# Total Fund Portfolio Management Annual Program Review

As of Quarter Ending on June 30, 2026

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November 16, 2026

CalPERS

# Today's Presentation



TFPM Program Overview



Market Environment



Key Initiatives and Business Updates



Appendix



All data as of Fiscal Year End (FYE) June 30, 2026 unless otherwise noted.

# TFPM Program Overview

TFPM is accountable for total portfolio processes including research and analytics, scenario analysis, portfolio design, financing and liquidity, developing new strategies, and for managing exposures.

TFPM is focused on funding stability, cost minimization, and balance sheet monetization.

## Key Program Functions & Accomplishments

### Portfolio Strategy

- Evaluated investment strategies and their risk-return profiles
- Developed diversified strategies to strengthen Total Fund resilience

### Portfolio Construction

- Designed New Process for Total Portfolio Approach (TPA)
- Integrated liquidity and allocation planning

### Liquidity Management

- Maintained Average Surplus Liquidity Ratio of 3.5x
- Kept Funding Costs Consistently Below Target
- Deployed Excess Capital to Generate Excess Return

### Beta Management

- Oversaw $90 Billion in TPA Transition Trades
- Managed Portfolio Incorporating $95 Billion of Private Asset and Pension Flows

# TFPM has a Central Role in Managing the Fund

## Manages and supports the full spectrum of activities needed to implement the Total Portfolio

**Governance**

- Investment Governance
- Board Communications

**Research**

- Economic & Portfolio Analysis
- Investment Strategy Analysis (ISA)

**Planning**

- ALM
- Strategy Development
- Asset Allocation & Commitment Plans

**Implementation**

- Portfolio Completion & Rebalancing
- Financing & Liquidity
- Active Balance Sheet

