

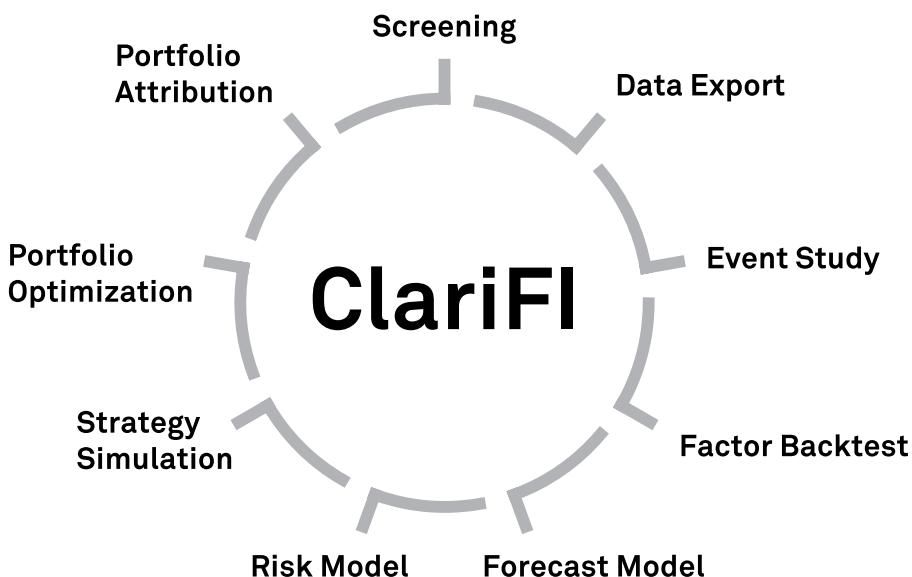
# A single platform. Your many investment ideas.

## Comprehensive Alpha Research and Portfolio Management Platform

ClariFI, our alpha research and portfolio management platform, provides powerful analytics and global market data solutions that let investment managers and quantitative researchers easily access S&P Global Market Intelligence's data libraries through a secure, hosted, or locally installed environment. Combining industry-leading analytics and content into a single platform reduces time-to-market without compromising the complexity and uniqueness of your investment strategies.

# Reduce time-to-market – without compromising the complexity and uniqueness of your investment strategies.

Powerful Alpha Research & Portfolio Management Platform



ClariFI enables you to generate and test new ideas, and understand market themes and opportunities – in order to create actionable investment signals on-the-fly.

## Integrated Workflows

The platform's full set of functionality, consisting of screening, backtesting, event study, portfolio construction, optimization and portfolio attribution are all tightly integrated for increased operational efficiency and accelerated ideation. Each can be used interactively or incorporated into scheduled production routines. All factors, models and activities are automatically cataloged and organized for continued use or access at a later date.

# Speed and Ease of Use

## Operational Efficiency and Flexibility

ClariFI's Visual Query Language eliminates the need to learn a programming language without sacrificing model or strategy complexity. New models can be built, tested, and implemented in days as opposed to months. Our web-based delivery option completely eliminates hardware and installation requirements, while allowing for the integration of proprietary data. For enterprise applications, a local installation allows for full integration with any number of proprietary relational databases. Either way, hardware requirements can be customized to meet the most advanced use cases.

The reduction or complete removal of operational infrastructure costs, alongside the benefits of industry-leading analytics and data, maximizes efficiency and profitability and offers significant competitive advantage. Validate and bring your new ideas to market before the competition. To further enhance your research, the ClariFI offering enables clients to seamlessly incorporate proprietary and third-party data, and to augment the platform's already mature formula library with R and MATLAB® if the need arises.

# Data Management

## Integrate and Create Complex Data Sets without Programming

The Data Management module enables you to quickly and accurately integrate, construct and organize complex data sets in a visual fashion, without having to work with a programming language.

- Access seamless historical security mapping with time-varying identifiers through the robust Security Master
- Leverage S&P Global Market Intelligence's plug-and-play Xpressfeed SQL data warehouse
- Reduce data validation efforts by easily examining, scrubbing, preparing, exporting and charting complex data sets
- Build powerful, predictive models from raw data
- Incorporate S&P Global Market Intelligence's Alpha Factor Library of stock selection signals for access to hundreds of factors on day one

# Screening

## Generate New Investment Ideas with Advanced Screening Tools

Leverage the Screening module to create customized security universes, analyze characteristics of your screen, calculate and plot return statistics, and export customizable reports.

