University of California Retirement Plan

Actuarial Experience Study Overview

UCRS Advisory Board

March 3, 2023

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Purpose of the Study

- Review all economic and demographic assumptions based on recent experience and future expectations
  - Actuarial best practice
  - Must be performed every 3 to 5 years under Plan terms
- Recommends economic and demographic assumptions for
  - Annual UCRP actuarial valuation
  - Asset / liability forecasts
  - Many assumptions are also used in Retiree Health valuation

Selection of Actuarial Assumptions

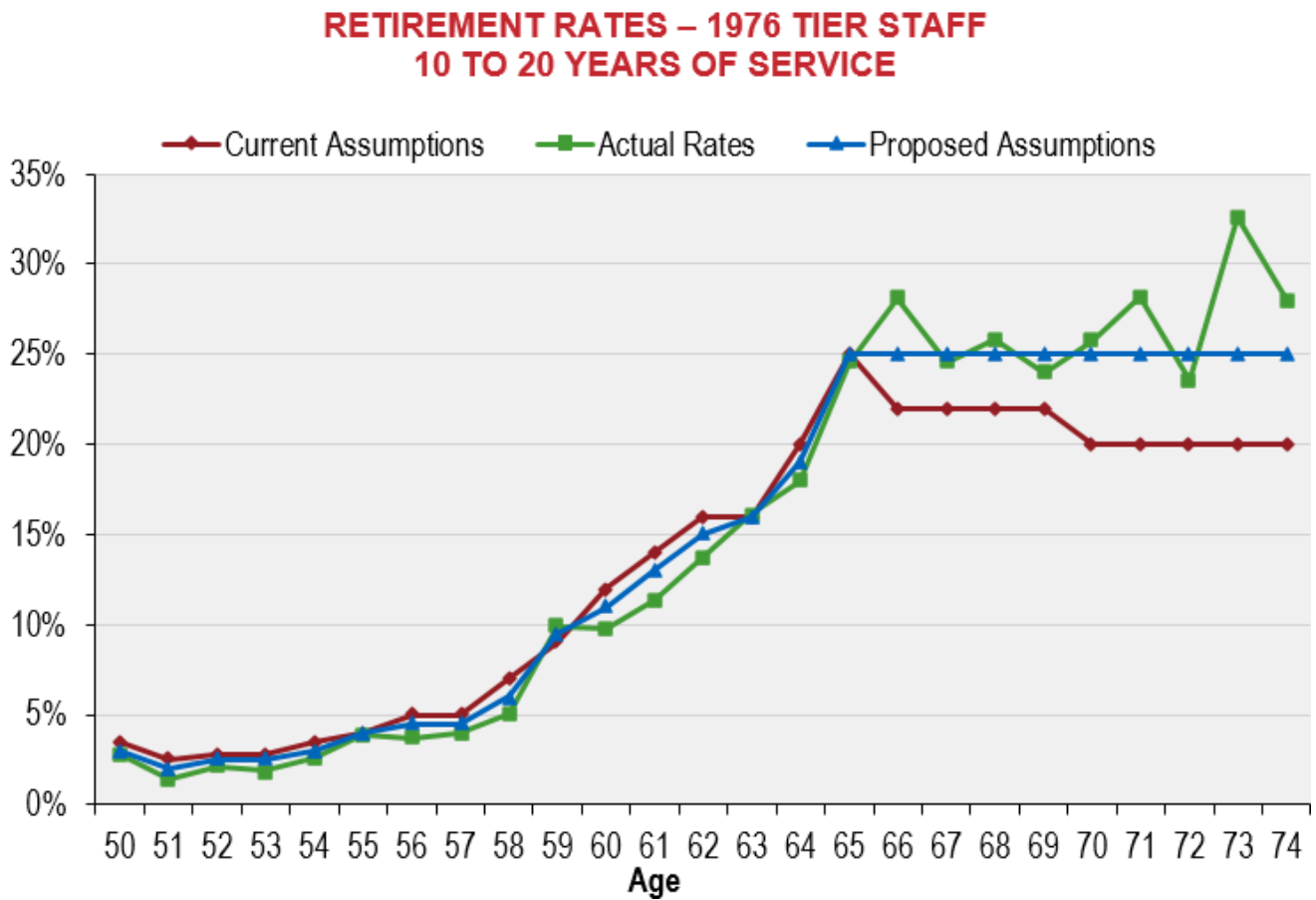
- Two kinds: Demographic and Economic
  - Objective, long term
  - Based on experience analysis
  - Consistency among assumptions, especially economic
- Recent experience and/or future expectations
  - Demographic: balance between current assumptions reflecting prior experience and actual experience during latest period(s)
  - Economic: more forward looking and macroeconomic
- Client specific or not
  - For UCRP, all assumptions are client specific except price inflation
- Desired long-term cost pattern
  - Good assumptions produce level total funding policy contributions
  - Assumption setting should be “results aware” but not “results based”

Types of Assumptions - Demographic

- Mortality
  - Before and after retirement
  - Service, disability and beneficiary
- Termination, Disability, Retirement
- Lump sum cash-out take rates
- Percent married and member/spouse age difference
- Unknown member sex