# Economic and Portfolio Analysis

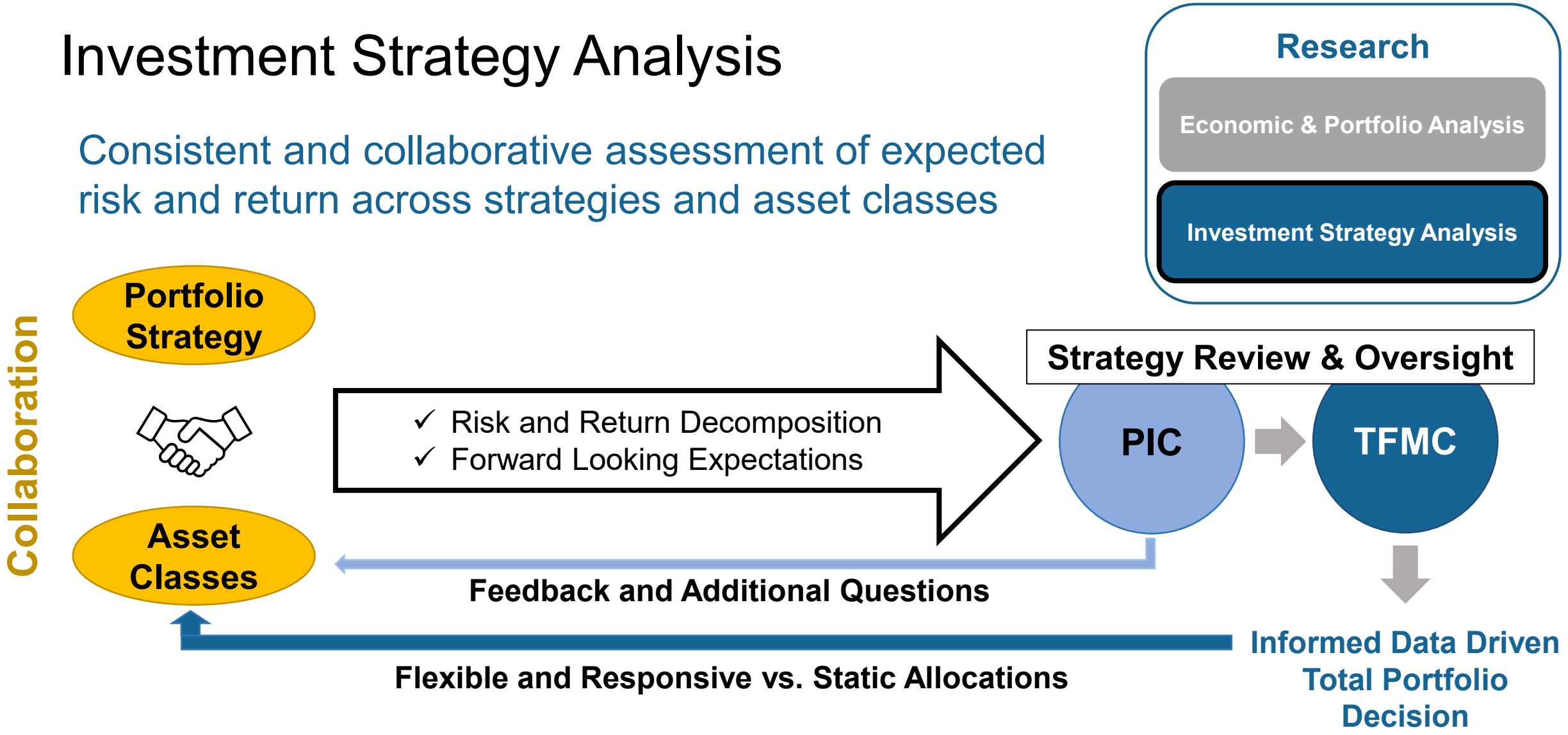



## Evidence-based analytical & scenario framework for informing investment decisions

- Reshaped internal portfolio analytics to align with TPA
- Integrated scenario analysis into the portfolio construction model
- Provided regular geopolitical, macroeconomic, and financial analysis for Board and internal teams
- Provided ongoing expert input to shape future data and technology architecture

# Investment Strategy Analysis

Consistent and collaborative assessment of expected risk and return across strategies and asset classes




- PIC: Portfolio Implementation Committee
- TFMC: Total Fund Management Committee

# Asset-Liability Management (ALM)

## Key contributor to 2025 ALM process, supporting the adoption of Total Portfolio Approach, the Reference Portfolio, and Active Risk Limit

- Conducted ALM analysis for PERF
- Collaborated with the Affiliate Investment Program (AIP) and Enterprise Partners for the Affiliate Funds' ALM






* Externally managed funds' ALM validated by TFPM

# Strategy Development

## Enhance the Total Fund's risk-return profile and resiliency through complementary diversifying strategies




- Building on the foundation established through Insurance-Linked Securities (ILS), secured approval to incubate the Diversifying Multi-Strategy (DMS) initiative and established nine cross-functional INVO workstreams to support its successful incubation and execution
- Developed three distinct DMS strategies: Risk Mitigation, Absolute Return, and Dynamic Asset Allocation. Each designed to deliver unique benefits to the Total Fund
- Designed the DMS governance and operating model, setting clear objectives for fiscal year 2026-27 and ensuring robust oversight and accountability

