

Tracking Error Limit Proposed Policy Changes

Investment Committee

June 14, 2021

Background and Summary of Proposed Changes

- At the November Investment Committee meeting we presented details on the Tracking Error metric (TE) implementation at CalPERS and were asked to come back with proposed policy changes to further strengthen the Fund's governance and accountability
- The following changes to the Total Fund Investment Policy are proposed:
 - Apply the Total Fund TE limit to the Actionable TE (which excludes the effect of active exposure from private assets relative to their benchmarks)
 - Lower the limit from 150 bps to 100 bps
 - Remove a 75 bps sub-limit on the Asset Allocation Program
 - Introduce provisions about what happens when the limit is breached
- The goal of these changes is to enhance governance and transparency but not to change the allowable level of risk taking. If the investment team would like to propose changes to the allowable level active risk e.g., for new opportunities, that will warrant a separate explicit discussion

Proposed Changes - Impact on Fund Governance

- Current methodology blends private asset modeling and benchmark issues with deliberate decisions taken by staff. Actionable TE eliminates the “noise”, improving resolution on true shifts in strategy, thus contributing to better governance and accountability for investment decisions

Hypothetical Portfolio Scenario	Tracking Error (Current Methodology)	Actionable Tracking Error (Proposed Methodology)
Current Active Exposures	111	16
Doubling Active Exposures in Public Markets and Allocation	118	31
Eliminating Active Exposures in Public Markets and Allocation	107	0

Small difference between meaningful changes in risk taking activities

Visible distinction

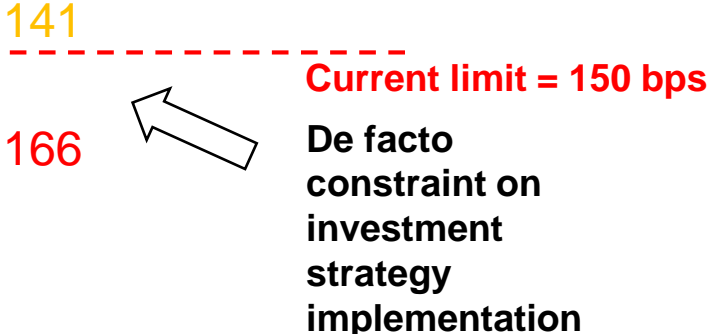
Proposed Changes - Impact on Fund Management

- The current tracking error limit methodology could become an unintended constraint on implementation of potential Board approved investment strategy

Hypothetical Portfolio Scenario	Tracking Error (Current Methodology)	Actionable Tracking Error (Proposed Methodology)
Current Portfolio	111	16
Current Portfolio with Private Equity Allocation = 10%	141	16
Current Portfolio with Private Equity Allocation = 12%	166	16

Current limit = 150 bps

**De facto
constraint on
investment
strategy
implementation**



Appendix

Proposed Changes – Removal of Asset Allocation Sub-Limit

- The removal of a sub-limit on the Asset Allocation Program will eliminate unnecessary complexity with no impact on allowable risk taking
 - All allocation management activities are captured in the Actionable TE
 - The constraint is less relevant in context of today's total fund management approach
 - A 75 bps sub-limit is not aligned with existing policy bands, which will remain simple and effective constraints on deviations for allocation
 - Practically, a smaller 100 bps TE limit will allow little room for more than 75 bps for allocation deviations considering existing active programs and passive asset class implementation frictions

Tracking Error in Context of Other Risk Tools

TE is only one of many risk metrics and constraints in use at CalPERS

POLICY (TRUST LEVEL)*

LIMITS AND CONSTRAINTS

Asset Allocation (targets and allocation ranges)

Tracking error (150 bps total / 75 bps allocation)

Leverage limit (20%)

REPORTING / DISCLOSURE

Currency

Counterparty exposure

Liquidity

Stress testing / Scenario

Analysis

POLICY (PROGRAM LEVEL)*

Global Equity	<ul style="list-style-type: none"> • Strategy categories (Index-oriented or Active) • Segment Active risk TE (0-50 bps forecast TE)
Global Fixed Income	<ul style="list-style-type: none"> • Segment limitations: <ul style="list-style-type: none"> - Long Treasury: Duration +/- 10% of BM - Long Spread: Sector ranges per strategy +/-10% of BM wgt (min wgt 0%) • External manager constraints
Private Equity	<ul style="list-style-type: none"> • External manager selection criteria • Staff authority limits • Strategy targets and ranges • Commitment limits • GP exposure limits (<10% in one GP w/o IC approval)
Real Assets	<ul style="list-style-type: none"> • Limitations by sub-program risk classification (Core, Value-add, Opportunistic) • Limitation on ownership of public securities (<10%) • Staff authority limits • Partner relationship exposure limits (<20%)
Opportunistic Strategies	<ul style="list-style-type: none"> • Max 5% exposure limit by market value • Allocation ranges by strategy • Staff authority limits
Securities Lending	<ul style="list-style-type: none"> • Liquidity constraint (min. 20% of cash collateral pool exercisable within 7 BDs) • Maintenance margin (102%/105% for securities with initial margin of 102%/105%) • Margin call constraints • Cash collateral re-investment
Low Liquidity Enhanced Return	<ul style="list-style-type: none"> • Duration limits • Maturity and rating constraints
Liquidity	<ul style="list-style-type: none"> • Maturity constraints (max. 15 months for internal STIF) • Minimum credit quality

Actionable Tracking Error Limit

- There are multiple alternatives to estimate a risk-equivalent Actionable TE limit comparable to current 150 bps constraint on Total TE

Reference Point / Approach	Hypothetical Limit
Given the current 150 bps Policy limit and current private asset weights and actual covariances	77 bps
Given the current 150 bps Policy limit and SAA private asset weights and zero correlations	98 bps
Implied using a 7% Growth-Public Equity Policy range as constraint	120 bps
Current Asset Allocation Program limit (per Policy)	>75 bps



Proposed Limit	100 bps
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Historical Total Fund and Actionable Tracking Error