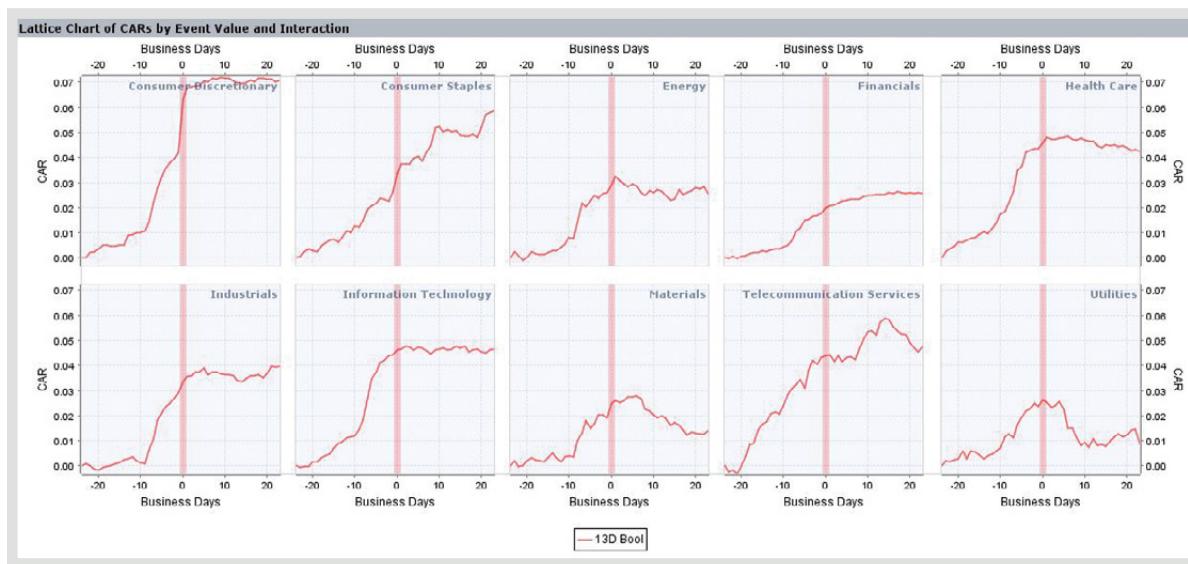
- Quickly perform screens for immediate insight into historical screen performance
- Create hierarchies of multiple screening rules on-the-fly for dynamic analysis
- Export customized results, including live charts and company-level data, to Excel®

## Event Study

## Understand the Abnormal Return Associated with Event-Driven Equity Strategies

The Event Study module opens up new areas of potential alpha research and strategy outperformance, allowing managers to test the effectiveness of events in the marketplace – using our data or yours.

- Analyze the impact of any event on market prices using any combination of economic, pricing, fundamental, analyst estimate, or qualitative information such as categorized news
- Get detailed views of an event's effect in sectors, industries, countries or any custom grouping with insightful drill-down analysis
- Identify abnormal returns with dynamic event visualizations which display event timelines on a security-by-security level

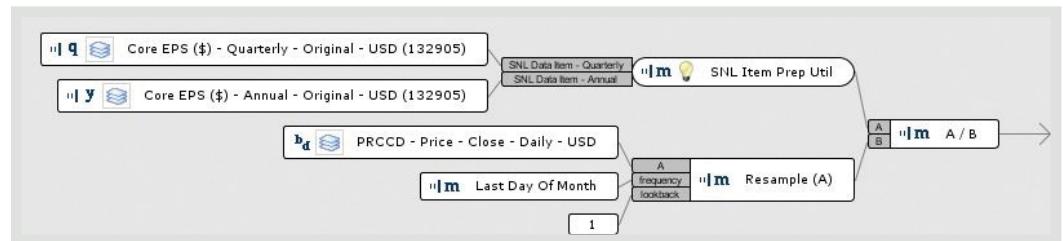


# Backtesting & Alpha Research

## Test your Investment Ideas' Performance Strength

The Factor Backtesting module ranks factors by their correlation to future returns across multiple investment universes, cross-sections—such as sector or country—and holding periods. In a few quick steps, you can easily test a variety of single or combined signals and incorporate results downstream in your investment process. Run single or multi-factor tests to understand the predictive power of factors.

