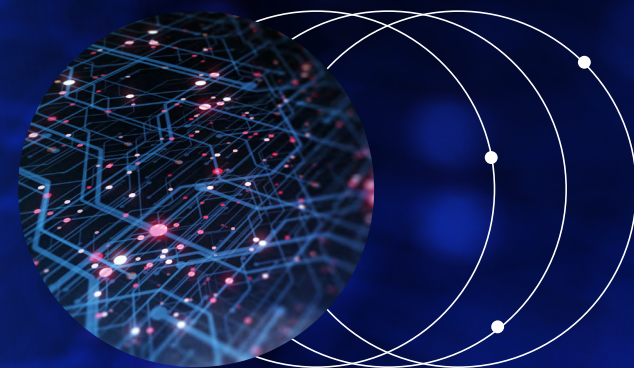


MSCI Mortgage and MBS Model Suite

Manage the risk of complex mortgage instruments more effectively with MSCI's integrated fixed income risk analytics.



Gain deeper portfolio insight

Identify key drivers of performance across multiple mortgage collateral segments with MSCI models that leverage granular inputs to deliver a greater level of insight.

- Our modeling framework is built to offer consistent and precise single security valuations and risk measures, in line with models traditionally offered by dealers.
- Our industry thought leadership includes advanced proprietary modeling methodologies and AI technology.

Make more effective investment decisions

- MSCI's securitized products models are designed to be accurate, relevant, and are backed by the latest research, seeking to help asset managers make more effective investment decisions in the mortgage and MBS space.
- The models utilize comprehensive macro-economic information and granular loan/ borrower level information and insights.
- We aim to enhance model credibility with regular and timely investor and client communications.

Broad analytical and instrument coverage

Instrument and segment coverage

- U.S. mortgage loans and Mortgage-Backed Securities (MBS)
- Fannie Mae, Freddie Mac, Ginnie Mae, Pools, CMOs, TBA and generics
- Danish MBS model suite covering one of the most sophisticated housing finance markets in Europe, with a prepayment model including base and refinance components, calibrated on 10 years of Danish MBS data
- Non-Agency MBS including Prime Jumbo, Non-QM, and Legacy sectors
- MBS CRT (Credit Risk Transfer) securities
- Mortgage loans

Model components

- 2 factor stochastic interest rate models
- Mortgage rate models including current coupon models and primary/secondary spread models
- Prepayment, delinquency and default, loss severity models
- House price models

Portfolio analytics

- Risk Measures: OAS, OAD, OAC, yield, prepayment, default, loss severity, etc.
- Portfolio VaR and attribution
- Portfolio factor attribution and risk forecasts

Scenario analysis

- Interest rates instantaneous shocks
- Macroeconomic shock scenarios
- Model dials for prepayment, default, severity, house prices, and mortgage rates
- Horizon analysis (future interest rates shocks)

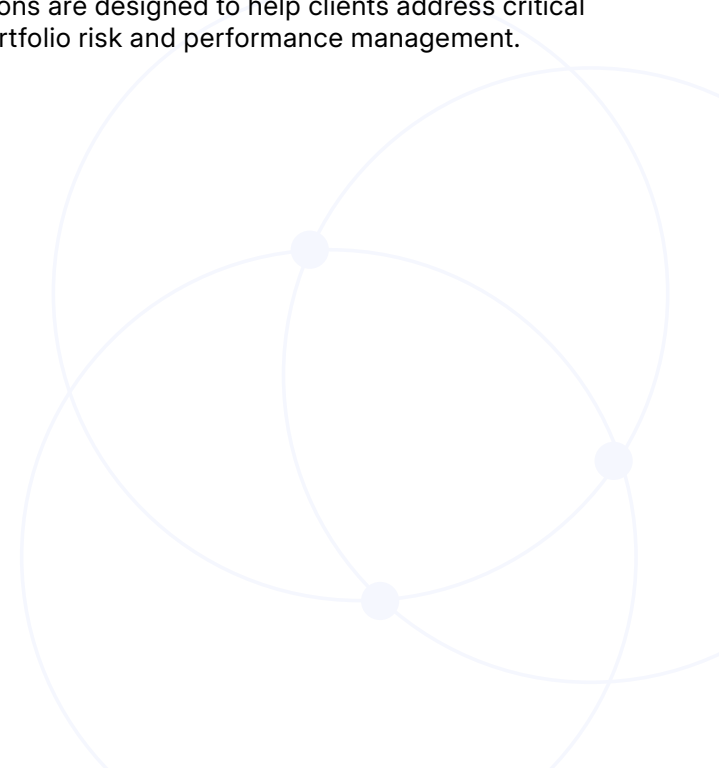
Integrated into MSCI's multi-asset class analytics

