

Asset Liability Management: First Reading Supplemental Income Plans Recommendations

Stephen Gilmore
Chief Investment Officer

Michele Nix
Chief Financial Officer

Christine Reese
Investment Director

Saeed Daroogheha
Investment Director

Investment Committee
June 15, 2026

Today's Agenda

- Supplemental Income Plans (SIP) Overview
- Analysis and Recommendations
- Next Steps
- Appendix

2026 Asset Liability Management Timeline

← Stakeholder Engagement Throughout Cycle →

June 2026	July 1, 2026	September 2026	
<p>First Read: Supplemental Income Plans ALM Board Vote: Affiliate Trusts ALM Recommendations & Actuarial Assumptions Board Vote: PERF Policy Updates</p> <p><i>Closed Session: PERF Implementation Strategy</i></p>	<p>PERF & Affiliates ALM Effective Date</p>	<p>Board Vote: Supplemental Income Plans ALM</p>	
October 1, 2026	November 2026	February 2027	March 2028
<p>Supplemental Income Plans Effective Date</p>	<p>First Read: ALM Policy Updates</p>	<p>Board Vote: ALM Policy Updates</p>	<p>PERF ALM Midcycle Review</p>

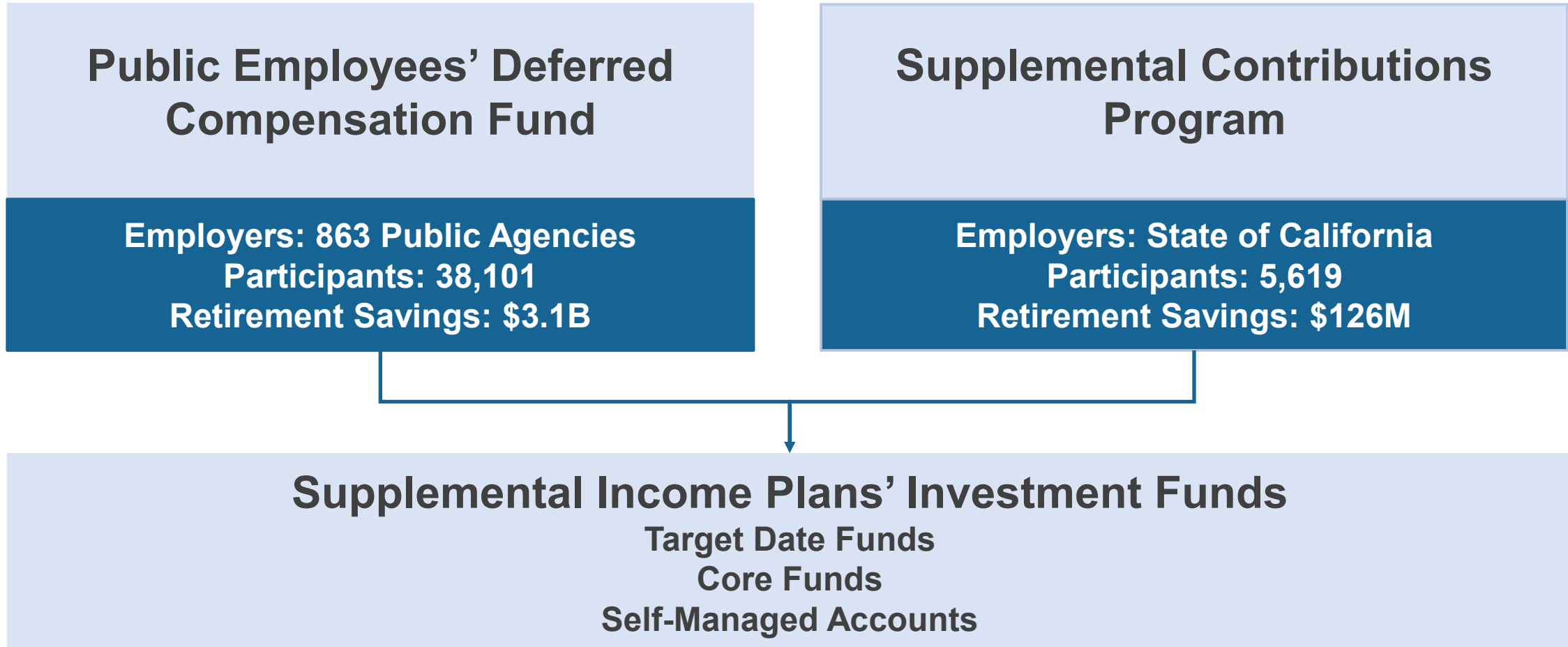


(PERF) Public Employees Retirement Fund. (ALM) Asset Liability Management. Affiliate Trusts: Legislators Retirement System, Judges Retirement System, Judges Retirement System II, Health Care Fund, Long-Term Care Fund, Supplemental Income Plans, California Employers Pension Prefunding Trust, California Employers Retirement Benefit Trust.

Summary of ALM Recommendations

1. Adopt the Capital Market Assumptions
2. Approve adding TIPS as a Target Date Fund allocation
