

Meltdown in Structured Securitization: Searching for Lessons not Scapegoats

Discussion by

Anthony Saunders

New York University
Stern School of Business

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Anatomy of the Storm and Credit Risk Models

- Can we have higher return without higher risk?
 - Why did Credit Risk Measurement Models fail?
 - Which risks were underestimated?

Anatomy of the Storm: The Phases of the Crisis – Bank of England

Chart 1 The phases of the crisis

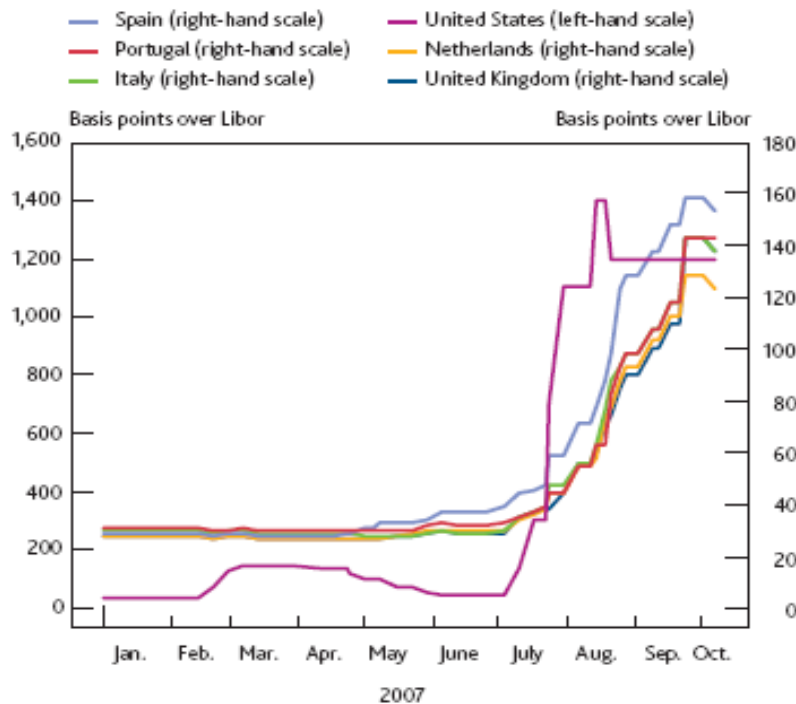


Phase 1: Anatomy of the Storm: Assumption of Perpetually Rising US House Prices

- Subprime and “teaser” rate mortgages depend on rising housing prices to:
 - Refinance upon hitting expiration of introductory teaser rate. But, there is a strong correlation between PD and level of rates (see, Stiglitz and Weiss)
 - Sale of property in the event of borrower’s inability to make payments. If housing prices increase, Loss Given Default = 0
 - Both PD and LGD exhibit “procyclicality”
 - Thus underestimate PD, LGD and ρ (PD, interest rates).

Phase II of the Storm: Rising Spreads on RMBS

Chart 6 Residential mortgage-backed securities spreads across selected countries^{(a)(b)}



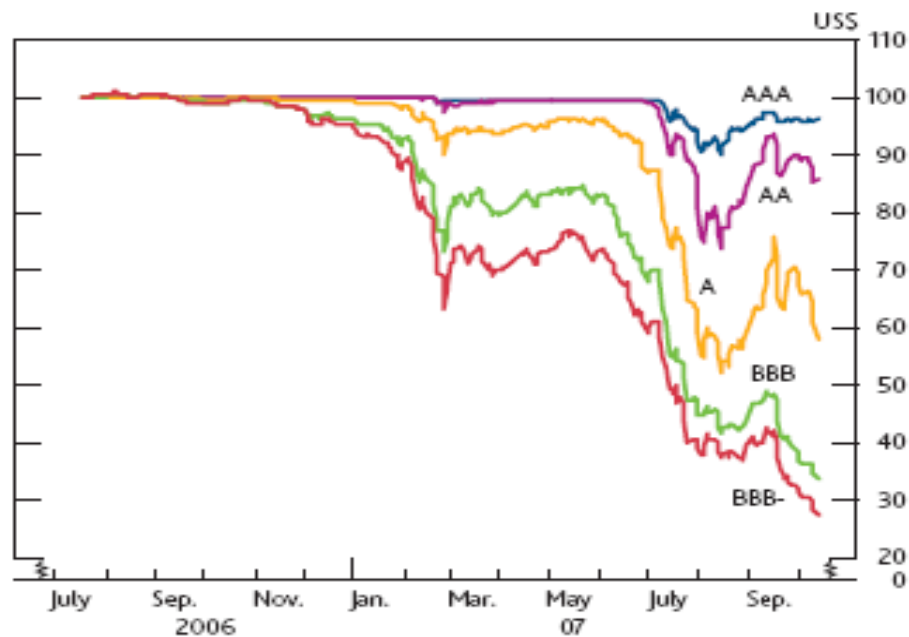
Source: Lehman Brothers.