In today's cost-conscious environment, investment managers often can no longer afford having multiple niche platforms across different asset classes to help them manage their multi-asset class portfolios. MSCI's mortgage and MBS model suite is integrated into our unified, industry-leading analytics framework, delivering a broad view of risk across fixed income, commodities, equities and FX. We offer:

- Multiple Value-at-Risk (VaR) simulation methodologies
- Robust stress testing
- Sensitivity analysis
- Flexible instrument pricing models

MSCI fixed income analytics

MSCI's mortgage and MBS model suite is part of our extensive suite of fixed income portfolio analytics. Backed by expert research and rigorously reviewed data, our solutions are designed to help clients address critical areas of fixed income portfolio risk and performance management.



Easily access and integrate fixed income content

Integrate MSCI content into your workflows without disrupting your existing investment processes.



Interactive applications

MSCI applications, including AI Portfolio Insights, Single Security Analyzer and Excel plug-in, enable portfolio managers to receive fixed income analytics directly in the Order Management System (OMS).

Key strategic partner:



Large-scale batch reporting

MSCI managed production of standardized and custom reports in PDF, Excel, CSV, XML and other formats for thousands of portfolios.



APIs

Direct, intraday access to MSCI's data and calculation engines via modern API's that maximize speed of delivery.

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.

To learn more, please visit www.msci.com.

The information contained herein (the "Information") may not be reproduced or disseminated in whole or in part without prior written permission from MSCI ESG Research. The Information may not be used to verify or correct other data, to create any derivative works, to create indexes, risk models, or analytics, or in connection with issuing, offering, sponsoring, managing or marketing any securities, portfolios, financial products or other investment vehicles. Historical data and analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. MSCI ESG Research is provided by MSCI Inc.'s subsidiary, MSCI ESG Research LLC, a Registered Investment Adviser under the Investment Advisers Act of 1940. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. None of the Information or MSCI index or other product or service constitutes an offer to buy or sell, or a promotion or recommendation of, any security, financial instrument or product or trading strategy. Further, none of the Information is intended to constitute a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. MSCI

ESG and climate ratings, research and data are produced by MSCI ESG Research LLC, a subsidiary of MSCI Inc. MSCI ESG Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. MSCI Indexes are administered by MSCI Limited (UK). The Information is provided "as is" and the user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF MSCI INC. OR ANY OF ITS SUBSIDIARIES OR ITS OR THEIR DIRECT OR INDIRECT SUPPLIERS OR ANY THIRD PARTY INVOLVED IN THE MAKING OR COMPILING OF THE INFORMATION (EACH, AN "INFORMATION PROVIDER") MAKES ANY WARRANTIES OR REPRESENTATIONS AND, TO THE MAXIMUM EXTENT PERMITTED BY LAW, EACH INFORMATION PROVIDER HEREBY EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. WITHOUT LIMITING ANY OF THE FOREGOING AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, IN NO EVENT SHALL ANY OF THE INFORMATION PROVIDERS HAVE ANY LIABILITY REGARDING ANY OF THE INFORMATION FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR ANY OTHER DAMAGES EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited. Privacy notice: For information about how MSCI collects and uses personal data, please refer to our Privacy Notice at <https://www.msci.com/privacy-pledge>.

Please note that the issuers mentioned in MSCI ESG Research materials sometimes have commercial relationships with MSCI ESG Research and/or MSCI Inc. (collectively, "MSCI") and that these relationships create potential conflicts of interest. In some cases, the issuers or their affiliates purchase research or other products or services from one or more MSCI affiliates. In other cases, MSCI ESG Research rates financial products such as mutual funds or ETFs that are managed by MSCI's clients or their affiliates, or are based on MSCI Inc. Indexes. In addition, constituents in MSCI Inc. equity indexes include companies that subscribe to MSCI products or services. In some cases, MSCI clients pay fees based in whole or part on the assets they manage. MSCI ESG Research has taken a number of steps to mitigate potential conflicts of interest and safeguard the integrity and independence of its research and ratings. More information about these conflict mitigation measures is available in our Form ADV, available at <https://adviserinfo.sec.gov/firm/summary/169222>.

©2025 MSCI Inc. All rights reserved | CFS0625