3. Approve the TIPS benchmark, as recommended by Wilshire:
 - Bloomberg US Government Inflation-Linked 1-10 Year Bond Index
4. Adopt the recommended Target Date Fund Glide Path

Program Structure



Investment Fund Lineup

	Participant Investment Choices ¹	Asset Classes	Investment Funds
Target Date Funds	Participants can select a target date fund based on expected retirement date. CalPERS manages the glide path asset allocation.	Global Equity U.S. Fixed Income Real Assets TIPS ² Cash Equivalents	CalPERS Target Date Funds: 2065, 2060, 2055, 2050, 2045, 2040, 2035, 2030, 2025, 2020, and Income Fund
Core Funds	Participants can select broad market index funds and manage their asset allocation.	U.S. Equity International Equity U.S. Fixed Income U.S. Fixed Income Real Assets Cash Equivalents	Russell All Cap Equity Index Fund Global All Cap ex-U.S. Equity Index Fund U.S. Bond Index Fund U.S. Short-Term Govt/Credit Bond Index Fund Real Asset Fund Short-Term Investment Fund
SMA	Participants can select the self-managed account to invest in and manage their allocation.	Various	Mutual Funds, ETFs, stocks from all the major exchanges, bonds, money market funds and certificates of deposit

¹ Participants can select any combination of investment choices and may select more than one target date fund, if desired.

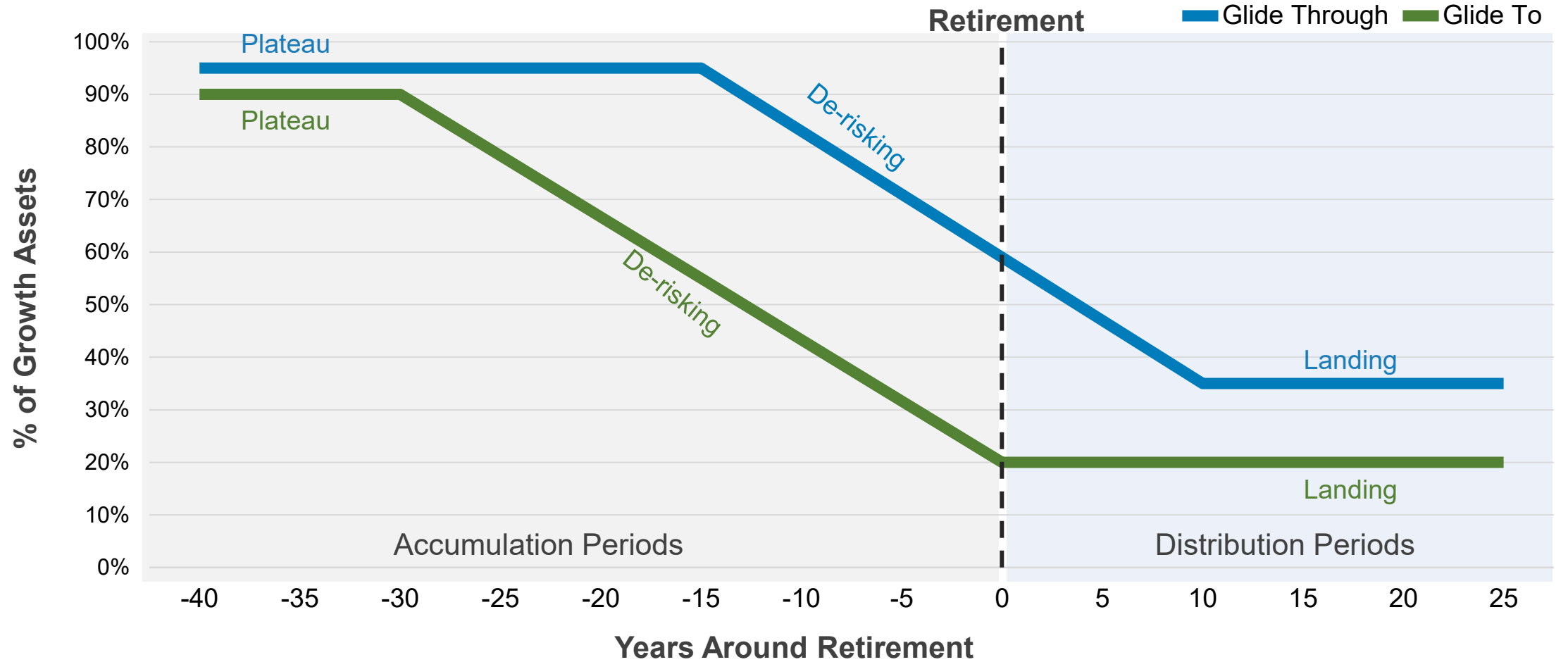
² An allocation to TIPS (Treasury Inflation Protected Securities) is being recommended in this ALM review as a new asset class that is additive to the TIPS allocation in the Real Assets Fund.

