Integrated Market and Credit Risk Model

Get a unified view of risk across assets, credit qualities and time horizons

Actively traded portfolios with assets held for long periods pose a challenge for risk management — they are not only subject to price changes due to market movements but losses arising from waves of default events. This is especially important with high-yield bonds and equities of their issuers accounting for both types of risk. However, comparing portfolios with varying credit qualities requires a balanced description of these risk types. Without a unified view across time horizons and sources of loss, asset owners and managers with these portfolios might find it difficult to make rigorous comparisons based solely on results from separate models.

Seeing credit risk more clearly

MSCI's Integrated Market and Credit Risk Model combines our long-term horizon market risk modeling engine with the well-established CreditMetrics portfolio credit risk model.

Our model jointly simulates market risk factors and individual default events via default risk drivers. The simulation yields consistent scenarios, accounting for profit and loss arising from cash flows, aging, market movements and defaults of individual entities with full repricing of positions.

As a result, the model can deliver risk insights under a broader set of conditions and across credit qualities without making assumptions regarding the dominance or independence of any of the risk types.

Gaining new insights with an integrated view

We offer the model as part of an end-to-end risk management solution, covering data, analytics and reporting requirements.

MSCI's Integrated Market and Credit Risk Model

- Suitable for long-term horizons, including bootstrap historical and Monte Carlo simulations with mean-reverting stochastic models
- Includes full support for bonds, equities, most common equity and credit derivatives, mutual funds and exchange-traded funds with a look-through approach, market risk support for securitized products, as well as for private equity and private real estate holdings
- Compatible with HedgePlatform[1]
- Provides all modeling parameters for public assets, including correlation model and probabilities of default, while maintaining clients' full flexibility to override them
- Features model parameters for public securities that can be combined with client-provided data for private assets
- Includes value-at-risk, expected shortfall as well as full portfolio profit-and-loss distribution
- Incorporates incremental versions of risk measures that support breakdown to additive contributions from positions or sub-portfolios
- Comprises a two-tiered simulation algorithm, generating large number of scenarios for stable risk measures while limiting computational cost
- Offers delivery through diverse channels such as RiskManager 4, as well as aggregation, web and managed services

[1] Calculation of risk measures on hedge funds subject to approvals from fund managers.

Our model is designed to enable asset owners and managers to calculate risk measures under stressed market conditions and incorporate their views on stressed probabilities of default. They can gain additional insights on the contributors to their total risk through credit-risk-only and market-risk-only simulation models.

Getting on board

MSCI's Integrated Market and Credit Risk Model leverages our expertise in risk modeling, offering a unified view of risk across investment types and horizons. Through a broad set of data, analytics and reporting, we deliver an end-to-end solution that is easy to implement and equips asset owners and managers with flexibility to incorporate their own data and modeling preferences. [Contact us](#) to learn how we can help you gain new insights into market and credit risk.

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

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