

Axioma
By SimCorp

Tools for Portfolio Optimization and Risk Analytics in Charles River IMS

Charles River's portfolio management, risk and attribution capabilities combined with the Axioma portfolio construction, risk models and analytics tools helps enable firms to identify, measure and model risk across the front and middle office on one platform.

The Axioma Portfolio Optimizer™ incorporates several patented innovations that allow clients to build and rebalance more robust portfolios across a broad range of strategies and timeframes.

Leveraging Charles River's single data model and portfolio manager workbench, the Axioma analytics tools provide global investment managers, asset owners, insurers, wealth managers and hedge funds with fit-for-purpose analytics across assets, markets and geographies.

Axioma's Analytics Tools in Charles River IMS

Axioma Equity Factor Risk Model Suite	<ul style="list-style-type: none"> • Fundamental, statistical and macroeconomic models updated daily • Multiple methodologies provide different ways to combine insights and drivers of risk • Multiple horizons (short and medium) to balance investment horizons and compare results with different forecasting assumptions • Models customized through the Axioma Risk Model Machine can be integrated into Charles River IMS • Transparent factors and robust statistics maintained by experienced researchers
Axioma Portfolio Optimizer	<ul style="list-style-type: none"> • Flexible objective function and constraint library allowing users to tailor strategies to their own investment process • Choose any combination of Axioma Factor Risk Models and/or third-party and internal risk models for portfolio construction • Incorporate Charles River compliance rules as constraints, including security exclusions, restrictions and category limits
Axioma Fixed Income and Multi-Asset Risk Models	<ul style="list-style-type: none"> • Gain more granular and accurate views of entity-specific risk • Measure and monitor risk budgets • Validate risk assumptions for exposures across similar sectors/ratings • Deconstruct portfolio risk at any required level of granularity • Model corporate and non-corporate credit risk across portfolios

Charles River clients can access new capabilities and improved workflows across portfolio construction, risk monitoring and measurement and performance attribution.



Monitor risk in fast changing markets with short and medium horizon models



Utilizing Pure Factor Portfolios (PFP) to track factor performance, model portfolios for factor baskets, evaluate hedges and decompose intraday asset P & L



Analyze macro factors and stress test impact of macro events on portfolios

These capabilities support a broad range of investment strategies, products and tax objectives.



Investment Strategy	Potential Benefits
Actively managed strategies	<ul style="list-style-type: none"> Control portfolio exposures using standard or custom factor exposures in order to deliver results aligned with strategy objectives Construct more efficient portfolios by allocating risk to the factors that portfolio managers believe will outperform, while mitigating undesirable risk exposures
Long/short portfolios	<ul style="list-style-type: none"> Manage unwanted exposure by constructing efficient overlays Isolate risk factors and implement appropriate strategies including factor hedging or pair trading
Index-tracking portfolios account replication & tax-efficient strategies	<ul style="list-style-type: none"> Evaluate and report forecasted tracking error simultaneously Leverage multiple risk models to help minimize tracking error Construct smart beta strategies that closely track benchmark exposures

About SimCorp

SimCorp is a provider of industry-leading integrated investment management solutions for the global buy side. Founded in 1971, with more than 3,000 employees across five continents, SimCorp is a truly global technology leader that empowers more than half of the world's top 100 financial companies through its integrated platform, services, and partner ecosystem.

The Axioma analytics suite provides portfolio construction and risk management solutions to a global client base which includes asset managers, asset owners, hedge funds and wealth managers. The offering comprises an advanced financial optimizer, a comprehensive suite of factor risk models, performance attribution, backtesting and stress testing tools.

Learn more at simcorp.com.

About Charles River Development, A State Street Company

Investment and wealth managers, asset owners and insurers in over 30 countries rely on Charles River IMS to manage USD \$59 Trillion in assets. Together with State Street's middle and back office services, Charles River's cloud-based front office technology forms the foundation of State Street Alpha®. Charles River helps automate and simplify the investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. Charles River's partner ecosystem enables clients to access the data, analytics, application and liquidity providers that support their product and asset class mix. With more than 120% increase in headcount over the last 5 years, Charles River serves clients in 11 regional offices.

Learn more at crd.com (Statistics as of January 2024)

About State Street Corporation

State Street Corporation (NYSE: STT) is one of the world's leading providers of financial services to institutional investors including investment servicing, investment management and investment research and trading. With \$43.9 trillion in assets under custody and/or administration and \$4.3 trillion* in assets under management as of March 31, 2024, State Street operates globally in more than 100 geographic markets and employs approximately 46,000 worldwide as of March 31, 2024. For more information, visit State Street's website at statestreet.com.

* Assets under management as of March 31, 2024 includes approximately \$66 billion of assets with respect to SPDR® products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

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