(a) A-rated five-year spreads over Libor except for Spain which uses ten-year spreads over Libor.
 (b) All countries' data are prime residential mortgage-backed securities except for the United States which uses home equity loans, which will tend to be of lower quality.

- Underestimate ρ (RMBS vs. RMBS_{EUR})

Phase II: Higher spreads, lower prices, fewer MBS originations

Chart 1.9 Prices of US sub-prime mortgage credit default swaps(a)



Source: JPMorgan Chase & Co.

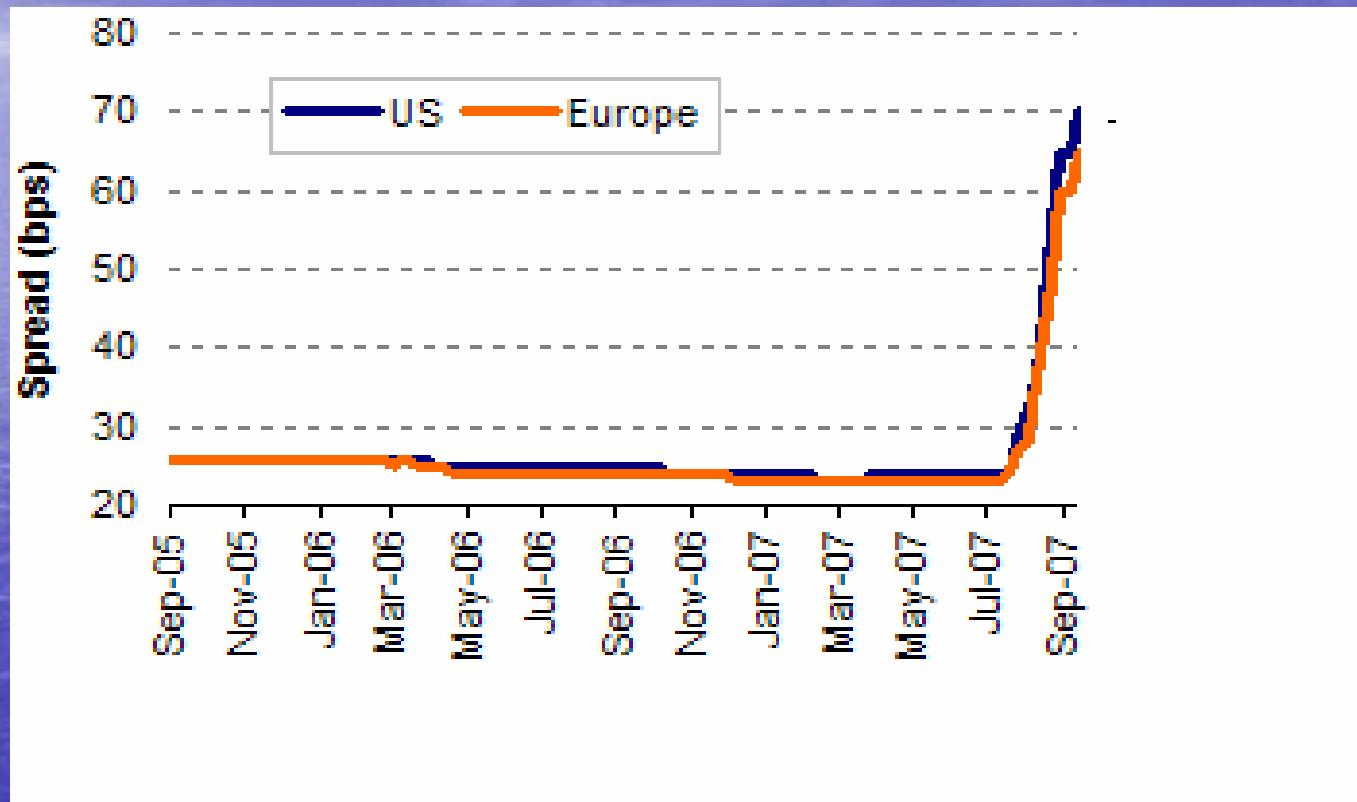
(a) 2006 H2 vintage.

