

Internal / External Decision Criteria Matrix

		Low	Medium	High
Decision Factors	Cost-Effectiveness/ Control	External	External/Internal	Internal
	Market Liquidity & Transparency	External	External/Internal	Internal
	Market Efficiency	External	External/Internal	Internal
	Active Risk	Internal	External/Internal	External
	Infrastructure/ Resource Requirements	Internal	External/Internal	External

Cost-Effectiveness/Control

After including all costs, is internal management able to add more value than external management? All things being equal, management fees increase in direct relation to the risk and complexity of the strategy being managed. Given the narrower band for active risk, passive management usually provides opportunities for more cost-effective management of assets, while active management presents the potential to generate alpha. For active management to make sense in the Portfolio, the strategy must generate returns in excess of the benchmark net of management fees which is difficult to accomplish consistently.

The decision to manage a portfolio internally or externally should not be based solely on who provides the cheapest management fees. Even though many studies have shown that internal asset management typically has a lower cost structure than external management, a more holistic view should be used in the decision-making process, which includes control of the assets and market awareness of internal staff. Internal management, it has been argued, allows better coordination over when and how assets are deployed, permits greater control over corporate governance issues, and allows for a more straightforward mechanism to customize investment mandates that align with a plan sponsor's unique directives. In other words, internal management is able to focus on

CalSTRS as its one and only client, versus the multiple accounts among which an external manager must divide its attention. Also, as internal staff begins to manage new strategies, staff should continue to identify additional ways to take advantage of market inefficiencies when they occur. It should be noted, however, that building in-house investment management expertise can be difficult, given the employment and hiring practices dictated by State employment.

While there seem to be many benefits to internal management, we should recognize that bringing assets in-house requires significant up-front costs which can then be amortized over the investment period. These costs include sufficient staffing levels, computer support systems, specialized software/technology, and access to investment-related data. It is clear that building and sizing the infrastructure, risk management and trading systems, and people are critical to investment success. The same criteria we apply to external managers in terms of people, process, and philosophy apply internally, as well. However, once an infrastructure has been established for an asset class, the incremental costs of adding new strategies may be minimal, depending upon the strategy.

Market Transparency and Liquidity

Does the market have enough liquidity and transparency to allow for effective management of the strategy? While it appears that the internal versus external management debate centers around the public (i.e., fixed income and equity) markets, as opposed to the private markets (i.e., private equity and real estate), it is really the transparency and liquidity of the markets within which each strategy trades that is the primary decision factor.

Private markets are generally less transparent and liquid than other asset classes within the Fund. Public equity and debt markets are more transparent, have broadly and widely recognized indices, are highly liquid, and are amenable to structuring a broadly diversified portfolio. This liquidity and transparency, in terms of widely followed market information and pricing, make equity and fixed income portfolio management a different kind of management challenge, as the assets are broadly available for purchase and sale to all with a mandate and the proper business infrastructure/resources.

Market Efficiency

Does the strategy operate in a market that is efficient or inefficient? Market efficiency refers to the degree that all investors in a market have access to the same information and, at any given time, security prices reflect all available market information. The decision to manage an active or passive strategy should be directly based on the efficiency of the market. For markets that are considered highly efficient, the probability of consistently outperforming the market is relatively low, which suggests that a passive/core strategy would be appropriate. In markets that are less efficient, the opportunity exists to generate alpha. Finding these market inefficiencies requires dedicated resources to identify securities that are considered mispriced. When these inefficiencies are evident, a skilled active manager can take advantage of these opportunities and construct a portfolio that should generate fee-adjusted returns in excess of the market.

Active Risk

Does internal staff have the knowledge and competence to manage the strategy in house? An active strategy requires highly specialized and skilled individuals who are well versed in the pursued strategy and willing to make educated decisions to take prudent risk, in order to achieve a net return higher than the benchmark. A passive or less active strategy still requires skilled individuals; however, the goal of this type of strategy is to track or slightly exceed the strategy's benchmark,

and the research effort is much less intensive than active managers.

Private equity and real estate are uniquely active markets in which expertise, in terms of property, or company type, leverage, deal structure, deal components, and terms, make them truly active investments requiring resources capable of reviewing the fundamentals of the deal structure and capital to fund the deal. With internal management, recruiting investment professionals who have highly specialized skills in active strategies may be difficult. CalSTRS' compensation structure and the current environment of state budget cuts may provide a headwind to attracting new investment talent. There is also the potential for key investment staff turnover. This will always be a concern in both internal and external portfolios. CalSTRS, like external managers, would seek to construct a bench of talent for any strategy undertaken.

Infrastructure/Resource Requirements

Does CalSTRS have sufficient infrastructure and the resources to support the strategy? Technology and risk management systems, along with proper staffing levels (front and middle office) are a key ingredient to operating a successful investment management operation. CalSTRS has gained much of this experience over the last 20 years through the development of our own internal infrastructure, in terms of communications, specialized investment software, and analytical criteria needed to operate in the public fixed income and equity markets, as well as our exposure to external managers.