Moody's ANALYTICS

CASE STUDY:
Estimating Losses on Resi Portfolios Under the Federal Reserve's CCAR Scenario

Results

In March 2012, Moody's Analytics used its residential mortgage loan-level credit model, **Mortgage Portfolio Analyzer (MPA)**, to forecast expected losses on loans held by a major US bank under the **Federal Reserve's CCAR stress scenario**. The losses computed by MPA yield strikingly similar results to the predictions published by the Federal Reserve, demonstrating the high predictive power of MPA for stress testing.

Federal Reserve's Predicted CCAR Losses Compared to MPA Predicted Losses

Overview

As of December 31st, 2011, the selected major US Bank had total assets of $314 billion in its Real Estate 1-4 Family Mortgage Loans portfolio, including the Pick-a-Pay portfolio and home equity portfolio.

Data Source

Information was gathered from the 2011 Annual Report, in which the bank disclosed the LTV, FICO, state and delinquency status distribution for their 1st lien residential mortgage portfolio and 2nd lien residential mortgage portfolio.

Methodology

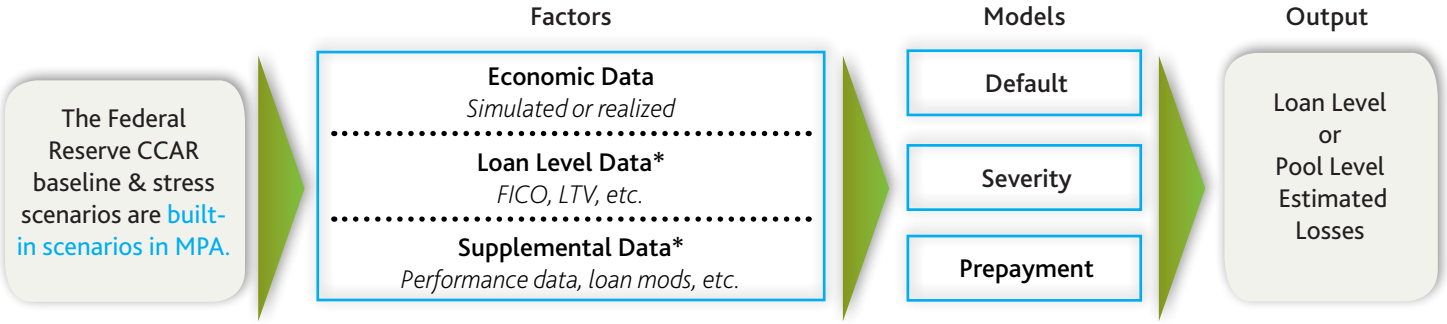
- Moody's Analytics simulated 5 representative loan level portfolios, which were fed to MPA
  - Real Estate 1-4 Family 1st mortgage excluding HELOC, Government Insured loans, and Purchased Credit Impaired (PCI) loans
  - Real Estate 1-4 Family 1st Lien HELOC
  - Real Estate 1-4 Family 1st mortgage PCI loans
  - Real Estate 1-4 Family 2nd mortgage excluding PCI loans
  - Real Estate 1-4 Family 2nd mortgage PCI loans
- Some generic assumptions were made on other related fields, such as origination date and loan amount
- Losses were then estimated under the CCAR stress scenario over the next two years, with the results as follows:

	Non-PCI Loans		PCI Loans		Total			
	Amount *($ millions)*	Loss	Amount *($ millions)*	Loss	Amount *($ millions)*	CCAR Projected Losses	MPA Projected Losses	
1st Lien	151,807	7.90%	29,748	31.06%	204,527	9.50%	9.94%	1st Lien Mortgage
1st Lien Govt Insured	26,555	0.00%						
1st Lien HELOC	20,786	9.45%						
2nd Lien & 2nd Lien HELOC	85,785	14.13%	206	41.98%	110,360	13.80%	13.84%	2nd Liens and HELOCs

MPA and CCAR:

MPA is a **loan-level credit model** designed to **assess credit risk measures, capital levels and stress scenarios** for portfolios of residential mortgages. The model incorporates thousands of macroeconomic paths for estimating probabilities of defaults and prepayments as well as severities (loss-given-default). MPA has incorporated the **Federal Reserve's CCAR** baseline and stress scenarios. It also allows for user defined macroeconomic scenarios and computes the default/prepayment probability and severity for each month and aggregates the losses.

MPA's loan-level model can also be customized to client specific portfolios leveraging Moody's Analytics loan level and supplemental data.



** Data can be provided by the client or supplemented by Moody's Analytics*

ABOUT MOODY'S ANALYTICS

Moody's Analytics, a unit of Moody's Corporation, helps capital markets and credit risk management professionals worldwide respond to an evolving marketplace with confidence. The company offers unique tools and best practices for measuring and managing risk through expertise and experience in credit analysis, economic research and financial risk management. By offering leading-edge software and advisory services, as well as the proprietary credit research produced by Moody's Investors Service, Moody's Analytics integrates and customizes its offerings to address specific business challenges.

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