

## CalSTRS Asset Liability Management Study

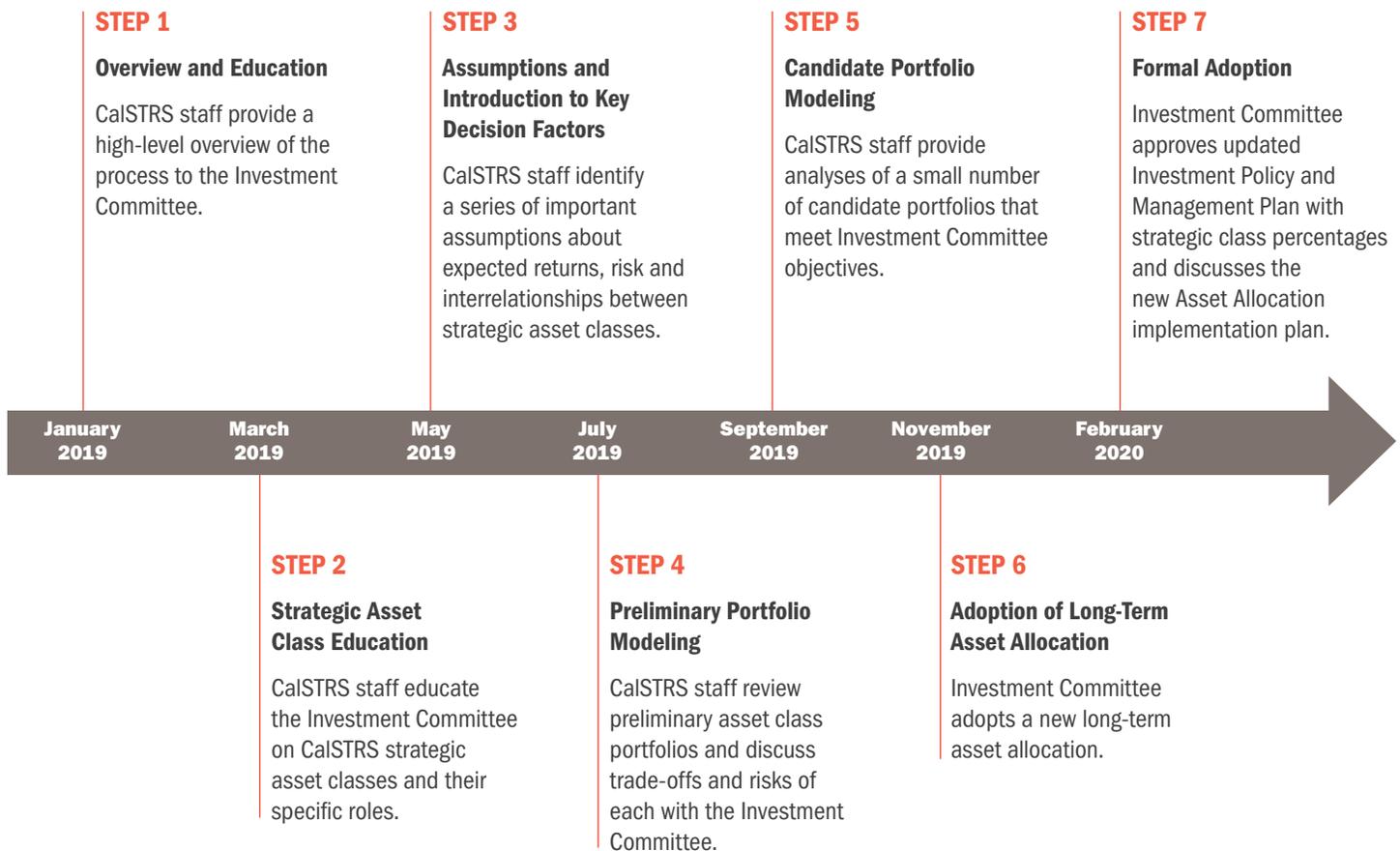
### What is the Asset Liability Management Study?

The Teachers' Retirement Board oversees the second-largest public pension fund in the U.S. One of the most important functions of that responsibility, setting the asset allocation, is performed by the board's Investment Committee. The board's asset allocation strategy directs how CalSTRS investment staff "allocate" or invest CalSTRS assets—for example, how much is invested in the U.S. stock market and the U.S. bond market. The comprehensive process weighs both teacher pension liabilities and the assets needed to fund those pensions over the long term. To help the Investment Committee reach its objective to adopt a long-term asset allocation that reflects the Teachers' Retirement Fund's obligations, we conduct

an Asset Liability Management Study every four years. The study ensures responsible investment practices and strategies are used in recommending investment allocations.

