USE CASE – AUTOMATED CONSTRUCTION OF A QUALITATIVELY DIFERSIFIED PORTFOLIO FOR A BRUSSELS BASED ASSET MANAGER

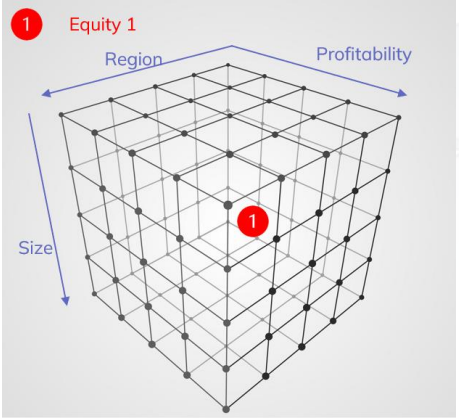
Asset Management | Investment | Optimization | Finance modelling

CONTEXT

The Brussels based Asset Manager came to us wanting to implement a new mathematical model allowing him to propose new portfolio types to his clients. In this context, we have developed an algorithm under several constraints:

- The portfolio can only be composed of unlevered long only ETFs.
- The target equity portfolio should resemble an All-World Market Cap weighted allocation, where the benchmark is the MSCI World Index.

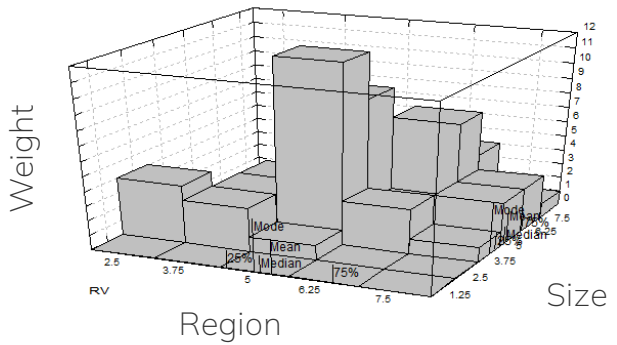
The proposed portfolios are the result of a trade off between maximizing diversification around four axes (size, entity value, region and business sector) and minimizing the distance to the MSCI World Index allocation.



SOLUTION

Selecting from a pool of 991 equity ETFs, we developed an optimization model allowing to build an ETF portfolio with a maximum diversification across four axes: size factor, value factor, region factor and business sector factor. All the while maintaining a risk/return profile like that of the MSCI World index. This allows us to construct a portfolio of assets robust to sectorial crises, for example by underweighting the USA Technology Sector (vs the MSCI World Index as a benchmark), our portfolio is comparatively less sensitive to US Fed rate hikes. Conversely, by overweighting the Africa and Oceania Raw Materials Sector, our portfolio is more sensitive to an increase in Copper prices.

ETF_1 Weight Distribution



BUSINESS IMPACT

- Less exposition to certain sectors while guaranteeing similar expected returns
- A new product that the Asset Manager can offer