City of Seattle

# Seattle City Employees' Retirement System

## Liability-Aware Investing (LAI) for Public Pensions

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# Seattle City Employees' Retirement System (SCERS)

## Background

- Established in 1929
- Supports non-uniformed City employees
- > 20,000 active, retired and deferred members
- $4 billion in assets
- 76% funded status

## Governance

- 7-member Board of Administration/Investment Committee (3 City representatives, 3 member representatives, 1 independent)
- Board-appointed Investment Advisory Committee of local, independent investment experts
- 4-person investment team who, alongside consultant, recommend investments actions to the Board/Investment Committee for approval

# Unconventional thinking

## Portfolios should be more aware of the liabilities that they support

- Opportunities to improve performance/risk assessment and investment strategy

## Down markets offer a silver lining and up markets a fool's paradise

- Changes in expected returns have an offsetting impact via plan liabilities

## Cash is not "risk-free" for a plan with long-lived liabilities

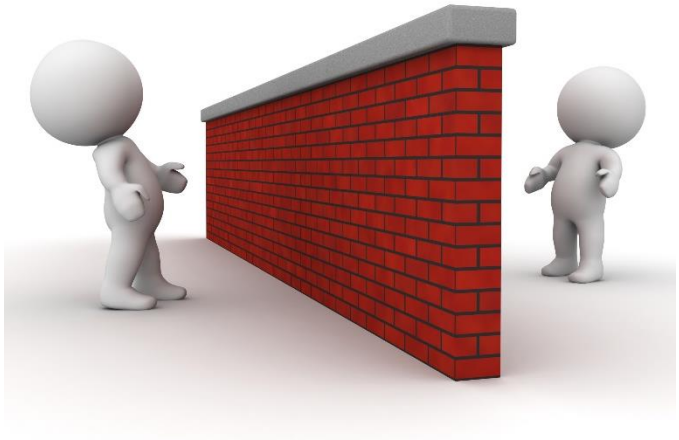
- Cash and other short-term assets introduce substantial reinvestment risk