Investment Fund Usage

Usage Measure	2022 ALM	2026 ALM	Change
Target Date Fund Balances	54%	56%	+2%
Core Fund Balances	44%	41%	-3%
Self-Managed Account	2%	3%	+1%
Target Date Fund Contributions	75%	80%	+5%
Core Fund Contributions	25%	20%	-5%
Participants only in TDFs	68%	70%	+2%

- Target Date Funds balances and contributions are both trending higher.
- The default investment¹ for a participant that does not make an election is a Target Date Fund.
- Self-Managed Account usage aligns with industry averages.

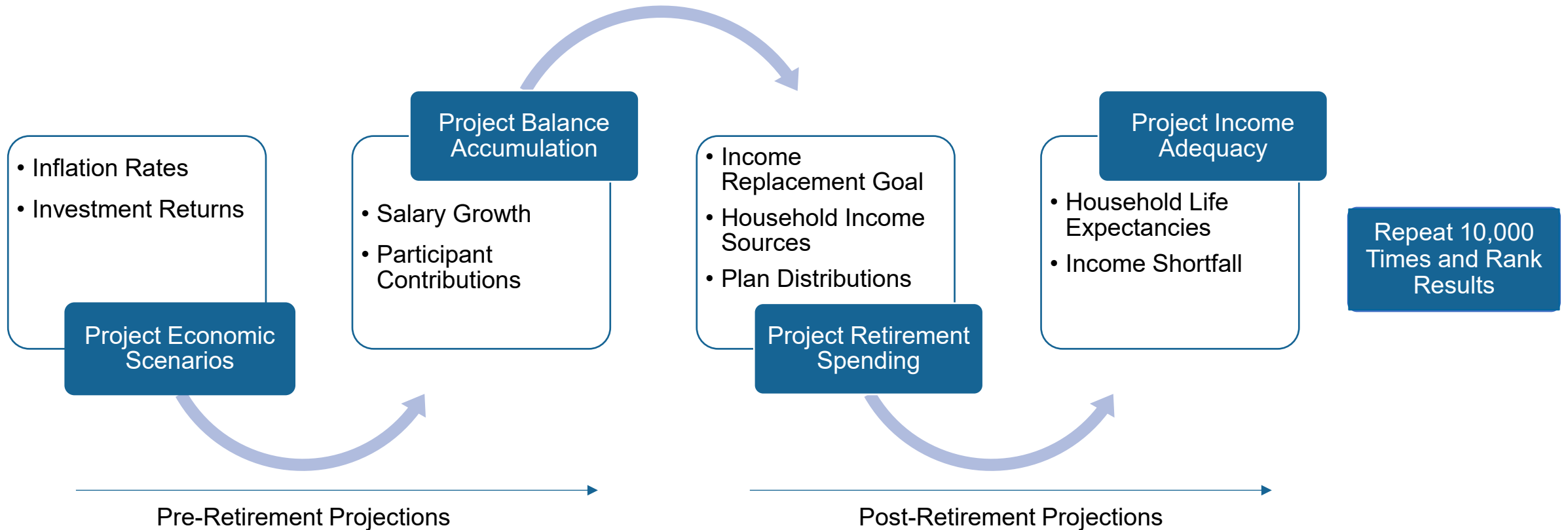
Basic Elements of a Glide Path



Benefits of a Glide Path

- Provides participants with an asset allocation framework that strives to maximize retirement income replacement during distribution years, while alleviating participants from having to manage their individual asset allocation and rebalancing.