- Underestimate ρ (AAA, BBB-)

Phase III of the Storm: The Crisis Spreads to Other ABS Markets

- CDO spreads increase
- CDO issuance declines
- Leveraged Loan prices fall

CDO Spreads Increase

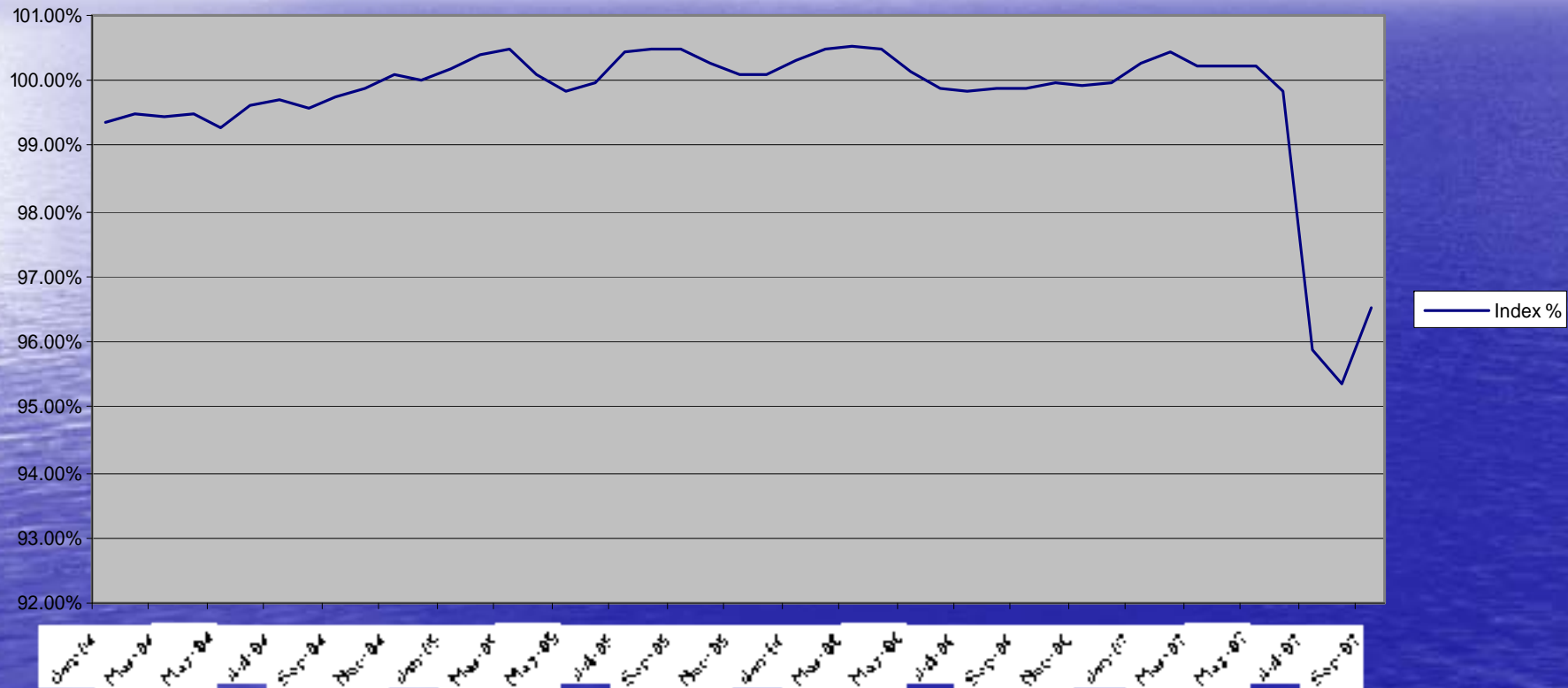


- Underestimate ρ across debt markets, *i.e.*, ρ (RMBS, CDOs)

Source: Loan Pricing Corporation website.

Leveraged Loan Prices Fall

Leveraged Loan Index Prices 2004-2007



- Underestimate ρ (RMBS, HLT)

Source: Leveraged Loan Index is the CSFB Leveraged Loan Index Plus Average Price, expressed as a percentage of par, Bloomberg Ticker = DLJLPX