- Accelerate the construction and estimation of effective factor models
- Analyze factor performance across different geographies, market segments and economic regimes
- Test historical predictions from forecast models with no look-ahead bias out of sample

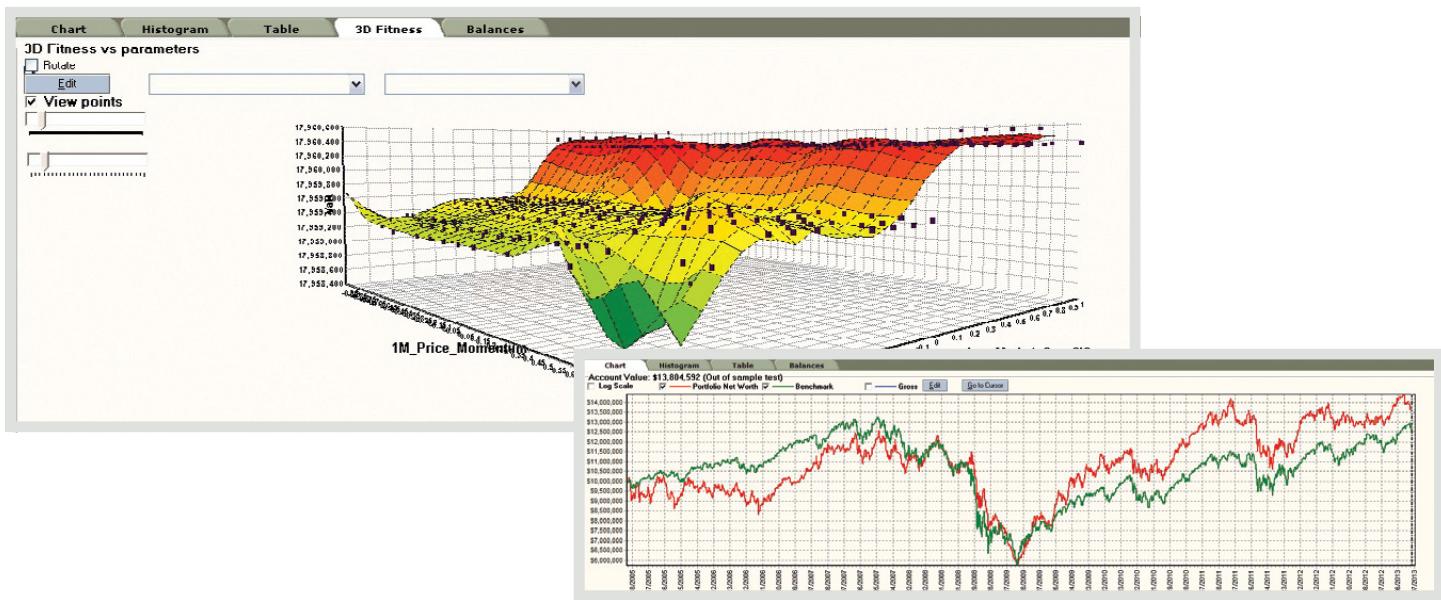


# Strategy Simulation

## Simulate Realistic Portfolio Performance over Time

The Strategy Simulation module provides detailed trade-by-trade performance of rules-based or optimization strategies to provide deep insight into an investment strategy's historical performance.

- Incorporate existing models into the simulation environment to build long-only or long-/short portfolios in a realistic fashion, taking into account customized trading rules, market impact, commissions, and the effect of cash positions
- Access a scripting environment to accommodate fully flexible trading strategies including enhanced mean-variance optimization and constraints
- Manage and optimize risk exposure before implementation, and evaluate the effects on overall strategy performance across portfolio construction scenarios



# Portfolio Optimization

## Effectively Solve Mean-Variance Portfolio Optimization Problems

The Portfolio Optimizer is a mixed-integer optimization module that provides you the tools to rapidly solve the most challenging real-world portfolio construction and rebalancing problems.