# Traditional framework

## Assets

**Investment portfolio**

→ Portfolio return



## Liabilities

**Future benefit payments**

→ Benefit structure

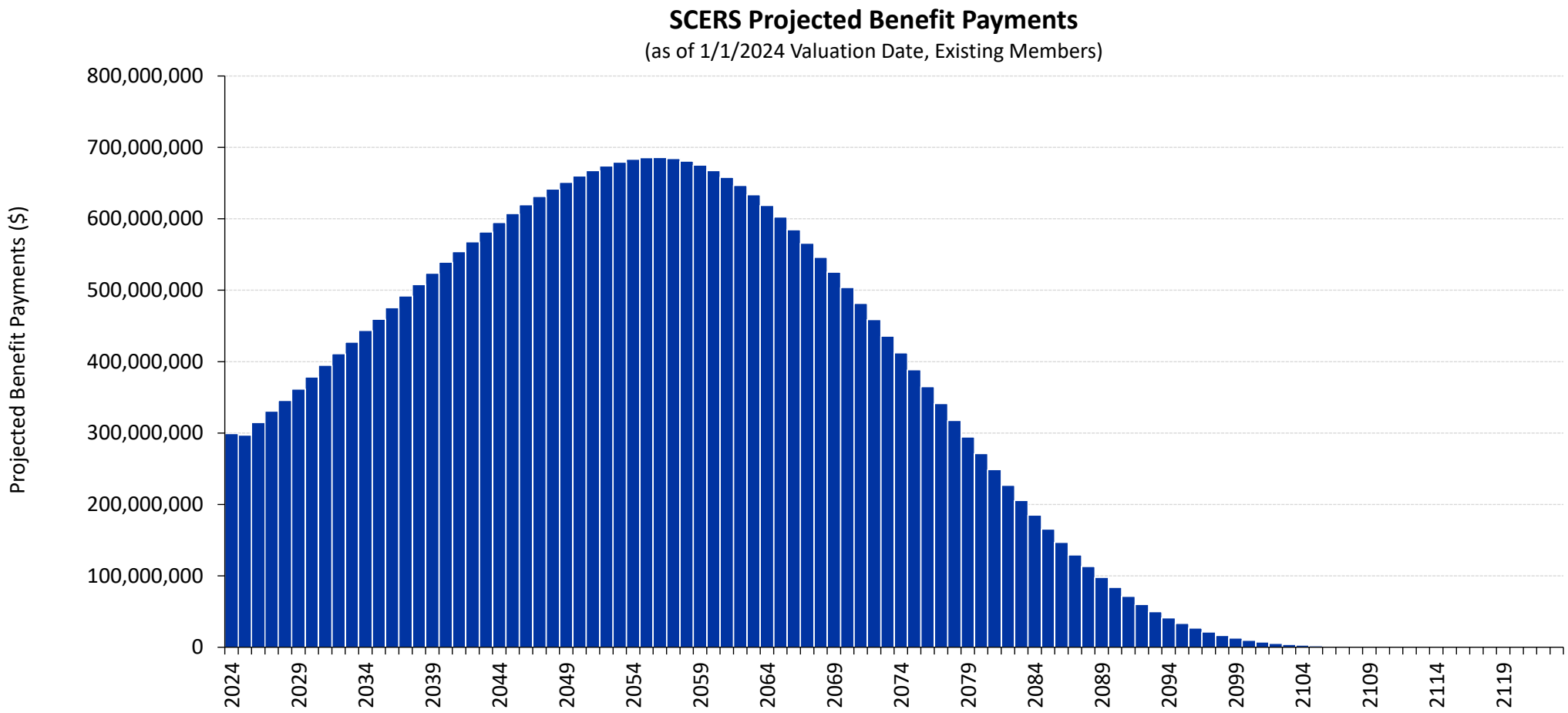
→ Demographics

→ Inflation

**Discount rate**

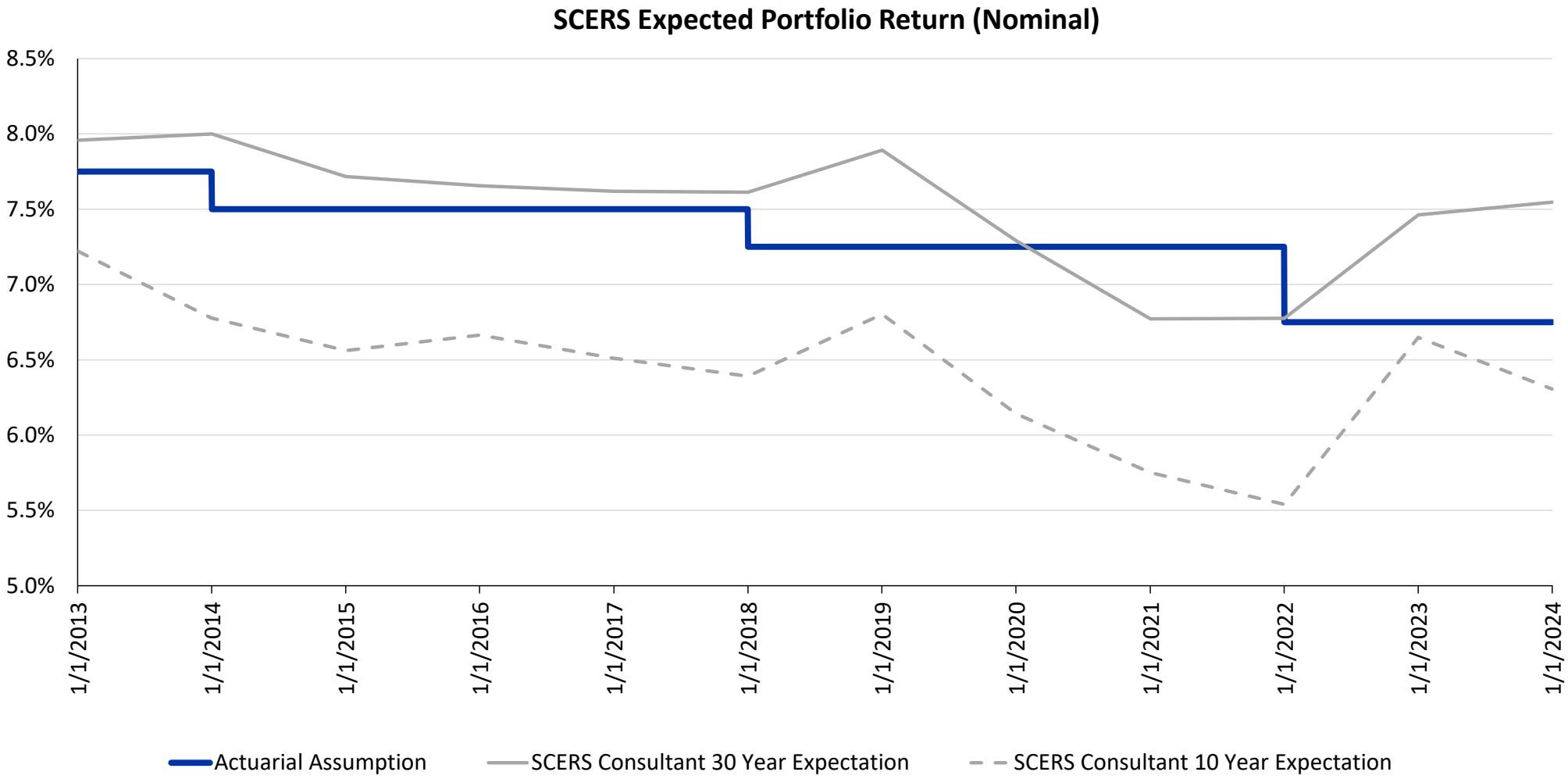
→ Expected portfolio return

# Liabilities: future benefit payments




Source: SCERS's actuary

# Liabilities: discount rate



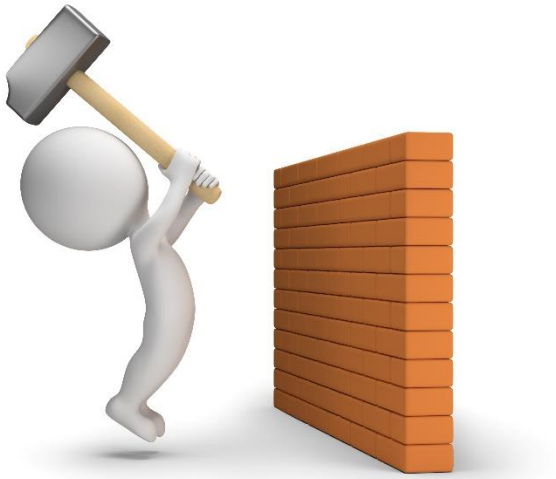

Source: SCERS calculations based on SCERS's investment consultant capital market assumptions

