

# Analytical rigor and operational efficiency delivered through cost-effective, integrated solutions

## PARTNERSHIP HISTORY

Andrew Davidson & Co., Inc. (AD&Co) has collaborated with Moody's Analytics to provide a solution for market-risk assessment for CMO deals. This solution integrates Moody's Analytics securities master data, terms and conditions, collateral characteristics, performance, and cash flow analytics data for structured finance securities, with the rigor of AD&Co's valuation analytics. This includes AD&Co's efficient and popular OAS computing engine (with its prOAS and Credit OAS variations), LoanDynamics Model (LDM) for borrower behavior, no-arbitrage term-structure models and home-price index (HPI) stochastic simulator. The computing subroutine can be integrated into proprietary risk products and is also available in RiskProfiler, AD&Co's end-user delivery system for MBS analysis.

## THE SOLUTION

To begin an MBS analysis using AD&Co's and Moody's Analytics joint product, the user only needs to know market conditions (rates, volatilities, prices or spreads/yields) and to provide the appropriate CUSIP. Using market data, and according to the user's task, AD&Co's interest rate (IR) and HPI models generate partially linked stochastic or deterministic economic scenarios. AD&Co's Valuation Engine plays the role of orchestra conductor and, given the CUSIP, retrieves collateral data from Moody's Analytics deal files, asset by asset (with control over collateral granularity). For each asset and each scenario, the Valuation Engine requests AD&Co's LoanDynamics Model to project borrower behavior: Vectors of MRR, MDR, Severity and Delinquency.

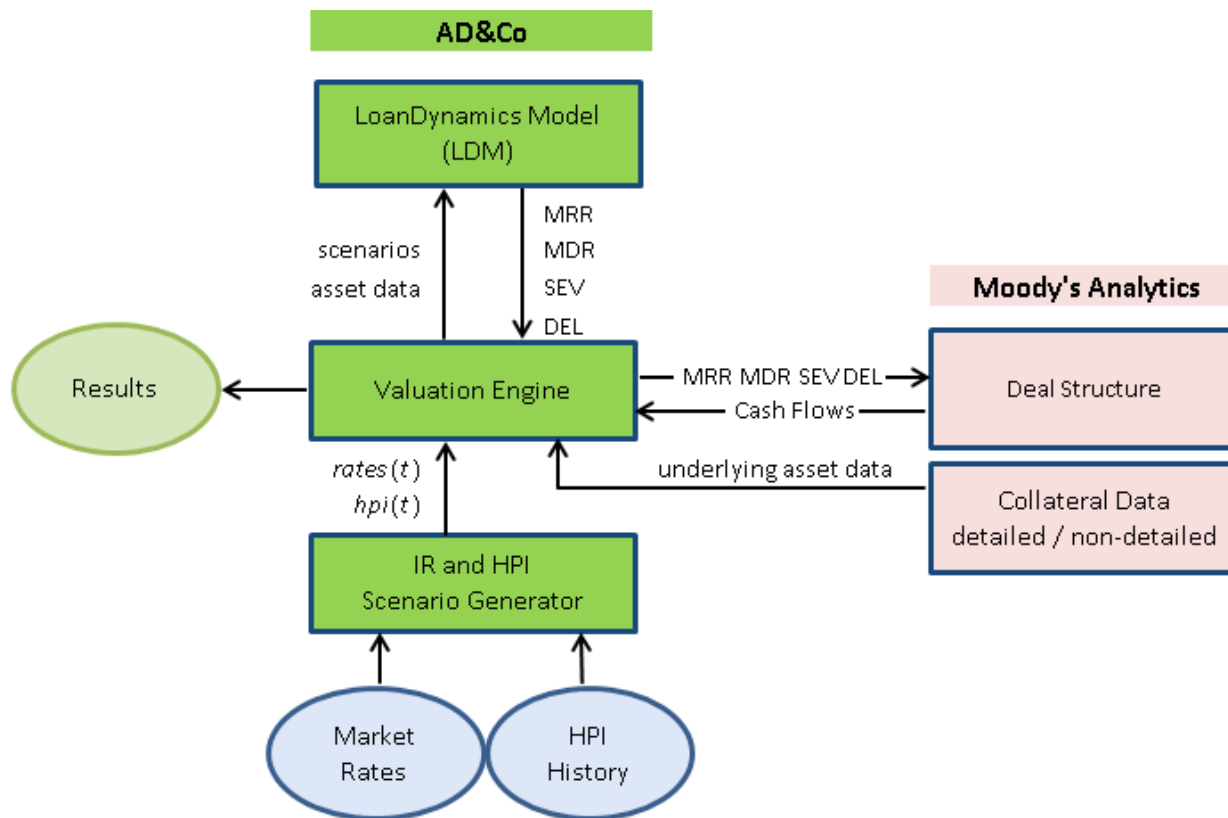
Next, those vectors get passed back to Moody's Analytics deal model. They are aggregated, and Moody's Analytics amortizes the collateral and the tranche in question, sending cash flows back to the AD&Co Valuation Engine, which then computes numerous option-adjusted risk and return measures: Yield, Z-Spread, OAS, Price (if unknown), OAD and OAC, OAS Duration, KRDs, Vega, and projected equivalent prepayments. The cash flow details are also available. In the case of RiskProfiler, results are stored in a database.

The product covers both agency and non-agency MBS. In the latter case, it projects losses, their distribution and all risk calculations become loss-adjusted. The product can be used to estimate economic capital.

## THE BENEFITS

"Our collaboration provides a cost-effective integrated valuation/risk solution for a wide range of agency and non-agency MBS. It combines the analytical rigor of option-adjusted valuation and the accuracy of cash flow deals and completeness with computing speed and operational efficiency." – Alex Levin, Director of Financial Engineering, Andrew Davidson & Co

# The Process



## About Andrew Davidson & Co., Inc.

Andrew Davidson & Co., Inc. (AD&Co) was founded in 1992, and is a leading provider of risk analytics for fixed-income investors with an emphasis on mortgage and asset-backed securities and mortgage whole loans. Their unique blend of investment expertise and cutting-edge quantitative methods combines decades of Wall Street experience with the most advanced modeling techniques. For more information about AD&Co, please visit [www.ad-co.com](http://www.ad-co.com).

## About Moody's Analytics

Moody's Analytics provides financial intelligence and analytical tools to help business leaders make better, faster decisions. Our deep risk expertise, expansive information resources, and innovative application of technology help our clients confidently navigate an evolving marketplace. We are known for our industry-leading and award-winning solutions, made up of research, data, software, and professional services, assembled to deliver a seamless customer experience. We create confidence in thousands of organizations worldwide, with our commitment to excellence, open mindset approach, and focus on meeting customer needs. For more information about Moody's Analytics, visit [www.moodyanalytics.com](http://www.moodyanalytics.com).

Moody's Analytics is a subsidiary of Moody's Corporation (NYSE: MCO). Moody's Corporation reported revenue of \$4.2 billion in 2017, employs approximately 12,300 people worldwide and maintains a presence in 42 countries.

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