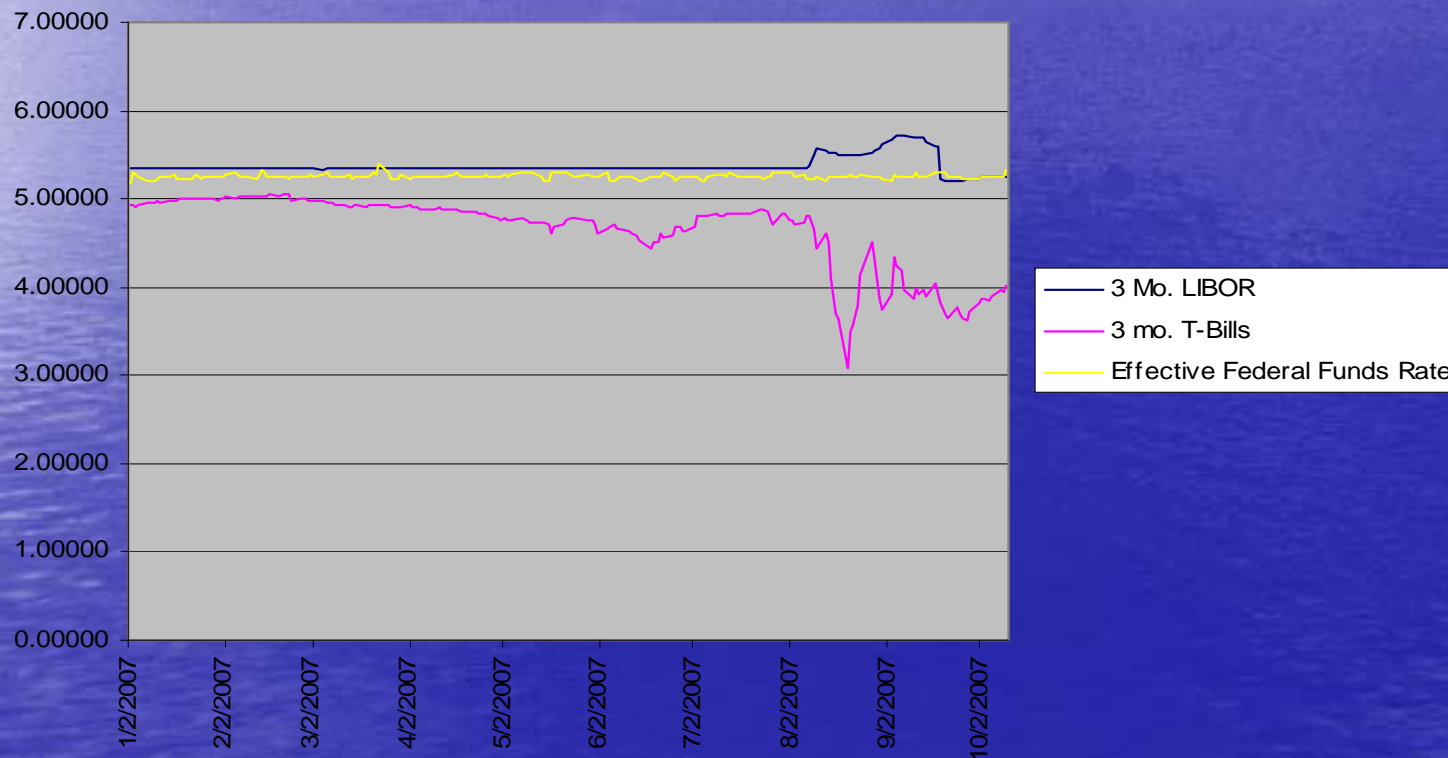
Phase IV: Risk Flows Back to Banks

– Reintermediation

- SIVs are unable to issue Asset-Backed Commercial Paper
- SIVs access their backup lines of liquidity and take down credit lines
- Banks are unable to securitize or syndicate these loans due to the decreased volume of new deals
- Even if they could sell off these unwanted loans, the prices would be low as spreads increase.
- SO: Banks did not really remove the risks from their balance sheets.
- Underestimate correlation between on and off-balance sheet risk , i.e., ρ (Risk on, Risk off)

Phase V: Liquidity Hoarding and Flight to Quality Creates Mispricings

3 Month LIBOR, 3 Month US T-Bill Rates and Federal Funds Rates
January 2007-October 2007



- Underestimate ρ (credit risk, liquidity risk)

Source: St. Louis Federal Reserve Bank database, FRED website.

How do we steer out of the storm?

- Better Risk Modeling
 - Price of risk was set too low in the mortgage market.
 - Quantity of risk was underestimated – the pitfalls of hidden leverage.
 - Improve credit rating models PD and LGD.
 - Analyze correlation across markets, risks and countries
- Align Incentives
 - What does it tell you when informed lenders treat their loans like hot potatoes?
- Avoid Regulatory Mispricings
 - Basel II implications

If capital is required:

- Standardized model risk weights:

Long-term rating category³³

External Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to BB-	B+ and below or unrated
Risk Weight	20%	50%	100%	350%	Deduction

Short-term rating category

External Credit Assessment	A-1/P-1	A-2/P-2	A-3/P-3	All other ratings or unrated
Risk Weight	20%	50%	100%	Deduction

- Credit Conversion Factor for Off-Balance Sheet Items:
 - 100% unless “eligible liquidity facility” – limited draw-down privileges unrelated to default – then 50% CCF for maturity > 1 year and 20% CCF for maturity ≤ 1 year

Steering Out: Potential Pitfalls of the Basel II Securitization Requirements

- Places heavy reliance on external credit ratings.
 - Standardized model uses credit ratings
 - In the hierarchy of IRB approaches, RBA is preferred – tied to credit ratings
- What happens when the credit ratings are wrong?