

California State Teachers Retirement System (CalSTRS)

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Overview of Benchmarking



Introduction

- What is the purpose of a benchmark?
 - To assess both return, and risk
 - Also, often a tool to measure staff/portfolio success
- “You cannot manage what you can’t measure”- Peter Drucker
- Benchmarks are used at many “Levels”
 - Total Plan
 - Asset Class
 - Manager



Overview of Benchmarking

Definition

A benchmark is a standard against which the performance of a portfolio or investment manager is measured. Benchmarks allow investors to assess success of the Program or manager, and to better understand not only allocation decisions made by the Board but to better understand and analyze risk and returns. If an investment outperforms or underperforms its benchmark, an investor should understand why it happened, whether it was to be expected, and most importantly what it signifies moving forward. In other words, a metric is only useful if it feeds back into a decision process.

Purpose

The primary purpose of a benchmark is to assist in the evaluation of an investment strategy or portfolio. For the evaluation to be meaningful, it is critical to:

- Select the correct benchmark
- Understand what active decisions you are trying to measure



Levels of Benchmarks

Total Plan Benchmark

Generally, Plan or portfolio-level benchmarks fall under three categories, discussed later in this presentation. Policy Benchmarks are typically based on an institutional portfolio's target asset allocation expressed passively. Other Plan-level benchmarks include Simple/Reference Benchmarks, Dynamic Benchmarks, and Peer Benchmarks.

Asset Class-level Benchmark

A benchmark for the aggregate asset class that represents what the investor is seeking at the aggregate asset class level. These benchmarks often exist as blended versions of the underlying manager benchmarks, aggregate benchmarks that represent the investable universe, or some other proxy that represents the segment/asset class.

Manager-level Benchmark

A benchmark at the manager level that is primarily used to measure the relative performance of a given manager.



Levels of Benchmarks (continued)

Criteria

There are two widely accepted schools of thought for determining benchmark criteria.

- The Bailey Criteria includes six characteristics.
- The CFA Institute includes five characteristics.
- The criteria have some overlapping characteristics and concepts, which are shown in-depth on the next slide.
- Critical to understand is that many commonly used benchmarks fail one or more of these tests, and thus the policy benchmark, made up of asset class benchmarks, will never be a perfect comparison for an institutional fund's diversified asset allocation.



Benchmark Characteristics

Bailey Benchmark Characteristics:

- **Unambiguous** - The components in a benchmark should be clearly identifiable.
- **Investible** - It must be possible to replicate and hold the benchmark to earn its return (gross of fees).
- **Measurable** - It must be possible to measure the benchmark's return on a frequent and timely basis.
- **Appropriate** - The benchmark must be consistent with the manager's investment style or area of expertise.
- **Reflective of current investment options** - The manager should be familiar with the securities that constitute the benchmark and their factor exposures.
- **Specified in advance** - The benchmark must be constructed prior to the evaluation period so that the manager is not judged against benchmarks created after the fact.

CFA Benchmark Characteristics:

- **Investable** - It is possible to forgo active management and simply hold the benchmark. That is, investors can effectively purchase all securities in the benchmark.
- **Accessible** - Difficult-to-produce benchmarks should be avoided.
- **Transparent** - Understanding the underlying constituency of a benchmark is critical to understanding its suitability for a particular manager.
- **Independent** - A manager's performance should not impact the prescribed benchmark return.
- **Relevant** - Spurious correlation exists between many random sets of data over various time periods. High correlation or low tracking error to a particular benchmark is not enough to conclude the benchmark is appropriate for a particular manager.



Primary Approaches to Plan Level Benchmarking

1. Plan Level Benchmark

- There are three generally accepted Plan Level Benchmarks. While each has its pros and cons, it is common practice for institutional clients to utilize multiple Benchmarks at the Total Plan level.
 - Simple: Simple Benchmarks are typically based on a predetermined mix of relatively few public market investments, rebalanced at regular intervals (e.g., 60/40 portfolio).
 - Static/Policy: Is a blend of the individual asset class benchmarks represented at their policy weights, to align with the plan's portfolio composition and investment objectives. This captures the effect of active management and allocation differences from policy targets. The asset class benchmarks are generally one of the following types of benchmarks depending on the asset class type.
 - Broad market (i.e. MSCI ACWI IMI Index; Bloomberg Barclays Aggregate Index).
 - Real return target (i.e. CPI + 3%).
 - Peer fund universe primarily utilized for private markets (i.e. NCREIF ODCE; Cambridge Private Equity Index; HFRI Fund of Fund Index).
 - Dynamic: Uses the *actual weights*, adjusted monthly, of each asset class within the portfolio and the passive index to calculate the passive equivalent of the return achieved by the total portfolio.
- Based on an internal Meketa survey of 99 Defined Benefit clients, 71 use a Static/Policy Benchmark, 36 use a Simple benchmark, 25 use a Dynamic benchmark. A total of 35 of those clients use more than one benchmark to assess their Total Fund.



Primary Approaches to Plan Level Benchmarking (continued)

2. Peer Group Benchmark

- Peer group benchmarks measure how well the Plans' performance compares to other "similar" plans.
- However, every Plan is unique and very few pension plans track performance at the total plan level.
- Peer comparisons may be difficult to obtain, are often substantially lagged and are subject to reporting issues (fee netting, etc.), making them only marginally useful.

3. Institutional Financial Objectives: Target Returns

- Institutional Financial Objective benchmarks compare realized returns against target (e.g., annual spend rate, assumed actuarial rate of return, etc.).
- While Institutional Financial Objectives benchmarks provide the ultimate measure of whether a portfolio is achieving its target return, they are disconnected from what the capital markets are delivering at any given time (e.g., the 2008 calendar year didn't provide the backdrop for positive investment performance).
- Institutional Financial Objective benchmarks offer useful long-term comparisons, such as over a full market cycle, whereas benchmarks that are composed of risk assets will permit short-term comparisons with institutional portfolios.



Conclusion

- Benchmarks are objective standards to measure the performance of an investment against a reasonable alternative and whether it is meeting the investor's goal.
 - They may be applied at different levels of the portfolio.
 - There are a number of widely-accepted criteria for effective benchmarks, not all of which are available for every asset class.
 - Therefore, combined “total portfolio/plan benchmarks” will have flaws in most cases. This has been exacerbated by the growing allocations of “alternatives” and hard-to-benchmark areas.
- Due to the intricacies and diverse composition of total portfolio/plan benchmarks, no single total portfolio benchmark can provide a perfect comparison for all time periods.
 - Because of this limitation, institutional investors often utilize two or more total portfolio level benchmarks, while being aware of the structure (and flaws) of each.
- Fiduciaries should understand why each benchmark performs the way it does in different capital market environments, as this understanding adds context to the investment pool's total return.