# Asset Allocation & Commitment Plans

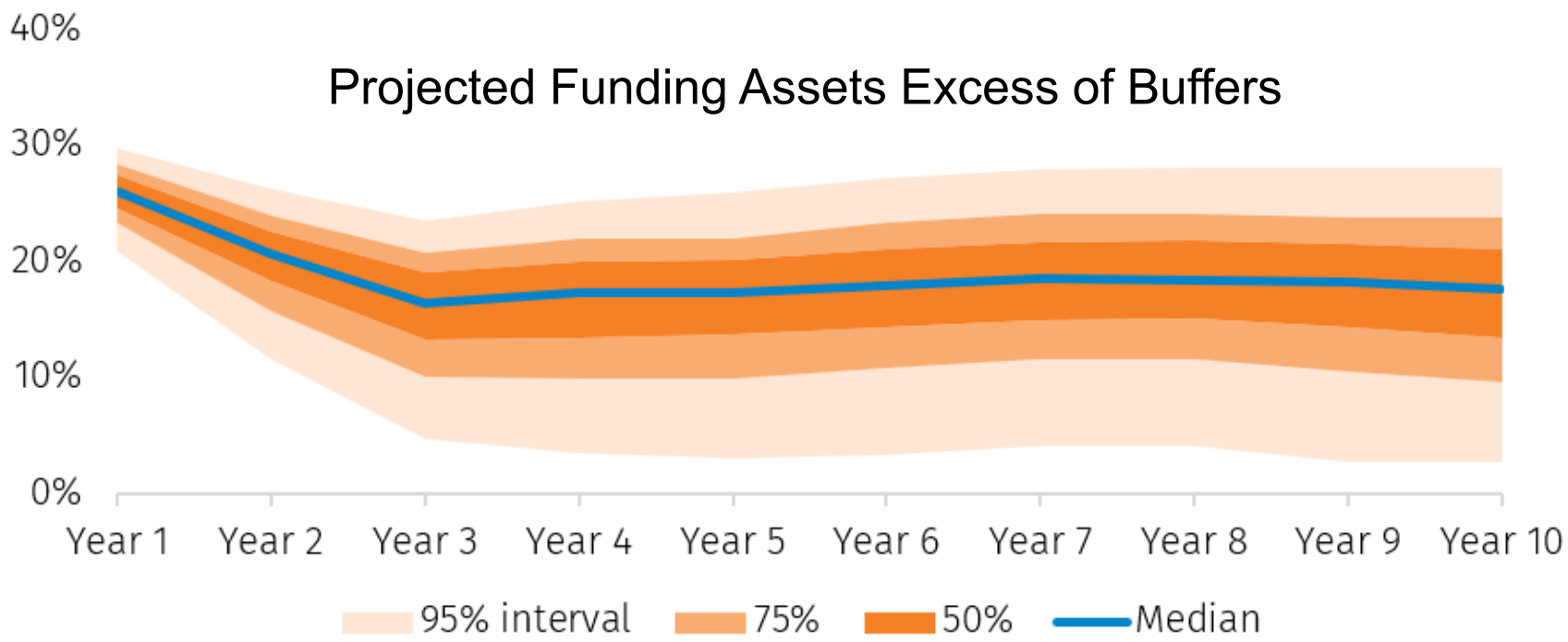
## Capital and risk budgeting, managing the allocation of Active Risk, liquidity, and leverage

- Designed and managed INVO's new TPA allocation process
- Improved coordination of private asset commitment planning to support ongoing growth in illiquid assets
- Introduced modeling approach that integrates liquidity projections directly into traditional optimizer-based allocation



# Projecting Liquidity to Enable Active Management

## Efficient use of liquidity is critical




**Planning**

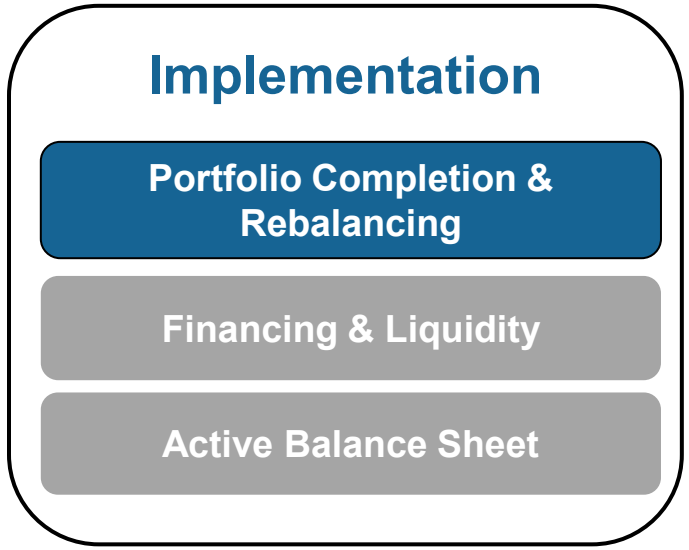
- ALM
- Strategy Development
- **Asset Allocation & Commitment Plans**

Both under-utilizing and over-utilizing available liquidity can be costly

Long-term modeling provides confidence to increase active management while maintaining a conservative liquidity posture

