Advanced Logic Analytics

Enhanced Index Fund Creation using SSD

Background: The investment industry manages funds in excess of $60Tn1 globally. Managers of 'Active' funds seek to deliver a return in excess of the broad market and charge fees of 0.3- 1.0% per annum2, whereas 'passive' funds use rules to follow indices and carry much lower fees. In recent years there has been a trend towards designing hybrid 'enhanced index' or 'index-plus' funds with a similar cost to index-trackers, but with some of the upside potential of the active funds.
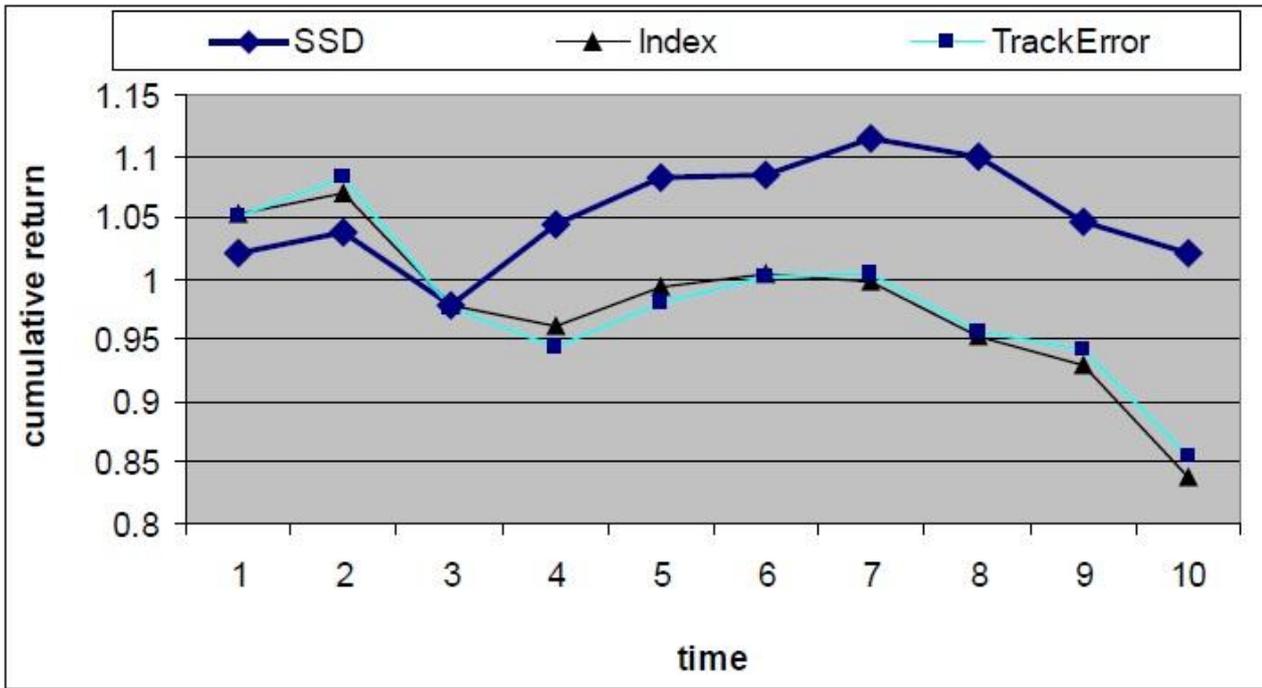
Business Case: Enhanced index funds, which are designed and executed well, attract a significant proportion of investor wealth. Designers of these funds have had difficulty preserving low running cost and low risk profile across changing markets (different regimes).

To date alternative strategies have either used popular portfolio construction methods with oversimplified risk models (mean variance optimization on tracking error), or have used more sophisticated risk models (simulation-based) but have had to adopt weaker portfolio construction methods.

Our Approach: : OneLogic's SSD approach (Second-Order Stochastic Dominance) uses a simulation-based risk system, is suitable for all asset classes in all market conditions; through backtesting (with transcaction costs) we demonstrate superior portfolio construction performance across markets, regimes and time periods.

The SSD approach, whilst being computationally intensive, ensures that the cumulative return across all market conditions (points on the distribution) exceeds the index. Competing approaches simplify the true distribution of market returns leading to increased realised risk or underperformance.

The accompanying graph above shows the performance over a 3-month period of two FTSE-100 tracking portfolios, one a typical current approach, and the SSD portfolio using this new method and showing superior performance. The SSD portfolio contained only nine securities against the Tracking Error portfolio's 58, and had substantially lower turnover, further reducing transaction costs - a consistent finding for the SSD approach.

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