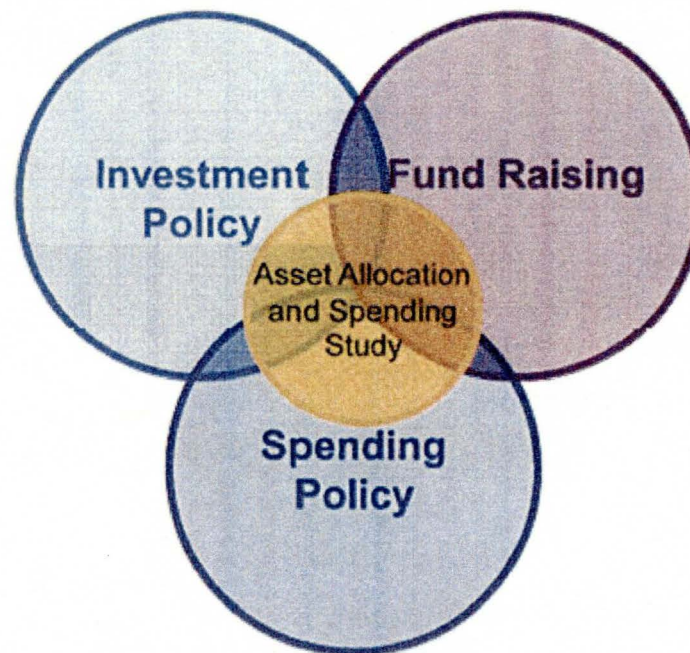


What is an Asset Allocation and Spending Study?

Evaluating the interaction of the three key policies that govern the Legacy Fund with the goal of establishing the best investment policy

Investment Policy

- How will the assets supporting the spending be invested?
- What are the risk/return objectives?
- How to manage cash flows?



Funding Policy

- Revenue expectation
- Near-term policies?
- Consistency of policy and amounts derived thereof?

Spending Policy

- What are the objectives of the distribution policy?
- What level of spending?
- Expectations for fees?

Rationale for Conducting an Asset Allocation and Spending Study

- ▶ Represents fiduciary best practice:
 - ▶ Strategic reviews of asset allocation policy are typically conducted every 3-to-5 years, or when Fund changes warrant a review of investment activities
- ▶ Assists the Advisory Board and Staff in developing a long-term asset allocation strategy
 - ▶ Sets the foundation for the long-term management structure of the investment portfolio
- ▶ Incorporates changes and uncertainty in capital markets, spending and contributions
- ▶ Provides a reasonable basis for the selection of an asset allocation policy that achieves the following:
 - ▶ Reflects an appropriate level of risk that balances the preservation of principal with spending requirements
 - ▶ Generates the maximum expected rate-of-return given an appropriate level of risk
 - ▶ Balances both near-term and long-term spending goals

Rationale for Conducting an Asset Allocation and Spending Study (continued)

