Using VOR in Risk Premia Portfolio Management

Case Study

"At the outset, agile prototyping allowed FRG to design, test, and implement each portfolio management function speedily in VOR modules. Now FRG's technology and risk professionals manage the client's data and respond smartly to special requests for analytical assistance."

— Dominic Pazzula, FRG's Director of Risk and Asset Allocation

In 2016, after more than two years of research, a major U.S. foundation with a strong governance structure launched a thematic risk premia strategy designed to improve the risk-adjusted returns of their overall investment program.

The new initiative was a significant departure from the foundation's customary allocation to global equities, credit securities, and real assets. Seen as a separate asset class, the risk premia strategy aims for a correlation around zero with the returns of the public market portfolio.

The investment team articulated an economic rationale for three themes (carry, value, and momentum), and elected to hold derivatives—futures and currency forwards—rather than physical securities. They determined that inverse volatility weighting was the most effective approach to portfolio construction.

Crucially, they also decided to integrate a customized application of FRG's VOR tools into their day-to-day portfolio management activities as well as their monthly analysis and performance reporting.
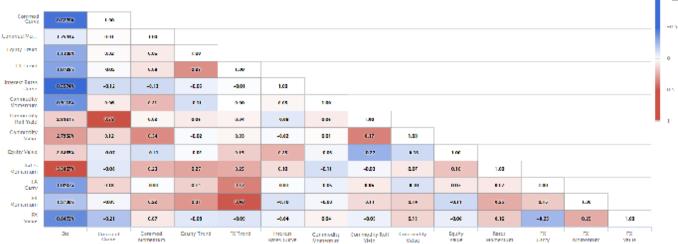
How FRG Supports the Foundation

Successfully managing a risk premia strategy isn't easy. From the research and implementation stages to ongoing operations, FRG's econometric expertise, system development capability, and logistical strength have empowered the foundation's specialized investment team.

- Research: FRG consultants worked closely with the client to design and test multiple portfolio construction methodologies with different return, diversification, and turn-over characteristics.
- Data Integration: FRG works proactively with the foundation's providers to capture, load, and present all the relevant data from a single source.
- Portfolio Management Tools: The system holds, reports, and optimizes the current portfolio based on the foundation's requirements.
- Customized Web User Interface: A state-of-the-art web interface enables foundation staff to access risk premia data, portfolio management tools, and historical reports for any as-of date.

Ex-Ante Standard Deviation and Correlation

FRG frees the foundation's investment professionals from the time-consuming data maintenance and error-prone spreadsheet management tasks that plague other organizations. This efficiency gains them the equivalent of more than one full-time analyst. FRG also provides the analytical tools they need to make timely, well-informed risk premia portfolio decisions.

How the Foundation Uses VOR

The foundation's staff members rely upon a customized version of the VOR application for daily portfolio monitoring, monthly reporting and attribution analysis, and special purpose inquiries.

- Portfolio Monitoring: Comparing the current portfolio to the optimized portfolio helps to determine if rebalancing or leverage adjustments are in order. Ex-ante correlations and beta statistics enable rules-based decisions.

Monitoring risk premia returns relative to their normal range helps to identify early-stage market movements and single out possible bad data points.

- Monthly Portfolio Reporting: Reports that are formatted to meet the foundation's requirements show the current portfolio's characteristics relative to the optimized and benchmark portfolios along with historical correlations and standard deviations in comparison with expected forward values.
- Monthly P/L and Risk Reporting and Attribution: Board-level reports present the portfolio's stand-alone performance as well as its effect on the foundation's overall asset allocation and investment results.
- Ad Hoc Requests: Foundation staff can extract historical portfolios, returns, and reports; run optimizations based upon different invested premia; or apply variant optimization techniques and parameters, among other possibilities.

About FRG

FRG is an international risk management firm dedicated to helping clients around the world maximize the effectiveness and value of their investments in risk management technology, methodology, and processes. Only FRG offers risk intelligence with real-time insights delivered as a service across multiple use cases – from one single, cloud-native platform.

Customers around the world rely on FRG to help build, run, and illuminate insights.

About the VOR Platform

The VOR (Visualization of Risk) platform brings together data, teams, and technology you need to manage money. Combining innovative risk analytics with comprehensive portfolio management, performance, and reporting — all on one platform — VOR provides insight to guide your decision-making regarding risk management, efficient trading, and operational scale.