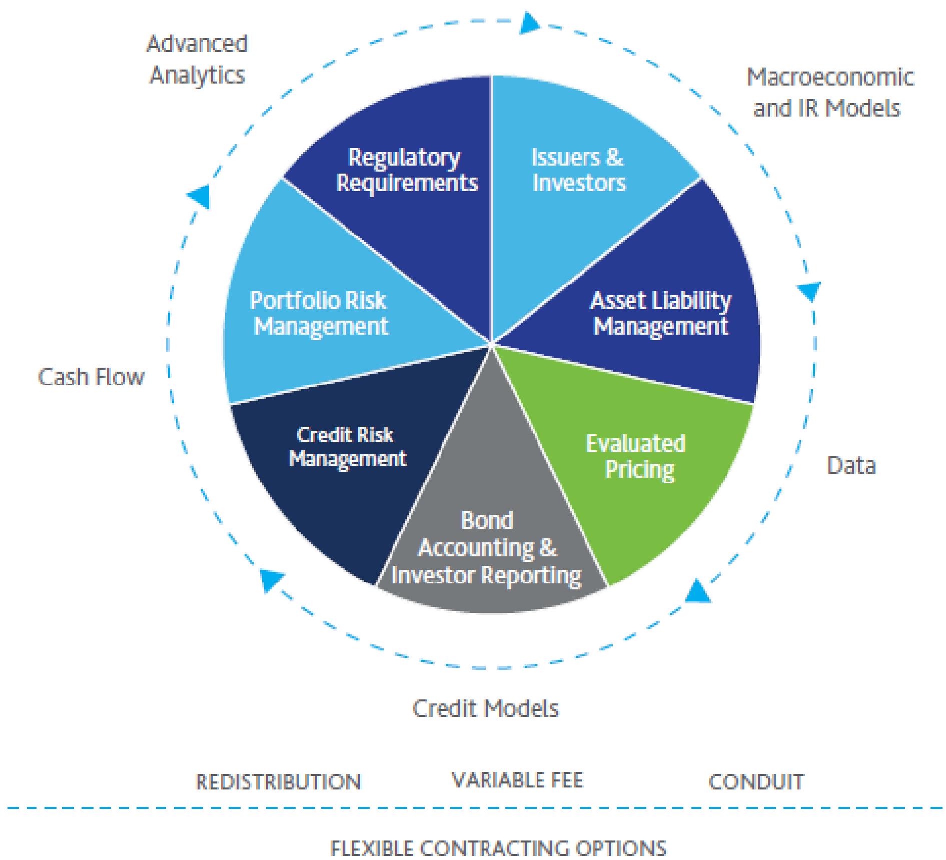
# Structured Finance Application Programming Interface (MA-SF API)

Moody's Analytics offers an end-to-end structured content solution with access to credit and cashflow models, economic assumptions, and interest rate models via flexible contracting options. Our cutting edge content delivery methods include local APIs, microservices (hosted APIs) and SFTP/HTTPS.

MA-SF API is integrated within other Moody's Analytics products, such as [ImpairmentStudio](), [Axis](), [RiskFrontier]() and [RiskConfidence]().






CONTACT US

## Product Offerings

We offer the following various products through our delivery channels:

**APIs (On-Prem / SaaS)**
Multiple language library and SaaS seamlessly integrate with custom in-house applications

**Cashflows (50k+)**
Proprietary and complete database of waterfall models covering comprehensive global structured finance markets

**Credit Models (45+)**
Global credit models with predefined or custom macro economic variables such as interest rates, HPI, GDP, and unemployment

**User-defined Scenarios**
Create user-defined scenario forecasts of interest rates, prepayments, defaults, delinquencies and loan modifications

**Advanced Analytics**
Comprehensive Market Risk Metrics and Regulatory Calculations

**Data (24M+ Loans)**
Loan and pool performance data enhanced with proprietary and third parity content set with an average history of 15+ years

## Access Moody's Analytics Deal Model Libraries for comprehensive global coverage of the Structured Finance universe

» 50,000+ cashflow waterfall models

» Moody's cashflow and credit models cover global capital markets and all major asset classes including agency and non-agency RMBS, ABS, CMBS, CDOs and other esoteric structured products

» Deep breadth of deal coverage that is constantly improving through collaboration with our partners/clients, allowing us to provide new models prior to or at issuance

» We maintain timely bond and collateral updates by working directly with trustees, servicers, issuers and other sources