- Diversified and risk-adjusted suite of target date funds from which participants can select based on their age or risk tolerance. Glide path reviewed every 4 years in line with the ALM cycle.
- Decades-long time horizon for balance accumulation and de-risking. The glide path has higher risk in the early years when participants typically have lower balances and a long time horizon to weather market volatility. The glide path de-risks in later years as participants near and enter retirement.
- Disciplined approach to quarterly asset class rebalancing and annual adjustments of the asset allocation along the glide path.
- Efficient portfolios built on risk/return trade-off of the entire accumulation and distribution period, instead of a static point of time.

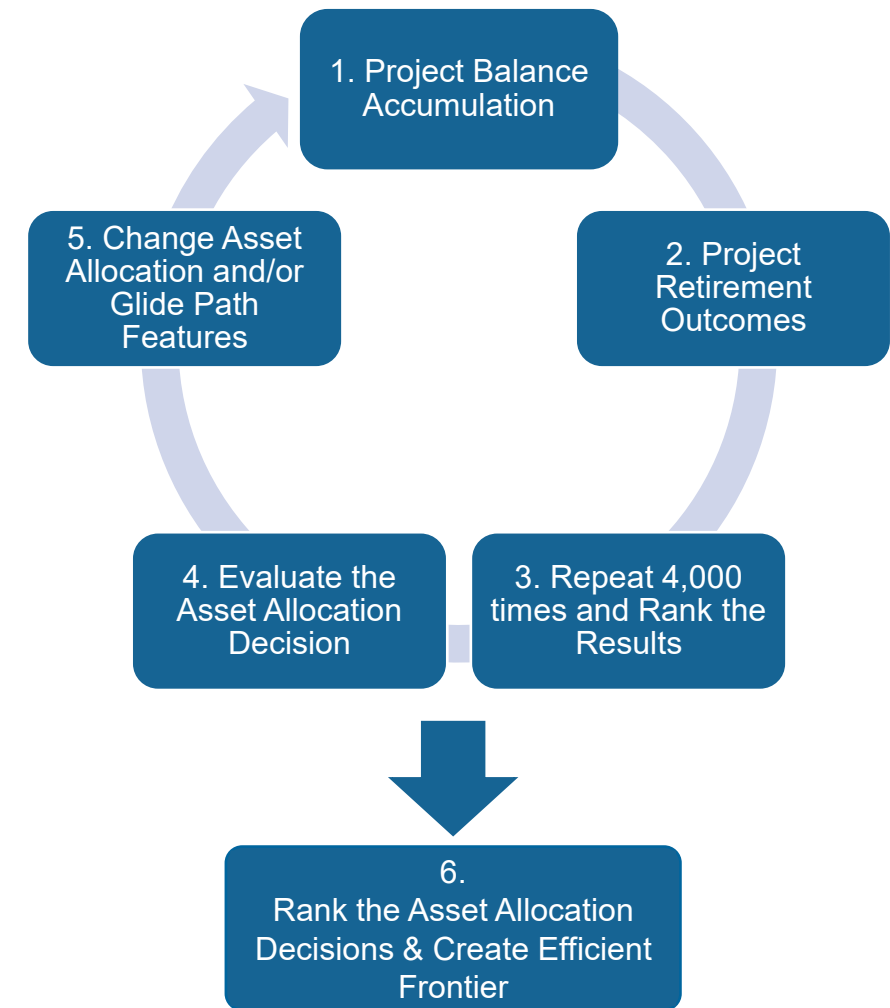
Retirement Income Model¹



¹ Retirement Income Model is provided by RVK Inc., an investment consultant with expertise in defined contribution glide path analysis and design.