# Liability-Aware Investing (LAI) framework

## Assets

**Investment portfolio**

→ Portfolio return



**Linked & correlated!**

## Liabilities

**Future benefit payments**

→ Benefit structure

→ Demographics

→ Inflation

**Discount rate**

→ Expected portfolio return

# 2022 performance

## Assets

- -9.8% return
- Worst annual performance since Global Financial Crisis
- 13% funding ratio decline based on market value of assets

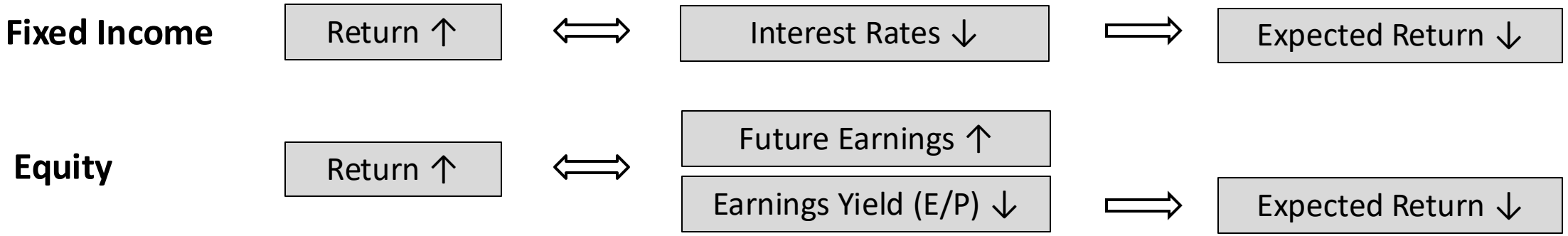
## Plan (Assets + Liabilities)