CLO / CBO

CMBS
- Non-Agency
- Agency

Consumer ABS
- Autos
- Student Loan
- Credit Cards
- Equipment

RMBS
- Non-Agency
- Agency

Esoteric
- Aircraft
- Small Business /Franchise
- Equipment
- Marketplace Lending

## Advanced Analytics

- A comprehensive metrics suite for regulatory and accounting use cases, including SFA, SSFA, RWA, OTTI/OCI, AP/DP, SPPI, and ECL
- Scenario-dependent cash flow forecasts metrics for portfolio risk assessments, such as average life, yield, asset swap spread, modified duration, convexity
- Simulation-based market risk metrics such as OAS, market value projection, effective duration, by taking advantage of the integrated in-house interest rate simulation and credit models

| Single Scenario | | | | Simulation | |
|---|---|---|---|---|---|
| Accrued Interest | Average Life | Yield to Maturity | Yield to Worst | Government OAS | LIBOR OAS |
| Nominal Spread | Asset Swap Spread | Discount Margin | Z-spread (ZVO) | Price from OAS | Market Value Projection |
| Macaulay Duration | Modified Duration | Spread Duration | Duration to Worst | Effective Duration | Effective Convexity |
| DV01 | DV100 | CS01 | Yield Value of 32nd | Spread Duration | Internal Rate of Return (IRR) |
| Convexity | Spread Convexity | Price from Yield | Price from DM | First Loss | |

## Secure cross-platform solution with scalable hosted and local offerings

The MA-SF API has outperformed on a wide range of demanding use cases, from multi-threaded deal analytics to stochastic simulations.[1]

### *Local platform*

By offering support in both Windows and Linux, our local API integrations scale easily in a multi-server environment and can be implemented securely in production ("on-prem"). The API can be configured either to run analytics using loan level data, or to optimize performance by using rep-lines or aggregate pools.

### *Hosted platform (microservices)*

Clients also have the flexibility to directly integrate with our hosted solutions (SaaS). We take pride in our technology architecture using AWS services and Kubernetes to provide our clients with scalable solutions and faster analytics. Whether the use case involves analytics or market data, our hosted microservices provide several end points for client integrations.

[1] Based on internal testing and client feedback

## *Solutions delivery matrix*

| | Local API | Hosted API |
|---|---|---|
| **Platform Support** | | |
| Windows | ✓ | ✓ |
| Linux | ✓ | ✓ |
| **Supported Languages** | | |
| C++ | ✓ | ✓ |
| C# / .NET | ✓ | ✓ |
| Python | ✓ | ✓ |
| Java | | ✓ |
| **Developer Tools** | | |
| Documentation | ✓ | ✓ |
| Sample Code Solutions | ✓ | ✓ |
| Implementation Support | ✓ | ✓ |

## Our Partners

We have partnered with some of the leading organizations to successfully integrate our API solution within other platforms. These integrations cover diverse use cases such as accounting, asset/liability management, pricing, trading, portfolio management and insurance.

| | | | |
|---|---|---|---|
| ANDREW DAVIDSON & CO | FACTSET | citi | BLACKROCK |
| clearwater | QONTIGO | PolyPaths | EMPYREAN |
| Wilshire | REFINITIV | FIS | |

To learn more about all of our partners, please visit [https://www.moodysanalytics.com/microsites/sav-partners](https://www.moodysanalytics.com/microsites/sav-partners).

Find out more information about Moody's Analytics award winning structured finance products and solutions.

**Evaluated Pricing Solutions:** Calculate end-of-day prices for structured finance securities based on various pricing recipes across global structured asset classes

**Investor and Issuer Solutions:** Our end-to-end solution includes 500+ enhanced metrics, a sophisticated cash flow engine, global coverage, and advanced comparative analytics

**Portfolio Analytics & ALM Solutions:** Access structured cash flows models and data via APIs to calculate and report assets and liabilities under various economic scenarios

**Risk & Regulatory Solutions**: Leverage our proprietary interest rate, economic, credit and cash flow models to calculate advanced market risk measures and to assist with your regulatory needs, such as for CCAR, DFAST, IFRS9, and CECL


### Contact Details

Visit us at moodysanalytics.com or contact us at a location below.

| AMERICAS | EMEA | ASIA (Excluding Japan) | JAPAN |
|---|---|---|---|
| +1.212.553.1653 | +44.20.7772.5454 | +852.3551.3077 | +81.3.5408.4100 |
| clientservices@moodys.com | clientservices.emea@moodys.com | clientservices.asia@moodys.com | clientservices.japan@moodys.com |