Glide Path Optimization Methodology¹

- Success is measured by final retirement outcomes (income security) rather than isolated asset performance.
- The strategy accounts for real-world variables like participant behavior (contributions/withdrawals), inflation, market volatility, and life expectancy.
- Asset allocation decisions are grounded in the specific demographics of the participants and the reality of market uncertainty.
- Portfolio structures are evaluated and prioritized based on their efficiency in meeting specific income replacement goals while staying within defined risk limits.



CMAAs: Expected Returns, Volatility & Correlation

Asset Class	Benchmark Index	20-Year Expected Return	20-Year Expected Volatility	Asset Class Correlation				
				Global Equity	Real Assets	Fixed Income	TIPS	Liquidity
Global Equity	Global Equity Composite ¹	6.6%	16.6%	1.00	0.70	0.19	0.25	0.00
Real Assets	Real Asset Composite ¹	5.9%	11.6%	0.70	1.00	0.24	0.46	0.01
Fixed Income	Bloomberg U.S. Aggregate	4.2%	4.5%	0.19	0.24	1.00	0.61	0.11
TIPS ²	Bloomberg US Gov. Inflation-Linked 1-10 Year Bond Index	3.9%	4.5%	0.25	0.46	0.61	1.00	0.08
Liquidity	BofA Merrill Lynch 3-Month US Treasury Bill	3.3%	0.7%	0.00	0.01	0.11	0.08	1.00

Data as of June 30, 2025 & sourced from CalPERS' CMA Survey



¹ Global Equity Composite: 63% Russell 3000 Index and 37% MSCI ACWI ex-USA IMI. Real Asset Composite: 25% Bloomberg Enhanced Roll Yield Index, 25% S&P Global Large/Mid Cap Commodity and Resources, 10% Dow Jones U.S. Select REIT, 20% Bloomberg U.S. Government Inflation-Linked 1-10 Year Bond, and 20% S&P Global Infrastructure.

² TIPS are Treasury Inflation Protected Securities

Glide Path Demographic Inputs

Input ¹	2022 ALM	2026 ALM	Change
Starting Age	21	21	-
Retirement Age	62	62	-
Years of Service	42 years	41 years ²	Down 1 year
Household Size	2 members	2 members	-
Annual Contribution	1.9% - 3.2%	1.0% - 2.8%	Down .9% to .4%
Income Replacement Goal	83%	89%	Up 6%
Pension Formula	2% at age 62	2% at age 62	-
Social Security Coverage	None	None	-