- Increasing interest rates, earnings yields, rental yields, etc.
- +0.9% change in expected return*, leading to lower liability value

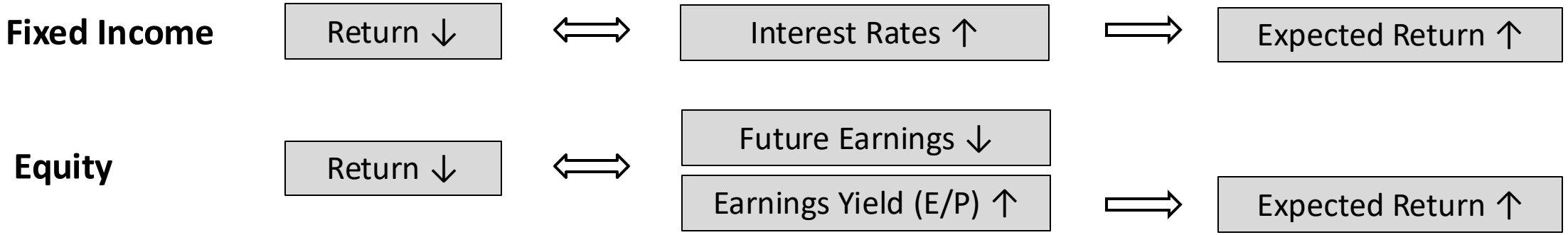
*Blend of investment consultant's 10-year and 30-year return assumptions