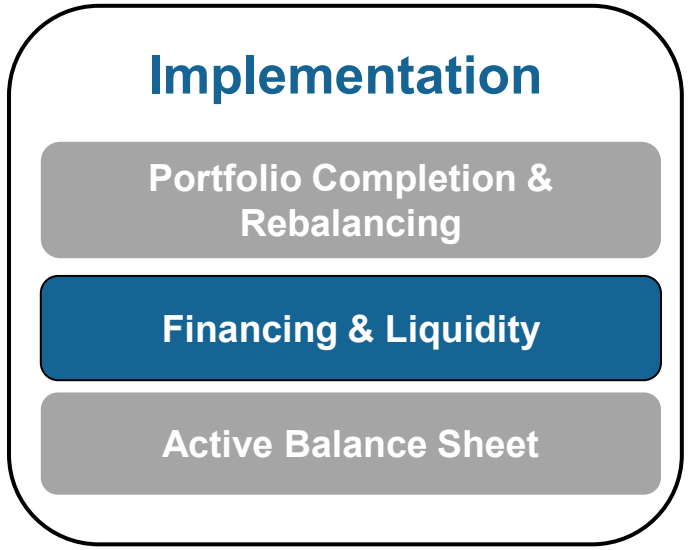
# Portfolio Completion & Rebalancing

## Ensuring total portfolio risk profile remains consistent with objectives and constraints




- Designed the TPA funding mix framework which creates a common language for risk across the plan
- Managed TPA portfolio transition, planning and coordinating $90B of trading activity
- Maintained consistent day to day PERF risk profile, while facilitating $64B gross pension flows and $32B capital calls and distributions

# Financing & Liquidity Management




## Enabling exposure and risk management flexibility through provision of financing and liquidity

- Conducted successful first Liquidity Tabletop exercise across INVO leaders
- Diversified funding capacity with addition of new securities lending agent, asset types, and counterparties
- Further centralized Liquidity Management with internal TFPM team realignments

# Liquidity Risk Management

## Ensuring Safety and Soundness: Maintaining Sufficient Liquidity so the Portfolio can always stay on Strategy

| Reserving for Liquidity Risk | Examples |
|---|---|
| 1. Model all **known** cash flows | Pension payments, capital calls, rebalancing |
| 2. Reserve for **unknown** cash flow risks | Margin calls, unexpected payments or capital calls |
| 3. Reserve for funding roll risks | Securities lending returns, market impairments |
| 4. Reserve extra safety buffer for **unknown unknowns** | Humility factor, model estimation errors |

| Multiple Layers of Enhanced Protection | Description |
|---|---|
| **1. Governance** and accountability | CIO/DCIO oversight, guidelines, consultant reviews |
| **2. Diversification** across multiple dimensions | Funding channels, maturities, counterparties, asset types, reinvestments |
| **3. Responsiveness** to new information | Adapt to risk assessments and portfolio changes, daily monitoring, weekly meetings |
| **4. Test and evolve** the platform and processes frequently | Tabletop exercises, stress testing, response plans, improve reporting, increase automation |

# Liquidity Risk Management

## Operating Liquidity Management

## Long-Term Portfolio Liquidity

**Reporting Metric:**
**Surplus Available Liquidity**

**Liquidity Risk Reserves**




**Readily Accessible Liquidity**

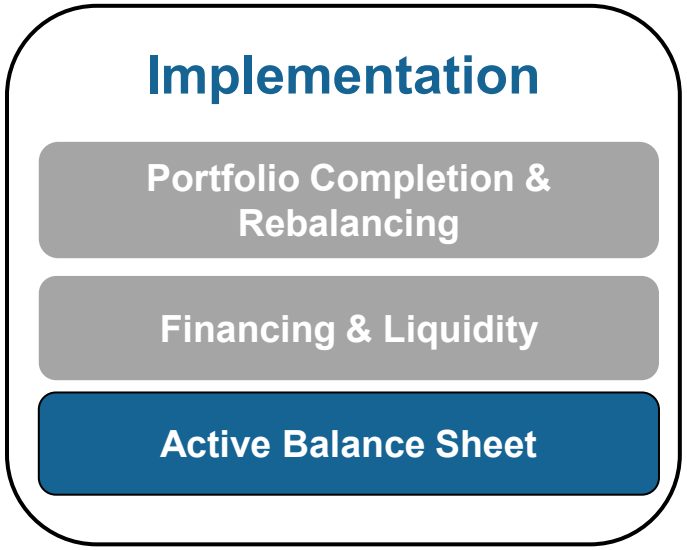
**Liquid Portfolio Assets**

Not Drawn to Scale

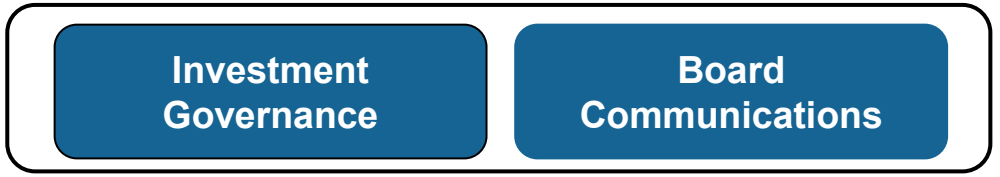
# Active Balance Sheet Management

## Ensuring portfolio resilience through liquidity pre-positioning and monetizing balance sheet strength

- Monetized balance sheet strength (~+$800mm value-added last year)
- Expanded investments into private market financing opportunities
- Added new public market cash reinvestment strategies
- Expanded access to posted collateral for additional liquidity and efficiency