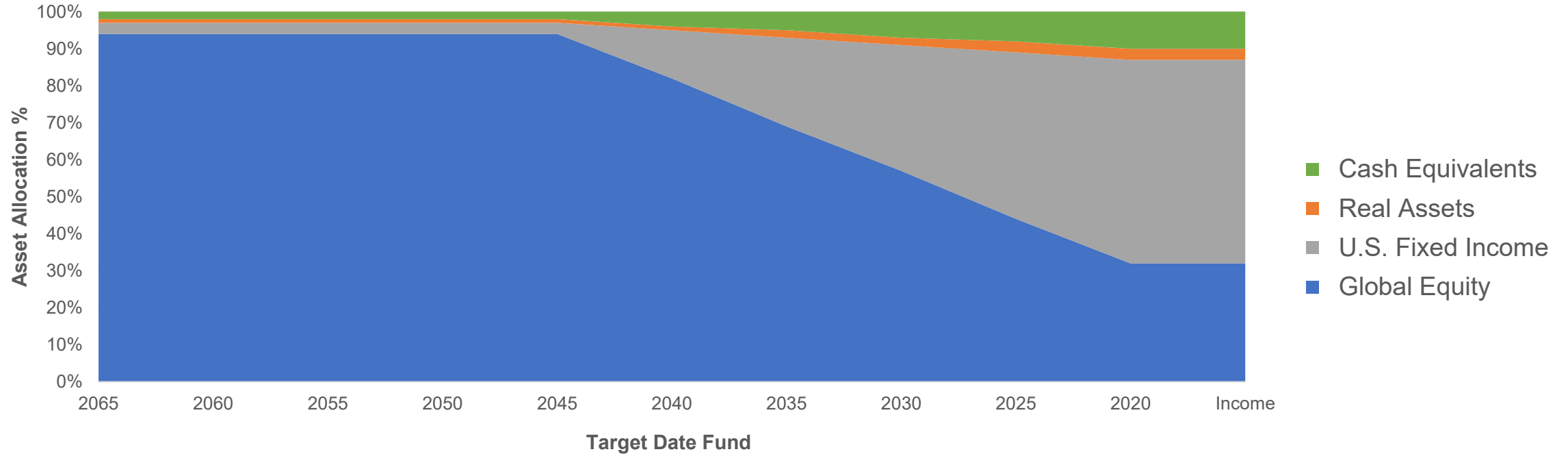
Evaluating TIPS as an Addition to the Glide Path

The optimization model shows that a small allocation to 1-10 Year TIPS across the glide path could achieve comparable retirement outcomes at lower levels of portfolio risk. A historical analysis was conducted to evaluate the performance of TIPS against short-duration bonds and cash.

Historical Analysis Results:

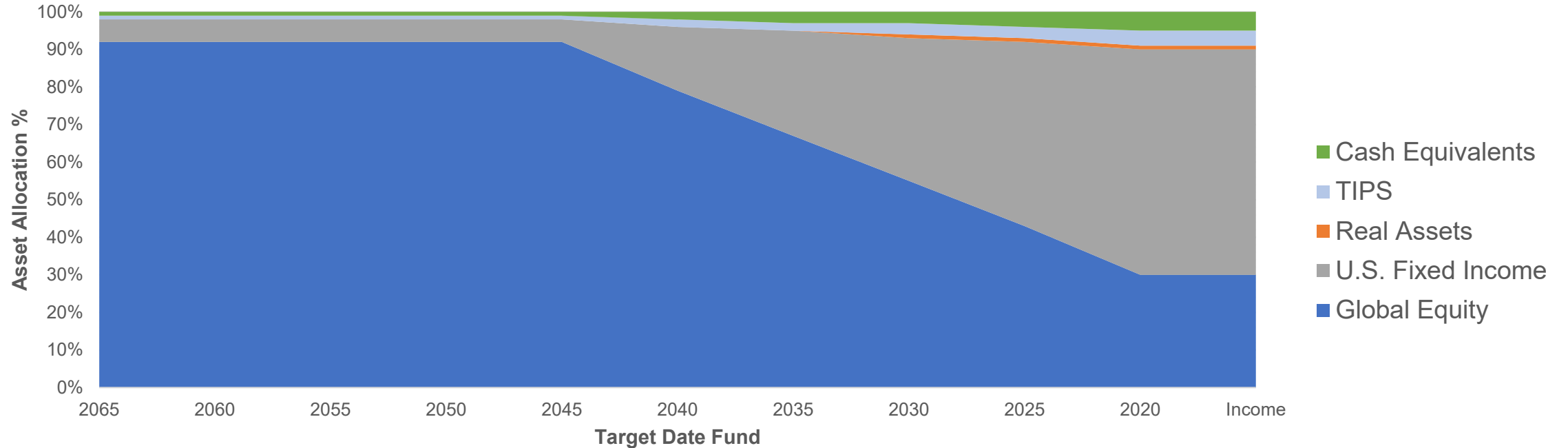
- 1-10 Year TIPS has protected purchasing power, on average, over the available return history, outperforming cash and short duration bonds.
- TIPS have outperformed cash across most inflation regimes and market environments, with the largest advantage when cash was most impaired during periods of high inflation and extended low-rate cycles.
- Rate shock is the primary risk for duration-sensitive bonds; TIPS may also underperform in a deflationary or disinflationary environment.