# Asset-Liability generalized relationship

## Positive Asset Returns



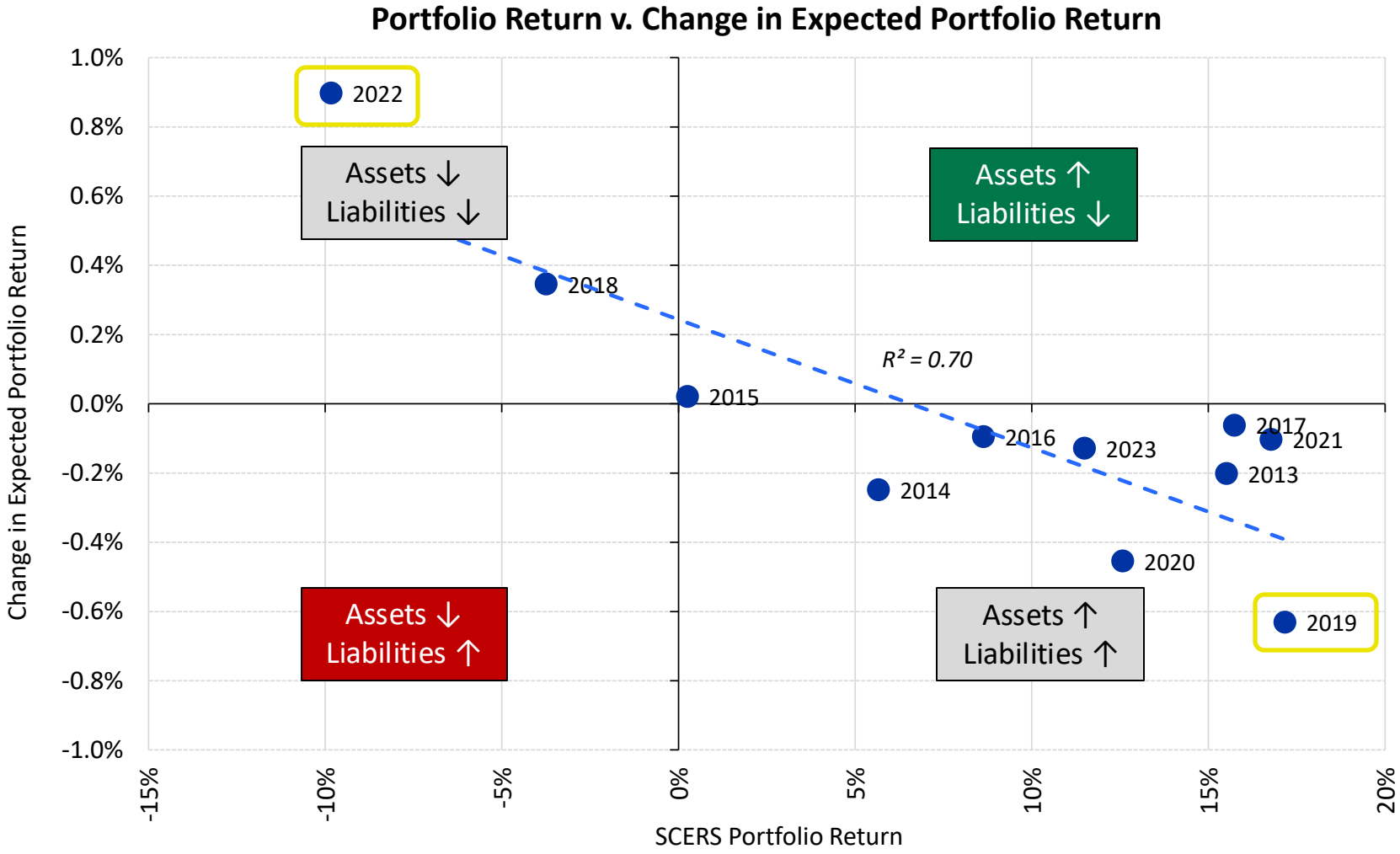

## Negative Asset Returns



# Liability-Aware Investing (LAI) defined

- ✓ **LAI is a broad framework that explicitly recognizes the linkage between plan assets and liabilities**
- ✓ **LAI is tailored to investors, such as public pension funds, who discount their liabilities based on expected portfolio return**
- ✓ **LAI incorporates funded status volatility, as a complement to conventional asset return volatility**
- ✓ **LAI can revolutionize performance & risk assessment and improve investment strategy**

# Plan performance




Note: SCERS-calculated expected portfolio return based on a blend of investment consultant's 10 and 30-year capital market assumptions

# Winners and losers

## Asset class attractiveness when changing to liability-aware

| Long-Term | Intermediate-Term | Short-Term |
|---|---|---|
| • Equity (Public & Private)<br>• Real Estate<br>• Infrastructure<br>• Long-Term Fixed Income | • Core Fixed Income<br>• Credit Fixed Income | • Cash<br>• Hedge Funds<br>• Commodities |
| | | |