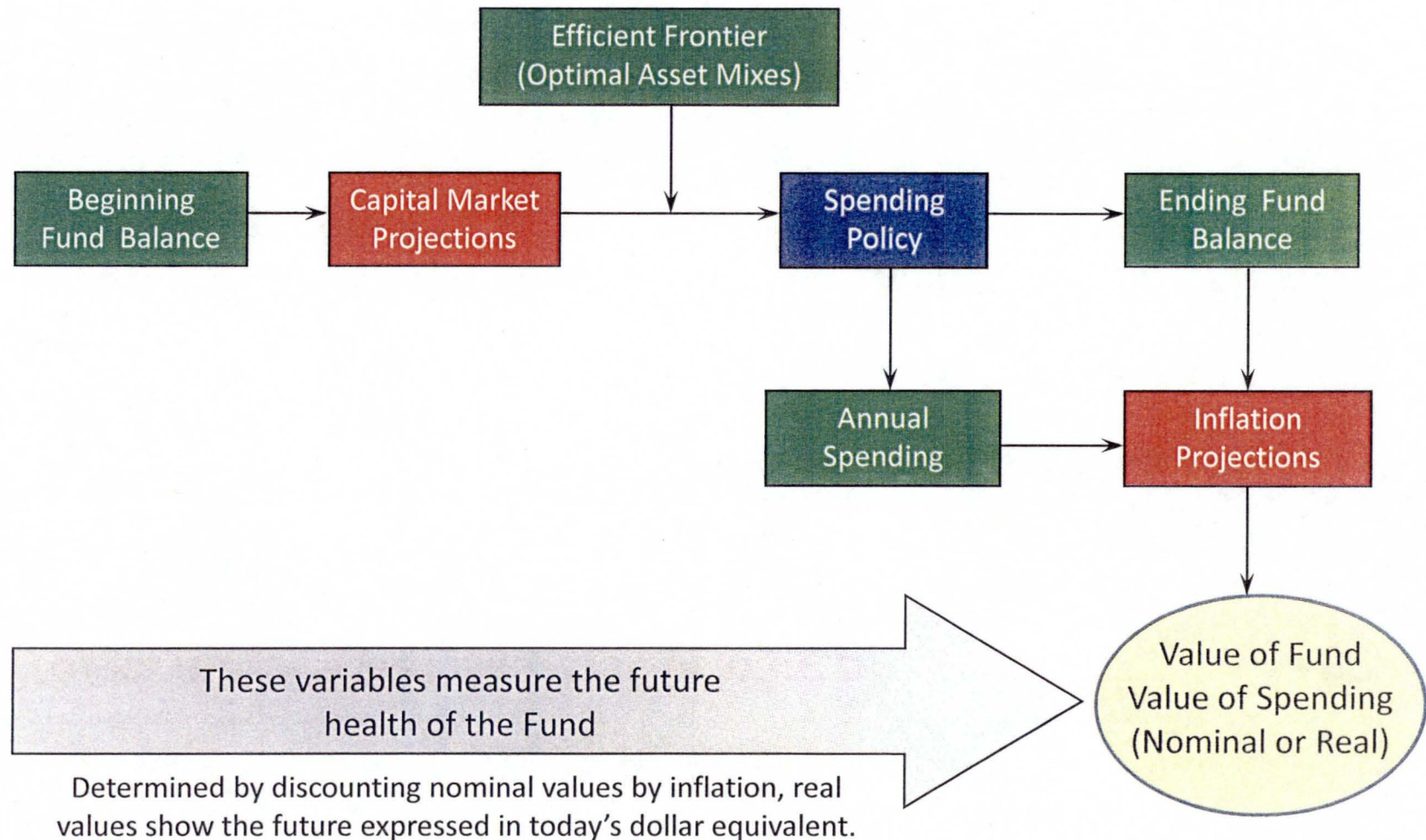
► Types of investment allocation:

- Strategic allocation – a long-term policy decision
- Tactical/dynamic allocation – opportunistically adjusting the asset mix in response to changes in the capital markets; managing risk by shifting the policy mix in response to a changing risk environment
 - Tactical asset allocation is very difficult to successfully implement with consistency
 - Tactical adjustments may introduce additional risk, which can undermine the integrity of the strategic asset allocation decision
 - Trading costs can overwhelm any perceived benefit

► Importance of strategic allocation:

- One of the most important decisions faced by fiduciaries
- Primary determinant of asset growth and volatility
- Strategic allocation policy generally reflects overall investment goals and risk tolerance

Study Overview: Model of Spending Policy and Fund Growth



Study Process

- ▶ **Project major asset class performance**
 - ▶ Used to create asset mix alternatives
 - ▶ Used to estimate the financial future of the Fund
- ▶ **Create alternative asset mixes to compare to the existing target mix**
 - ▶ Only look at optimal mixes
 - ▶ Look at a range from more conservative than the current target mix to more aggressive
- ▶ **Simulate future outcomes**
 - ▶ Look at the range of possible future Fund conditions
 - ▶ Determine the relative benefits of each of the asset mixes
- ▶ **Identify a target asset mix**
 - ▶ What parameters are most important to the Fund?

Modeling Techniques Employed

▶ **Mean-variance optimization**

- ▶ Allows for the identification of the risk-minimizing asset allocation for a given level of return
- ▶ Different optimal mixes for different target rates of return

▶ **Monte Carlo Simulation**

- ▶ Looks at the interaction of the spending and investment policy over a variety of possible future outcomes
- ▶ Allows for the statistical analysis of a variable that is dependant on other variables with uncertain outcomes
- ▶ Thousands of capital market scenarios can be simulated across numerous spending scenarios
- ▶ Incorporates the effect of inflation on the long-term real purchasing power of Legacy Fund assets

Recommendation and Potential Next Steps

- ▶ Staff recommends that the Advisory Board conduct an asset allocation and spending study for the Legacy Fund.
- ▶ Suitable finalists would be identified and invited to submit proposals and present to the Advisory Board. Potential candidates include the following:
 - ▶ Callan Associates
 - ▶ Cambridge Associates
 - ▶ Hewitt EnnisKnupp
 - ▶ R.V. Kuhns & Associates
 - ▶ Strategic Investment Solutions
- ▶ The Advisory Board would select the firm to award the asset/spending study project and Staff would work with the selected firm to commence the study.

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