Current Glide Path: 2026 Asset Allocation



Asset Classes	2065	2060	2055	2050	2045	2040	2035	2030	2025	2020	Income
Global Equity	94%	94%	94%	94%	94%	82%	69%	57%	44%	32%	32%
Real Assets	1%	1%	1%	1%	1%	1%	2%	2%	3%	3%	3%
U.S. Fixed Income	3%	3%	3%	3%	3%	13%	24%	34%	45%	55%	55%
Cash Equivalents	2%	2%	2%	2%	2%	4%	5%	7%	8%	10%	10%

Recommended Glide Path: 2026 Asset Allocation



Asset Classes	2065	2060	2055	2050	2045	2040	2035	2030	2025	2020 ¹	Income
Global Equity	92%	92%	92%	92%	92%	79%	67%	55%	43%	30%	30%
Real Assets	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%
TIPS	1%	1%	1%	1%	1%	2%	2%	3%	3%	4%	4%
U.S. Fixed Income	6%	6%	6%	6%	6%	17%	28%	38%	49%	60%	60%
Cash Equivalents	1%	1%	1%	1%	1%	2%	3%	3%	4%	5%	5%



¹ In 2026, the 2020 Fund allocation will be equivalent to the Income Fund allocation. In 2027, the 2020 Fund will be closed and participants will be moved into the Income Fund. Also in 2027, the 2070 Fund will also be opened and have the same allocation as the 2065 Fund.

Glide Path Allocation Comparison

Current 2026 Policy Allocation

Asset Classes	2065 Fund	2060 Fund	2055 Fund	2050 Fund	2045 Fund	2040 Fund	2035 Fund	2030 Fund	2025 Fund	2020 Fund	Income Fund
Global Equity	94%	94%	94%	94%	94%	82%	69%	57%	44%	32%	32%
Real Assets	1%	1%	1%	1%	1%	1%	2%	2%	3%	3%	3%
U.S. Fixed Income	3%	3%	3%	3%	3%	13%	24%	34%	45%	55%	55%
Cash Equivalents	2%	2%	2%	2%	2%	4%	5%	7%	8%	10%	10%

Recommended 2026 Policy Allocation

Global Equity	92%	92%	92%	92%	92%	79%	67%	55%	43%	30%	30%
Real Assets	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%
U.S. Fixed Income	6%	6%	6%	6%	6%	17%	28%	38%	49%	60%	60%
TIPS	1%	1%	1%	1%	1%	2%	2%	3%	3%	4%	4%
Cash Equivalents	1%	1%	1%	1%	1%	2%	3%	3%	4%	5%	5%

Allocation Shift from Current to Recommended for 2026 Policy Allocation

Global Equity	-2%	-2%	-2%	-2%	-2%	-3%	-2%	-2%	-1%	-2%	-2%
Real Assets	-1%	-1%	-1%	-1%	-1%	-1%	-2%	-1%	-2%	-2%	-2%
U.S. Fixed Income	3%	3%	3%	3%	3%	4%	4%	4%	4%	5%	5%
TIPS	1%	1%	1%	1%	1%	2%	2%	3%	3%	4%	4%
Cash Equivalents	-1%	-1%	-1%	-1%	-1%	-2%	-2%	-4%	-4%	-5%	-5%

Glide Path Projections¹

The recommended glide path results in slight improvements for many measures for the median participant.

Measure ¹	Current Glide Path	Recommended Glide Path	Difference	Rationale
Expected Return	5.68%	5.67%	-0.01%	<ul style="list-style-type: none"> Compared to the current glide path, the recommended glide path expected return decreases by 1 basis point, expected volatility decreases by 28 basis points, and the projected ending balance at retirement is slightly increased. Although the probability of shortfall is marginally higher, the years before drawdown stays constant, and additional contribution, probability of negative returns near retirement and worst-case annual returns at distribution all show improvement. The addition of a TIPS standalone allocation reduces risk and increases inflation protection.
Expected Volatility	12.25%	11.97%	-0.28%	
Ending Balance	\$234,221	\$234,382	+\$161	
Income Replacement	65.2%	65.1%	-0.1%	
SIP Income Replacement	4.6%	4.6%	0%	
Probability of Shortfall	93.7%	94.1%	+0.4%	
Years Before Drawdown	8	8	0	
Additional Contribution	5.2%	5.1%	-0.1%	
Probability of Negative Returns Near Retirement	22.9% – 3.0%	21.7% – 2.2%	-1.2% – 0.8%	
Worst-case Annual Return at Distribution (5 th percentile)	-6.45%	-5.91%	+0.54%	

