

Financial Modeling

“Searching for the New Normal: The Rebuilding Process for Risk Management”

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Some think ...

“We don’t need no stinkin’ models!”



“The Treasure of the Sierra Madre”



“Blazing Saddles”

... well, maybe we do!

Some Thoughts on Financial Models

- Models provide an analytic framework to assess risks
- Provides a common language to communicate risks
- Need control over financial models; at State Street we use a four-level approach
 - Model owners provide the first-line of review
 - Model Validation Group within Enterprise Risk Management provides independent assessment of models
 - New models, material changes, and periodic reviews
 - Model Assessment Committee reviews MVG findings and recommends to model oversight committee
 - Oversight Committee has final ownership of models and includes business units and risk management experts
 - e.g., ALCO for interest-rate risk models, Trading and Market Risk Committee for VaR models
- Need multiple views of risk: models, stress tests, and management's expert judgment
- Weakness for models, stress tests, and management judgment is calibrating to history

History of Asset Spreads: What Would You Think Pre-Crisis?

- Check out rows #1 and #2 and especially #10
- These influence model calibrations and people's judgments

AAA/Aaa Asset Spreads (bps)

Row	Date	Agency MBS	Credit Cards	Student Loans	UK RMBS	Subprime ABS	Agency Debt	Auto Loans	CMBS
1	6/30/07	-4	4	4	10	20	-18	3	25
2	12/31/07	6	55	45	70	290	-21	75	82
3	6/30/08	46	85	65	120	740	-8	80	195
4	12/31/08	122	560	375	425	960	22	550	900
5	6/30/09	24	170	120	240	1350	-7	100	690
6	9/30/09	15	85	65	145	1200	-3	45	600
7	12/31/09	7	75	65	150	800	-14	40	500
8	1/31/10	23	50	55	120	850	-15	25	480
9	2/28/10	27	45	55	130	825	-14	15	470
10	Historic Wide*	38	32	22	25	70	1	39	98
11	Term	15yr	5yr	5yr	5yr	3yr	5yr	2yr	10yr
12	Benchmark			Libor				Swap	

* Pre-2007 Historic Wide