

Enhancing Transparency Around Supervisory Models

Robert Sarama

Board of Governors of the Federal Reserve System

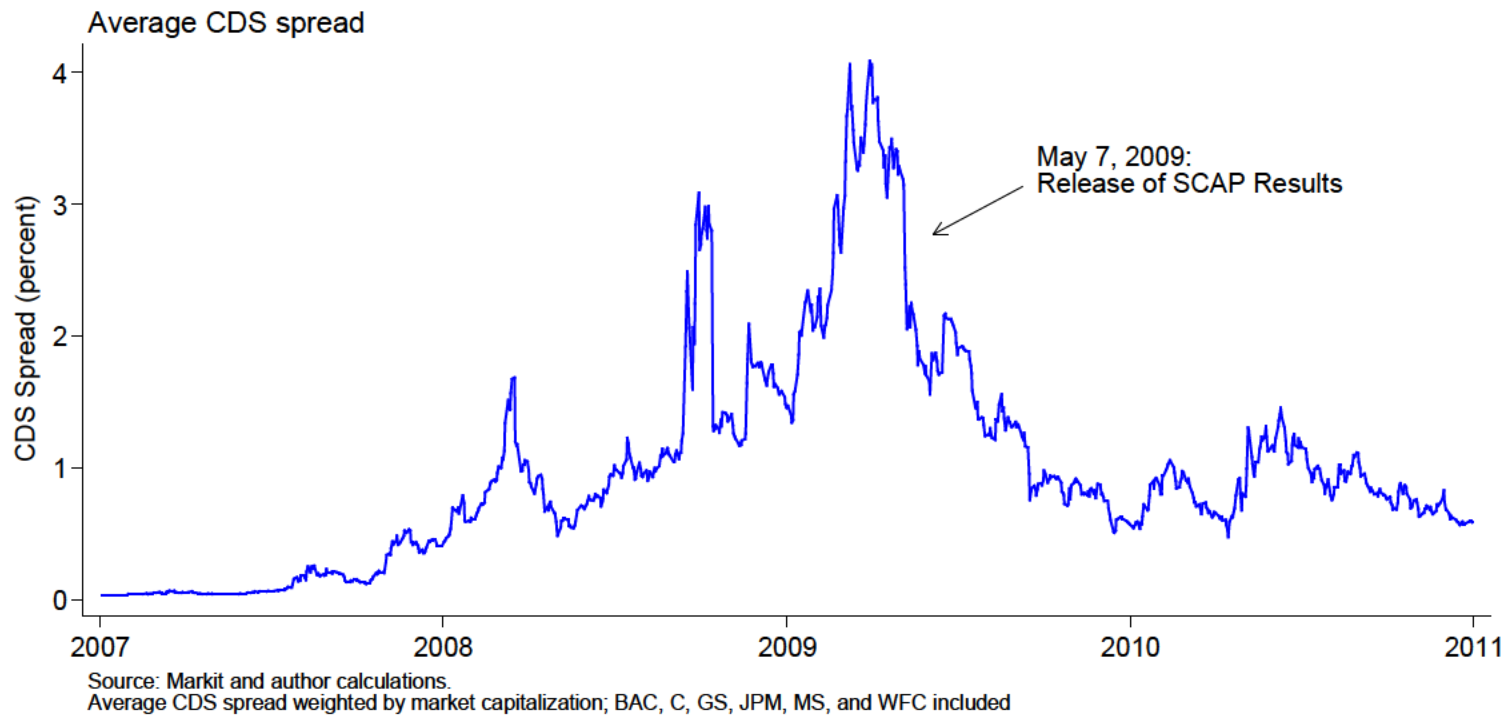
2017 Stress Testing Model Symposium

October 4, 2017

Disclaimer

The views expressed in this presentation are those of the author and do not necessarily reflect those of the Federal Reserve System or the Federal Reserve Board.

