) Perspective
4. Benefit Costing (Cross Sectional Equity) Perspective
5. Actuarial Methods and Funded Status
6. Actuarial Assumptions
7. Actuarial Process
8. Asset Approach to Portfolio Construction
9. Investment Beliefs and Investment Policy Statement
10. Transparency and Mutual Understanding
11. Governance

1. Goal and Objectives

The goal of the ASRS Funding Policy is to ensure a well thought through and documented process is in place that creates a reasonable expectation the various ASRS benefits will be fully funded in a manner consistent with the capital market, demographic, risk tolerance, and other parameters of the ASRS.

Specifically, the ASRS will make funding decisions toward the following objectives:

I. Ensuring long-term full funding.

II. Mitigating benefit costs, primarily through early contributions and a long -term risk profile.

III. Mitigating contribution rate volatility.

IV. Mitigating inter-generational wealth transfers.

2. <u>Time Horizon and Volatility Perspective</u>

The ASRS believes that contribution rates are the primary economic financial outputs of funding and investment policies. The ASRS believes that a going concern (or long-term) and primarily asset-only approach to investment management can result in contribution rates that are both lower and relatively insensitive to short- and medium-term portfolio volatilities. This enables the ASRS to combine the traditional cross-sectional diversification benefits found in large employee pooled plans with the time-series diversification benefits of multi-generational plans, thereby resulting in higher expected short-term investment volatility enabling higher expected long-term investment returns.

The impact on contribution rates of any realized short-term volatility of returns will be mitigated through actuarial time-series diversification (smoothing and amortizing), rather than by lowering short-term expected return volatility at the expense of lower expected returns (and therefore higher aggregate contribution rates).

As such, the ASRS is managed on a going-concern basis, with the following timeframes being utilized for portfolio construction decisions and contribution rate determination.

Portfolio Construction Decisions:

- Strategic asset allocation focuses on medium-term (3-5 years) capital market assumptions, subject to achieving the long-term assumed actuarial rate based on long-term (30 year) capital market assumptions.
- Tactical deviation decisions are based on shorter-term (less than 3-5years) capital market expectations.

Contribution Rate Determination:

- Liabilities are discounted based upon long-term (30 year) capital market expectations.
- Contribution rates are established using longer-term (currently 10 year) investment valuation smoothing periods, and longer-term (currently 30 years for Pension and 15 years for HI and LTD) closed period deficit/surplus amortization periods.

3. <u>Inter-Generational Equity (Time Series Equity) Perspective</u>

Under normal conditions the ASRS will strive to align the aggregate funding costs (normal costs plus amortization costs) over the generational period in which corresponding benefits accrue. During periods where the funded status deviates significantly from 100%, aggregate funding costs may expand beyond generational periods.

Once actuarially determined and granted, Permanent Benefit Increase (PBI) amounts will be amortized over a period of 15 years or less, or over the average life expectancy of the retirees. The reason the amortization period is less than the pension amortization period is due to the fact that PBIs are payable only to current retirees and therefore has a lower average duration. The reason PBIs are not pre-funded by estimating their current expected present values is because PBIs will most typically be created during periods when there are repetitive years of high rates of return, which are more likely to be followed by falling contribution rates. As a result, by utilizing the shorter-term amortization method of funding rather than pre-funding, PBIs will more likely be funded during periods of lower contribution rates, therefore furthering the objective of inter-generational equity.

4. Benefit Costing (Cross Sectional Equity) Perspective

The ASRS will consider fairness and appropriateness when determining whether or not to align the benefits accrued and costs paid by individual members for different programs.

The ASRS will also consider the various pricing and risk-sharing advantages that are afforded to groups (rather than individuals) for different programs.

5. Actuarial Methods and Funded Status

Actuarial Cost Allocation Method

The primary purpose of an actuarial cost allocation method is to allocate the present value of future benefits to past, current, and future periods of time. The ASRS was initially mandated by statute to use the Entry Age Normal (EAN) method, and subsequently mandated by statute to use the Projected Unit Credit (PUC) method. Legislation was successfully promulgated by the ASRS in 2015 to allow the ASRS itself to consider the most appropriate method for the June 30, 2016 period forward.

The ASRS currently utilizes PUC, the most recent statutorily mandated method and will consider the EAN method in future years. Key factors to be considered in determining a change in the actuarial cost allocation method are:

- Membership Demographics
- Impact on Contribution Rates
- Impact on Contribution Rate Volatility
- Impact on Intergenerational Equity
- Accounting Consistency
- Peer Consistency
- Impact on Funded Status

The actuarial cost allocation method adopted will be presented to, and discussed by, the Board every five years to ensure it continues to be the most appropriate method. This presentation and discussion will occur within one year of the actuarial experience study, which is also conducted every five years.

Asset Value Smoothing

The primary purpose of the asset-value smoothing process is to mitigate contribution rate volatility.

The constraint applied to the length of the asset-value smoothing process is related to both the magnitude of, and the duration of, the dispersion between smoothed and unsmoothed asset values. In general, the smoothed and unsmoothed asset values should cross or become equal approximately every 10 years or less.

Shorter smoothing periods are preferred to longer smoothing periods, subject only to the primary purpose of mitigating contribution rate volatility and the absolute magnitude of the volatility.