Summary of ALM Recommendations

1. Adopt the Capital Market Assumptions
2. Approve adding TIPS as a Target Date Fund allocation
3. Approve the TIPS benchmark, as recommended by Wilshire:
 - Bloomberg US Government Inflation-Linked 1-10 Year Bond Index
4. Adopt the recommended Target Date Fund Glide Path

Next Steps

- Take Board feedback from today
- Second reading at September Investment Committee
- Upon adoption, administratively update Investment Policy
- Work with Program Team on Participant & Employer Communications
- Implement new Glide Path, effective October 1, 2026
- Implement Fund Changes in 2027:
 - Sunset 2020 Target Date Fund
 - Open 2070 Target Date Fund

Appendix

Glide Path Demographic Inputs - Definitions

Input	Definition
Starting Age	The projection period starting age is 21 years. The model is tailored to the typical demographic profile of new full-career employees who enroll in SIP, invest in the CalPERS 2065 Target Retirement Date Fund, and start saving annually, consistent with the Plans' historical saving patterns.
Retirement Age	While median retirement age for current retirees is 59, based on applicable pension benefit formulas for current 457 Plan employees, assuming a small delay to age 62 is reasonable given changes in pension benefits.
Years of Service	Calculations for retirement benefits are based on 41 years of service, aligning with the new member full career projections.
Household Size	A household is assumed to be comprised of two individuals, with a single wage earner. Using two wage earners may not alter the income replacement goal considerably, as it increases both income and income replacement requirements.
Annual Contribution	Contribution rates used are consistent with median age group contribution for eligible participants.
Income Replacement Goal	Estimate of the level of retirement income, adjusted for inflation, relative to income earned before retirement, that would be required to maintain the pre-retirement standard of living. Based on a Standard of Living Benchmark.
Pension Formula	Pension benefit estimated using CalPERS Retirement Estimate Calculator based on the weighted average full retirement age and benefit multiplier of current 457 Plan employees. Since most active SIP employees are in the 457 Plan, the Plan's demographic attributes are utilized in this analysis.
Social Security Coverage	Assumes no Social Security Coverage during the tenure with CalPERS but that participants accrued Social Security credit prior to joining CalPERS. Approximately 60% of public agency employees are excluded from Social Security.

Glide Path Projections - Definitions

Measure	Definition
Expected Return	Projected annualized return during the accumulation phase.
Expected Volatility	Projected annualized volatility during the accumulation phase.
Ending Balance	Projected balance accumulation at age 62 for the median participant, saving at the current median savings rate.
Income Replacement	Estimated annual retirement income, adjusted for inflation, as a percent of final salary prior to retirement, that will be achieved from their pension and SIP savings.
SIP Income Replacement	Estimated annual retirement income, adjusted for inflation, as a percent of final salary prior to retirement, that will be achieved from SIP savings alone.
Probability of Shortfall	Probability that a participant will deplete the entire SIP balance in retirement and then rely solely on pension income and personal savings.
Years Before Drawdown	Number of years the median participant can draw on their SIP savings balance to meet any income shortfall.
Additional Contribution	Estimated amount of additional savings as a percent of salary a participant would need to save annually to reduce the probability of shortfall down to 50%.
Probability of Negative Returns Near Retirement	Probability that cumulative investment returns are negative over the last 1-year, 5-year, and 10-year periods prior to retirement, using simulated market scenarios.
Worst-case Annual Return at Distribution	Worst-case annualized return in a severe downside scenario at the point of retirement, representing the 5th percentile of simulated outcomes (where 95% of scenarios are better).