Retirement Rates Example – Last Experience Study

- The below graph is from the UCRP Actuarial Experience Study during the period July 1, 2014 through June 30, 2018
  - Shows comparison of the actual retirement rate experience with the current and proposed retirement rate assumptions



Types of Assumptions - Economic

- Inflation
- Investment Return
  - Inflation
    - Consistent with salary increase and COLA assumption
  - Real returns by asset class
    - Weighted by asset allocation
    - Average from survey of investment consultants plus OCIO
  - Reduced by assumed investment expenses
  - Reduced by “risk adjustment”
    - Margin for adverse deviation
    - Expressed as a confidence level above 50%
- Salary Increases
  - Price inflation
  - “Across the Board” real wage growth
  - Merit and promotion

UCRP Economic Assumptions

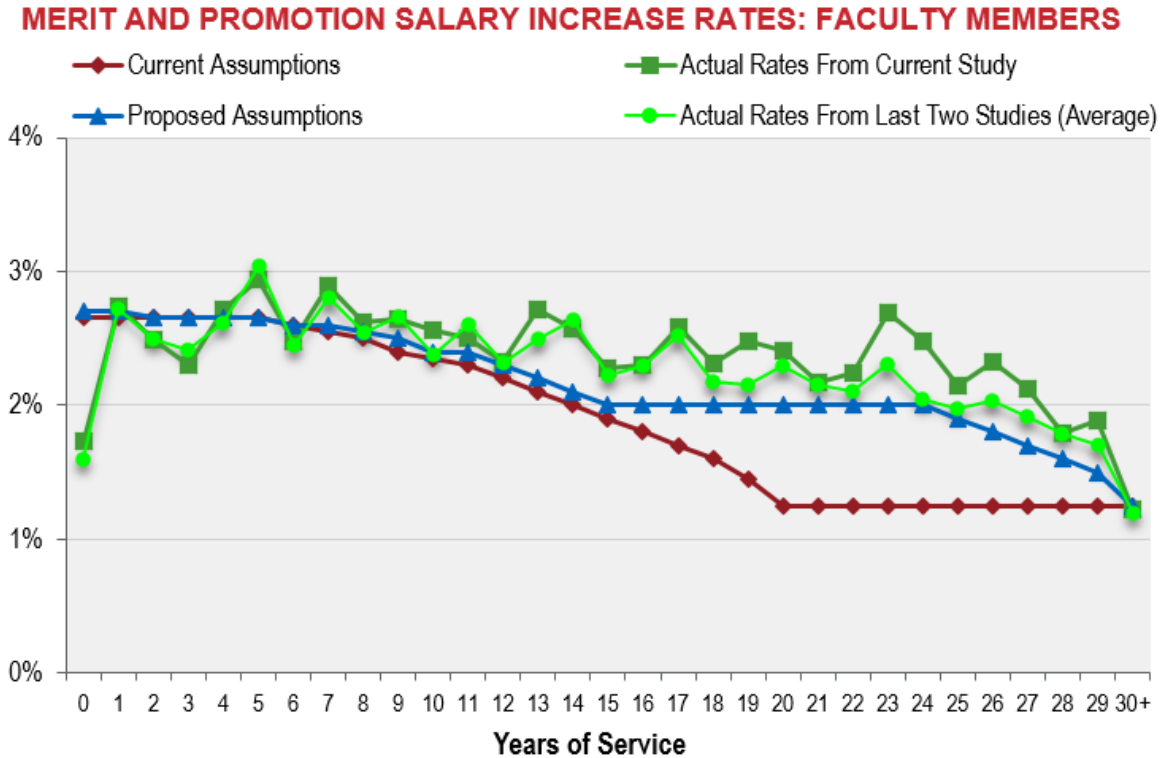
	As Adopted in 2019 Study		As Adopted in 2015 Study	
	Return	Pay*	Return	Pay*
Price Inflation	2.50%	2.50%	3.00%	3.00%
Real Wages	n/a	0.75%	n/a	0.50%
Net Real Return	4.25%**	n/a	4.25%**	n/a
Total	**6.75%**	**3.25%**	**7.25%**	**3.50%**

* Excludes merit and promotional component of assumed individual salary increases

** Recommended return is net of investment expenses and a risk adjustment

Components of UCRP Investment Return Assumption

	As Adopted in 2019 Study	As Adopted in 2015 Study
Assumed Inflation	2.50%	3.00%
Portfolio Real Rate of Return	5.40%	5.55%
Assumed Expenses	(0.80%)	(0.80%)
Risk Adjustment	(0.35%)	(0.50%)
Total	**6.75%**	**7.25%**
Confidence Level	54%	55%

Salary Increase Example – Last Experience Study

- The below graph is from the UCRP Actuarial Experience Study during the period July 1, 2014 through June 30, 2018
  - Shows comparison of the actual merit & promotion salary experience with the current and proposed merit & promotion salary assumptions
    - Total wage growth is comprised of three parts: Inflation, across-the-board increases, and merit & promotion
    - Amounts shown in the graph exclude increases as a result from inflation & across-the-board increases