Based upon the above, the following asset-smoothing periods are currently utilized:

- Pension: 10 Years
- Health Insurance: 10 Years
- LTD: 10 Years

Amortization of Unfunded Liabilities and Funded Status

The primary purpose of the amortizing process is to mitigate contribution rate volatility while ensuring the unfunded liabilities are paid off in a reasonable period of time.

The constraints applied to the length of the amortization period are related to contribution rate volatility and magnitude, intergenerational equity, and desire to pay off deficits sooner rather than later.

Shorter amortization periods are preferred to longer amortization periods, subject only to the primary purpose of mitigating contribution rate volatility and the absolute magnitude of the volatility.

Unfunded liabilities shall be amortized utilizing the level dollar amortization method over a closed period, not to exceed 30 years, and are currently amortized according to the dates in the table below.

The employee and employer contribution rates will be modified through time to reflect actual experience and changing expectations, and will be set such that, in combination with investment returns, they will bring the funds to fully funded status within a reasonable period.

The unfunded liability amortization periods are shown in the table below, along with the dates on which the unfunded liabilities that existed as of June 30, 2014, are expected to be fully funded on an unsmoothed asset basis.

	Amortization Period	Expected Full Funding Date
• Pension:	30 Years	June 30, 2037
• Health Insurance:	15 Years	June 30, 2015
• LTD:	15 Years	June 30, 2025

6. **Actuarial Assumptions**

The ASRS will utilize investment returns, mortality expectations, income adjusted mortality, benefit option choices, withdrawal option choices, and other assumptions that best reflect ASRS-specific expectations with respect to capital markets, and employee, retiree, and inactive member demographics. These assumptions may utilize ASRS-specific history, industry tables, as well as current and projected trends to best determine and allocate benefit costs. The assumptions should be forward-looking with appropriate consideration given to past experience.

7. Actuarial Process

The ASRS will retain an external independent actuary to conduct annual valuations of the ASRS plans, specifically to calculate funded status and contribution rates. In addition, the external independent actuary will measure and report to the ASRS Board the annual progression towards a fully funded status, as measured on an unsmoothed asset basis.

The ASRS will retain an external independent actuary to conduct an experience study of the ASRS plans every five years. This actuary may be the same actuary that conducts the annual valuations.

The ASRS will retain an external independent actuary to conduct an actuarial audit of the ASRS Plans every five years. The actuarial firm that performs the actuarial audit shall not be the same firm that performs the actuarial valuation or the actuarial experience study.

The purpose of the actuarial audit shall include:

- The validation and verification of actuarial valuation results for both funding and accounting.
- An evaluation of the reasonableness of actuarial assumptions and methods.
- Compliance with professional standards such as generally accepted actuarial standards.

Separate actuarial valuations shall be prepared for the following plans:

- Pension Plan and Health Insurance Plan
- System
- Long Term Disability Plan

8. Asset Approach to Portfolio Construction

The ASRS portfolio construction process will be substantially based upon a going-concern model where time-series diversifications of return are enabled by asset-valuation smoothing and surplus/deficit amortization.

This going concern model allows two fundamental strategies as follows:

1. Fundamentally asset-only approach to portfolio construction
2. Absorption of interim volatility

The above attributes allow for lower overall expected program costs, while maintaining reasonable contribution rate volatility.

9. Investment Beliefs and Investment Policy Statement (IPS)

ASRS Investment Beliefs have been established to ensure the development of congruent and synergistic investment strategies, and to ensure the effective and efficient allocation of resources. These Investment Beliefs determine the general paradigm within which investment strategies are developed, investment ideas are reviewed, and investment decisions are implemented. The Investment Beliefs support the idea of a well-diversified portfolio utilizing a fundamentally asset-only portfolio construction approach. The ASRS recognizes that a well-articulated Investment Policy Statement (IPS) is important to the long-term success of achieving the ASRS investment objectives and to meet the goal of this Funding Policy. As such, the ASRS has developed the IPS with the following goals:

- To clearly and explicitly establish the objectives and parameters which govern the investment of ASRS assets.
- To establish a target asset allocation that is long-term in nature but dynamic enough to allow the ASRS to take advantage of market opportunities which is expected to achieve its investment rate of return objectives.
- To help protect the financial health of the ASRS.
- To establish a framework for monitoring investment activity, and promote effective communication between the Board, Staff, and other involved parties.

10. Transparency and Mutual Understanding

This Funding Policy will be posted on the ASRS website for easy access.

This Funding Policy will enable a homogeneous understanding of how high-level funding decisions are contemplated at the ASRS by technical experts (e.g. actuaries), decision makers (e.g. ASRS Board and Director), internal policy makers (e.g. ASRS Board and Director) and external policy makers (e.g. Legislature and Executive Office).

11. Governance

This Funding Policy will be referenced in the Board Governance Policy Handbook as a responsibility of the Board to approve, modify, and monitor.

This Funding Policy will be referenced in the Board Governance Policy Handbook as a responsibility of the Director to review, analyze, implement, and present to the Board at the following time periods:

- Every three years,
- Whenever a significant event impacts the policy, or
- Whenever the Director recommends a modification.