NEPC, LLC

ASSET ALLOCATION

We Help Clients Achieve Their Objectives

Analyzing your commitments, short-and long-term objectives, and policy or regulatory considerations, we custom-build asset allocation and portfolio structure to your specific needs. As part of this customization, we incorporate multiple measures of risk and investigate alternate asset classes and strategies.

Step 1. Assessment of the Current Condition

The assets of investment programs exist to address future commitments. Our asset allocation process begins with an assessment of the program's current financial status, such as pension funded status or endowment spending needs. We incorporate your existing financial models into our framework.

Step 2. Asset Allocation

Our asset allocation process incorporates comprehensive models, both quantitative and qualitative.

Mean-variance optimization accommodates a range of investment requirements, such as maximum or minimum commitments to an asset class, return or volatility targets, and permissible asset classes for investment. We believe mean-variance optimization continues to be an important tool, especially in framing risk/reward tradeoffs and sharing the benefits of diversification. Yet despite its usefulness, mean-variance analysis has shortcomings. For instance, it assumes normal return distributions and static inputs, simplifications that, if ignored, can expose a portfolio to concentrated risks and significant drawdowns. Hence we supplement mean-variance with other approaches.

Risk budgeting examines potential portfolios in terms of contribution to risk instead of just the traditional allocation of capital. In a portfolio with a conventional 60/40 allocation of stocks and bonds, for example, more than 90% of total risk will be concentrated in stocks. True diversification is achieved by balancing risk exposures more evenly across asset classes and market factors. Our risk budgeting model has assisted clients in moving away from equity-centric portfolios well before the dislocations of 2008.

Scenario projections assess how a portfolio might perform in various economic environments, such as recession or stagflation. This approach provides a valuable alternative perspective to mean-variance analysis, as it is able to accommodate environments of extreme market

Our comprehensive approach produces portfolios tailored to your objectives.

We develop asset allocation strategies that incorporate:

- Your goals and constraints
- Multiple risk metrics
- Opportunistic investments
- Efficient structures

outcomes and shifting asset-class correlations. Integrated with liabilities or spending commitments, scenario analysis can assess risk factors across both sides of the program's balance sheet.

Liquidity analysis gauges the balance between the program's liquidity needs and its liquidity sources. We "stress-test" potential portfolios by simulating situations of heightened need for liquidity combined with constricted access to liquidity sources. Even before the financial crisis, our liquidity model helped clients "right-size" commitments and recognize risk factors. We believe in the return and diversification benefits of illiquid investments, and use liquidity analysis to determine the natural limits of alternative investments.

Portfolio structuring looks at decisions within asset classes, such as active/passive, value/growth or domestic/international. It extends our risk budgeting framework to actual or potential manager strategies, providing an integrated view of where risk is taken throughout the portfolio. Portfolio structuring provides the critical link between top-down asset allocation and bottom-up manager selection.

Factor analysis utilizes a similar foundation to our Risk Budgeting analysis but recognizes the key economic factors that drive asset class performance. As an example, US Equities and High Yield are distinct asset classes, however, both asset classes are largely driven by the results of economic growth. Factor analysis recognizes the impact that key factors have on overall portfolio performance and assigns risk along those factors.

Step 3. Presentation of Results

We provide a detailed final report to you on our findings and investment policy recommendations. The report provides summaries, observations, and recommendations using appropriate metrics. While our analysis is thorough, we frame conclusions in a way that allows you to make informed decisions. NEPC prides itself in recommending asset mixes and portfolio structures that result in successful implementations of our best ideas.

A risk-centered, customized approach to asset allocation.

YOU DEMAND MORE. *So do we.*[SM]

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