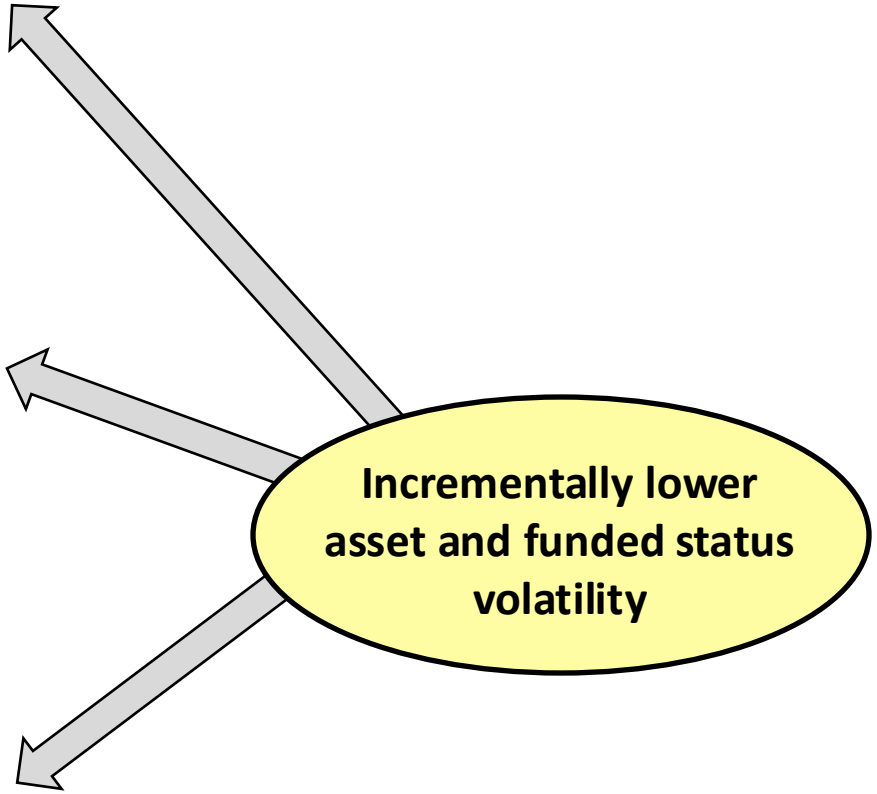
# A missing ingredient

**Long-Term Fixed Income was added to the asset class menu during the most-recent asset-liability study in 2023**

- ✓ **Attractive risk profile**
  Very well-aligned with SCERS's long-lived liabilities
- ✓ **Improved expected return**
  Beneficiary of higher interest rate environment
- ✓ **Tailored structure**
  US Treasury fixed-rate and inflation-protected securities with 10 to 30-year maturity

# Perfecting the recipe

| Target/Metric | Prior | Current | Difference |
|---|---|---|---|
| **Long-Term Asset Classes** | 75% | 79% | **+4%** |
| Public Equity | 48% | 46% | **-2%** |
| Private Equity | 11% | 11% | - |
| Real Estate | 12% | 12% | - |
| Infrastructure | 4% | 5% | **+1%** |
| Long-Term Fixed Income | N/A | 5% | **+5%** |
| **Intermediate-Term Asset Classes** | 25% | 21% | **-4%** |
| Core Fixed Income | 18% | 14% | **-4%** |
| Credit Fixed Income | 7% | 7% | - |
| **Portfolio Expectations** | | | |
| 10-Year Return | 6.5% | 6.5% | - |
| 30-Year Return | 7.5% | 7.5% | - |
| Asset Volatility | 13.5% | 13.3% | **-0.2%** |
| Funded Status Volatility | 7.8% | 7.6% | **-0.2%** |




Source: SCERS's investment consultant

# Want to learn more?

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## Liability Aware Investing for Public Pension Plans

Formulating the role of liabilities in asset allocation and performance measurement

August 2021

**SUMMARY**

- Public pension plans tend to focus disproportionately on investment performance while paying only cursory attention to liability performance. We believe public pension liabilities can, and deserve to, play a more central role in portfolio construction and holistic performance measurement.
- Assets and liabilities are inextricably linked through the expected return on assets (EROA) discounting mechanism. Realized investment returns drive plan assets, but also plan liabilities as a consequence of their impact on asset valuations and thus forward-looking expected returns.
- This paper introduces **Liability Aware Investing (LAI)** as a broad portfolio construction and risk management framework that explicitly incorporates this linkage between plan assets and liabilities and **funded status volatility** as a holistic measurement of total plan risk that quantifies the expected tracking error between assets and liabilities.
- LAI is NOT corporate pension liability-driven investing (LDI) applied to public plans. Rather, LDI can be conceptually understood as a narrow application of the broader LAI framework.
- Asset class risk characteristics are altered when shifting from a traditional asset-only framework to an LAI framework. For example, some like public equity become more attractive while others like cash become less attractive. LAI leads to moderate asset allocation changes relative to traditional asset-only mean-variance optimization techniques. In this sense, it can augment, rather than replace, current industry practices.
- LAI may justify taking on higher levels of asset volatility than a plan would otherwise accept before considering liability impacts, and thus support higher allocations to return-seeking assets. For example, the funded status volatility of public equity is lower than its asset volatility.
- LAI can be a helpful additional tool for communicating total plan risk and performance to investment committees and other plan stakeholders.
- This piece presents the groundwork and initial conceptual framework for LAI including broad principles and risk analytics. In practice, we expect adoption and implementation methods across the public plan universe will vary based on unique plan characteristics, governance and beliefs as well as over time.

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