Mortgage Credit Market Crisis: Leverage, Counterparty Risk, and Asymmetric Information

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Perspective on the U.S. Mortgage Crisis

Source: Author’s calculations, Federal Reserve Flow of Funds, Mortgage Bankers Association.
Foreclosures Are Highly Concentrated in Subprime

Subprime Market Supply Chain: *Fee businesses with inadequate capital*

(Adapted from: “Six Degrees of Separation,” Andrew Davidson)
GSAMP 2006-NC2: A Subprime RMBS Special Purpose Vehicle (SPV)

- **IB: Goldman Sachs**
  - 3,949 subprime loans
  - $881 Million
- **Finance Co: New Century Fin.**
  - Bankruptcy, April 2007.
  - 3rd largest subprime orig.
  - $51.8 billion originations.
  - Internet-based lender.
  - 14,000 brokers.

Global CDO Issuance

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount (Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>157.4</td>
</tr>
<tr>
<td>2005</td>
<td>273.0</td>
</tr>
<tr>
<td>2006</td>
<td>550.3</td>
</tr>
<tr>
<td>2007</td>
<td>503.0</td>
</tr>
</tbody>
</table>

Source: Securities Industry and Financial Markets Association

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Addition of Counterparty Risk: *Credit Default Swaps*

**The Life of a Swap**
How financial players transfer their risk in an opaque market:

1. A company raises cash by selling bonds

2. The buyer of a credit default swap—a pessimist in this scenario—does so to insure against a default on a bond or simply to bet that default risk will rise.

3. In exchange for regular payments over a fixed period of time, a seller of the credit default swap agrees to make a large payout to the buyer if the specific bond defaults.

Source: wsj.com

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Insuring Mortgage Bond Default Risk: *Credit Default Swaps*

(Adapted from: “Six Degrees of Separation,” Andrew Davidson)
Credit Default Swaps: Significant Counterparty Risk

$Trillions

Source: Authors calculations, New York Times, Federal Reserve Flow of Funds, L.4 Credit Market Debt, International Swaps and Derivatives Association

CDS Counterparty Risk

- Completely unregulated, privately negotiated bi-lateral trading structure.
  - No standardized capital requirements, no standardized valuation methods, no standardized contract structure.
- No central clearinghouse or system for recording trades.
  - Do not know where it all is!!
- CDS positions are long and can only be “unwound” with countervailing positions.
- Bears Stearns, AIGFPC, Lehman are all important ‘sellers’ of CDS – fee businesses with inadequate capital!
- Many CDOs are ‘sellers’ of CDS!