Average CDS Spread: Largest Banks



Role of Transparency in Supervision

- 2009 Supervisory Capital and Assessment Program (SCAP)
 - Sought to measure and publicly report details about health of banks
 - At time, disclosure of confidential supervisory information was controversial
 - Highlighted value of transparent supervision

“...senior policymakers – including myself – thought disclosure was essential for the SCAP to be credible and we resolved to disclose extensive information.”

William Dudley, 2011

- More transparency can improve credibility of supervisory programs and lead to better outcomes

Stress Testing and Transparency

- Annual stress testing disclosures since 2012 include:
 - Bank-level, post-stress estimates of
 - Loan losses;
 - Revenues;
 - Pre-tax net income; and,
 - Capital ratios
 - Information about the models and methodologies used by the Federal Reserve
- Disclosures represent significant increase in public transparency of large bank supervision in U.S.
- Would more be better?

Benefits of Additional Transparency

- Potentially significant benefits to disclosing additional detail about models and results
- More detailed disclosure of models and results could
 - Further enhance credibility of the stress test
 - Facilitate feedback on modeling approaches
 - Help public better understand and interpret results

Risks of Full Model Disclosure

- Could encourage firms to **manage to the test**
 - Adjusting practices/reporting to reduce losses without reducing risk
 - Distorts stress test's assessment of vulnerabilities
 - Could increase correlations of assets held by large banks
- Could promote **model monoculture**
 - Firms may have incentive to use supervisory models (or similar)
 - Discourages firms from building own capabilities
 - Models may miss key idiosyncratic risks faced by firms

Toward a More Transparent Stress Test

- As noted by Governor Powell in June, the Federal Reserve is committed to increasing the transparency of the stress test
- Channels to enhance transparency of supervisory models
 - Model development principles } Patrick's talk
 - Model descriptions } This talk
 - Model outputs }

Model Descriptions

- Current model description in Appendix B of the Dodd-Frank Act Stress Test Methodology and Results document
- 15-page description provides an overview of the modeling approaches
- Enhancements could
 - Provide a more consistent level of detail across modeling areas
 - Include more information about input variables

Model Outputs

- In current disclosure, model outputs aggregated to portfolio-level disclosure
- For example, loan losses and loss rates published for 7 portfolios of loans
- Potential enhancements could include
 - Range of loss rates within portfolios
 - Loss rates by more granular asset categories
 - Datasets containing portfolios of typical loans along with modeled loss rates for portfolios

What Do We Mean by “More Granular Asset Categories”?

Current Loss Rate Disclosure

Portfolio Loss Rates	
	Portfolio Loss Rate (%)
Loan Type	
First-lien mortgages, domestic	X.X
Junior liens and HELOCs, domestic	X.X
Commercial and industrial	X.X
Commercial real estate, domestic	X.X
Credit cards	X.X
Other consumer	X.X
Other loans	X.X

Possible Additional Disclosure

-- Illustrative example --

Sub-portfolio Loss Rates		
	Credit Score	
	< 720	>= 720
LTV < 80	X.X	X.X
LTV >= 80	X.X	X.X



How Model Output Disclosures May be Helpful

- Portfolio-level loss rates: hard to understand potential range of post-stress loss rates on particular types of loans
 - Stress losses can vary significantly on loans within portfolios
 - Certain loans are more sensitive to certain types of macro scenarios
- With more granular loss rates, the public could better
 - See how variation in loan characteristics results in variation in loss rates
 - Understand how different scenarios affect losses on particular types of loans
- Datasets of hypothetical loans, along with associated loss rates, would provide another angle to understand models
 - Public could calculate loss rates on loans in datasets using their models
 - Under right assumptions, better comparability to Federal Reserve models

Many Implementation Choices

- General
 - What to assume regarding 9-quarter balances?
 - Bank-level or industry-level?
 - Exclude or include overlays or other non-model adjustments?
- More granular loss rate disclosures
 - How many categories to disclose?
 - How to choose more granular categories for disclosure?
- Datasets of hypothetical loans
 - What variables to disclose?
 - What loan characteristics to highlight?