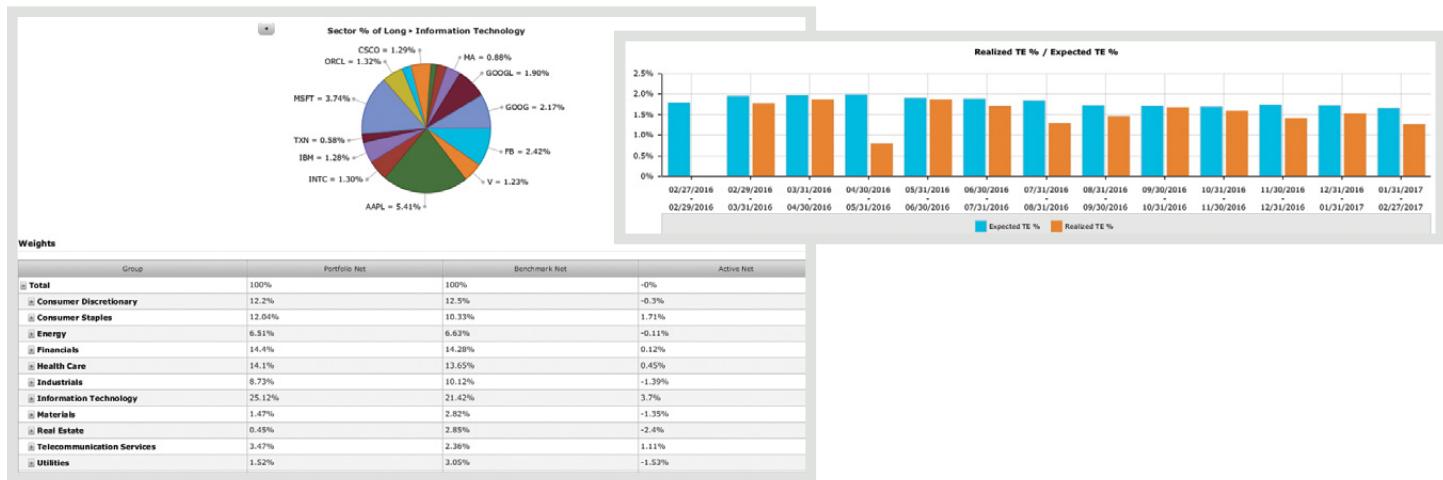
- Perform optimizations with integrated long-short capabilities in a historical research or production setting and with many options including quadratic constraints and advanced use of risk terms
- Eliminate the burden of translating data between disparate systems
- Quickly move new investment ideas from backtesting to portfolio construction
- Utilize S&P Global Market Intelligence's Equity Risk Models to create portfolios with desired risk characteristics, meeting complex linear or quadratic constraints, or easily incorporate third party and proprietary models

# Portfolio Attribution

## Gain Detailed Insight into Sources of Portfolio Risk and Return

The Portfolio Attribution module provides portfolio managers and reporting teams with a flexible, easy-to-use tool for identifying sources of portfolio return and risk.

- Calculate portfolio return and risk contribution across standard and custom groups
- Understand the fundamental composition of investments at the portfolio and group level over time
- Automate performance reporting across multiple portfolios and key holding periods, through batch reporting of customizable templates
- Fully customizable attribution reports, along with addition of company logos

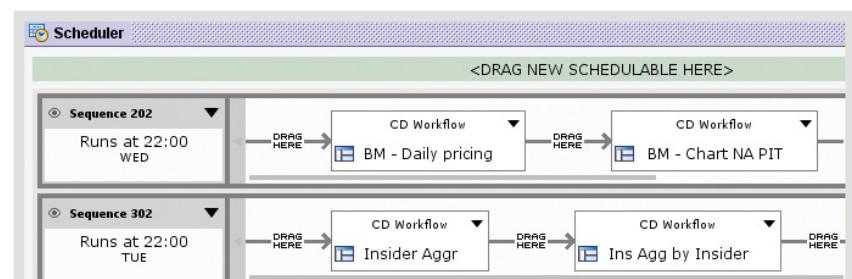
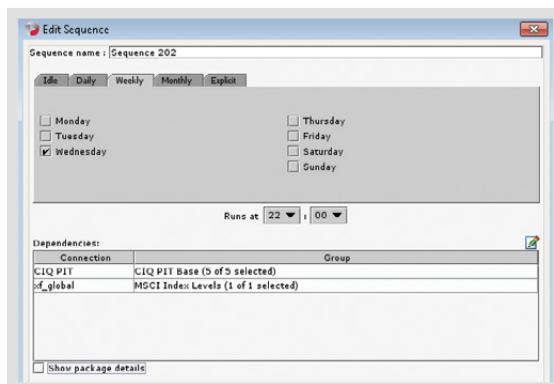


# Production Scheduler

## Automate Research and Production Activities

The Production Scheduling module provides complete automation capabilities of all modules without the need for scripting, or the assistance of IT personnel.

- Create automation dependencies in a “drag-and-drop” fashion, ensuring proper order of execution
- “Smart Cache” complex data sets for maximum productivity and research speed throughout entire routine production cycle
- Update screens and models, execute backtests and optimizations, and output trading signals
- Daisy chain job runs with data package updates in Xpressfeed



## About S&P Global Market Intelligence

S&P Global Market Intelligence integrates financial and industry data, research, and news into tools that help track performance, generate alpha, identify investment ideas, understand competitive and industry dynamics, perform valuation, and assess risk.

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