The last study, conducted in 2015, is in effect until a new study is complete. Beginning in 2019, the ALM Study timeline is aligned with the review of the fund's actuarial experience study and valuations, which helps ensure the ALM Study is using the same assumptions for both assets and liabilities, in addition to having the latest financial and demographic assumptions. The year-long process is a thorough collaboration between internal investment and actuarial staff along with the board's external consultants.

### ALM Process and Timeline



## Why is CalSTRS' ALM Study unique?

Conducting an ALM Study is a best practice for all pension funds, but the outcome of each study is unique to each plan. The data and results from our study are specific and applicable only to the Teachers' Retirement Fund; any comparison with similar studies for other pension funds would be misleading. The singular focus of the CalSTRS ALM Study is to review CalSTRS' liabilities (or pension benefits) owed to its members and its funding structure (CalSTRS Funding Plan) to determine how best to invest the assets to fund those pension benefits. CalSTRS members are unique regarding their years of service, pension benefit formula and demographics. The CalSTRS Funding Plan is also unique to CalSTRS and an important component of any asset allocation decisions. The funding plan, enacted in 2014, puts CalSTRS on the path toward full funding by 2046 through gradual contribution increases shared between CalSTRS members, employers and the state.

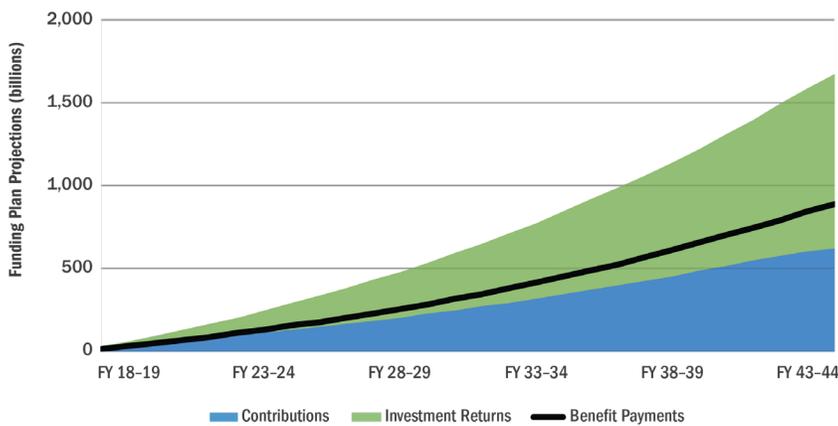
Figure 1: Expected Sources of Revenue to Pay Benefit Payments



Under the CalSTRS Funding Plan and current assumptions, we expect investment returns to be the largest contributor to our ability to pay benefits and reach full funding over the next 30 years and beyond (see Figure 1). While benefit payments and contributions are predictable, short-term investment returns are more volatile due to normal market movements that can cause significant swings in portfolio return in any given year.

CalSTRS is a mature system, which means the system is approaching an active member-to-retiree ratio of one-to-one. This puts the system into what is called deficit funding, meaning annual benefits paid exceed contributions received each year (see Figure 2). It also makes the system more sensitive to investment volatility. Over the past 30 years academic research has shown that 90 percent of investment performance and volatility is directly linked to the system's asset allocation. To mitigate risks, the ALM study spends significant time modeling market volatility as a key risk to manage and take advantage of when it offers appropriate investment returns. As a result, the CalSTRS ALM study puts it on the best path toward achieving full funding.

Figure 2: Projected Investment Returns, Contributions and Benefit Payments



## How does the CalSTRS ALM Study relate to the board's Investment Beliefs?

In July 2018, the board adopted a set of eight Investment Beliefs. These beliefs provide guidance to the board for investing in a manner that reflects CalSTRS' view of the global investment markets and its vision for participating in these markets to accomplish its fiduciary goal. The board has identified three of these beliefs that relate directly to the ALM Study process.

- **Belief 1** – Diversification strengthens the fund.
- **Belief 5** – CalSTRS can potentially capture an illiquidity risk premium.
- **Belief 6** – Managing short-term drawdown risk can positively impact CalSTRS' ability to meet its long-term financial obligations.