# Governance




## Advising on the evolution of frameworks that shape how investment decisions are made

- Helped design the TPA risk governance model
- Engaged with Board consultants on ongoing TPA development
- Supported updates to total fund portions of investment policy
- Ran TPA educational workshops customized to each Program as part of internal change management

# Macro and Market Environment

## Key Trends and Considerations

- Public equity market returns were strong, despite unexpected news and events (tariffs/ conflict)
- The AI-build-out and fiscal spending has supported corporate earnings and economic resilience
- In the US, higher US interest rates largely reflect the robust underlying economy whereas globally, yields have been sensitive to higher inflation and concerns around fiscal sustainability

# Macro and Market Environment

## Current Concerns

- A rising cost of capital could put pressure on investment returns
- Equity market concentration increases exposure to a narrow set of growth drivers, at a time when equity valuations are elevated
- The return on AI-related capital expenditure may fall short of expectations
- Frequent geopolitical shifts could trigger rapid market repricing
- The growing role of non-bank actors in the global economy heightens the risk of market dysfunction and changes to the US Treasury approach to debt management risks rapid changes to liquidity conditions

# Macro and Market Environment

## Investment Themes

- Greater uncertainty, given global events, underscores the role of diversification in navigating volatility and risk
- Greater uncertainty and rapid changes in global themes supports a more flexible approach to portfolio management:  the Total Portfolio Approach is well-placed to manage the fund through these events

# Key Initiatives | Sustainability Investments & Integration

| Activities | Description |
|---|---|
| **Sustainable Investments** | Contribute to the re-underwriting of CalPERS' Climate Transition Index's (CTI) under TPA, including a review of the climate alpha thesis in GPE (academic literature review, managers survey) |
| | Assess **Investability** and **Total Fund additivity** of sustainability-oriented new candidate markets and strategies |
| | Simulate the **2030 Total Fund climate-solutions exposure** distribution using allocation scenario generator |
| **Sustainability Integration** | Further **integrate sustainability KPIs** into total portfolio analysis and monitoring:<br>• Climate solutions exposure<br>• Carbon footprint and global warming scenario-alignment metrics (emissions, implied temperature rise) |
| | Integrate **climate physical risk** into total portfolio analysis and monitoring:<br>• Climate scenarios (including NGFS scenarios and extreme acute climate events)<br>• Climate VaR |

# Looking Back on Business & Key Initiatives

## What Worked



- Developed initial investment framework for Total Portfolio Approach implementation
- Developed Investment Strategy Analysis framework and process for driving investment strategy expectations
- Expanded balance sheet tools and opportunities in private markets
- Adapted portfolio construction toolsets to TPA

## Challenges



- Navigating tradeoffs between significant TPA work and business as usual responsibilities
- Change management and collaboration with transition to TPA required high degree of time and intentionality
- Data and technology gaps still result in manual processes, functionality shortfalls, and increased operating risk
- Limited Artificial Intelligence (AI) adoption likely impacting our relative efficiency vs. peers

# Looking Ahead on Key Initiatives

- Ensure TFPM is organized optimally to support ongoing TPA implementation
- Enhance active risk allocation process/capital budgeting (cost of capital) processes
- Expand use of balance sheet tools and liquidity management framework
- Support the incubation of diversifying strategies (DMS) program
- Improve robustness of portfolio construction through the use of tools such as portfolio scenario analysis and by refreshing our currency management framework
- Partner on Data and Technology Modernization Initiative to enable enhanced functionality, tools, and data availability for Total Fund

# TPA Reporting Look Ahead

## Strategy Level Reporting of:

**Equity Equivalent Exposure (EEE)**

**Strategy vs Funding Mix vs Reference Portfolio**

**Active Risk Composition**



# Appendix

# Investment Beliefs

- Liabilities must influence the asset structure (IB 1)
- CalPERS must articulate its investment goals and performance measures and ensure clear accountability for their execution (IB 5)
- Strategic asset allocation is the dominant determinant of portfolio risk and return (IB 6)
- Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error (IB 9)