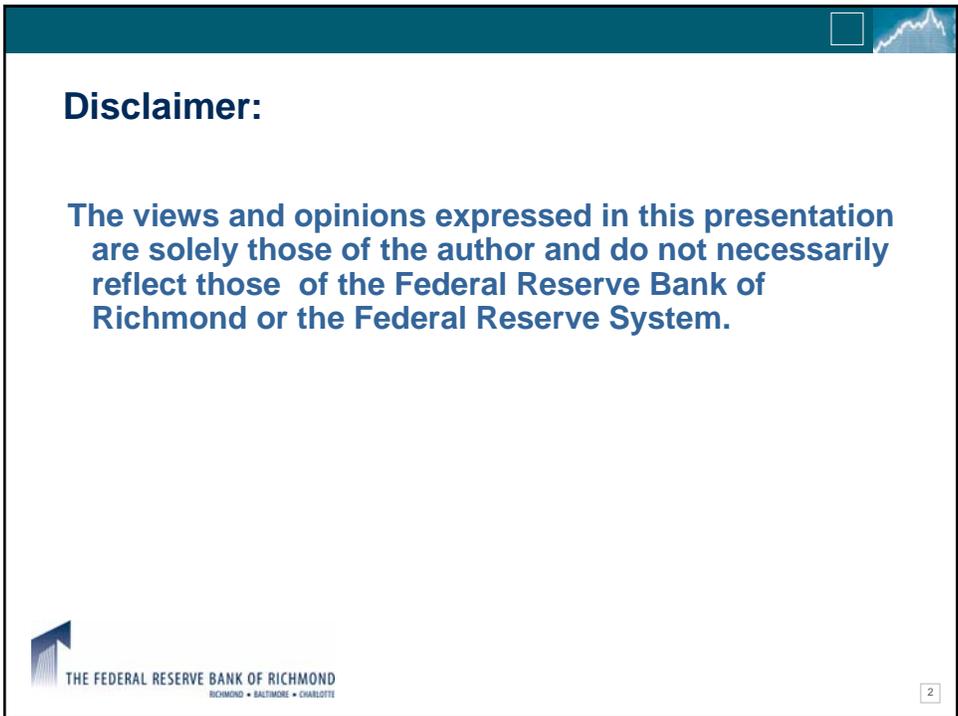


Financial Spillovers from the Housing Market Shakeout
Longwood University
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Robert E. Carpenter
Senior Financial Economist, Risk and Policy
Associate Professor of Economics, UMBC



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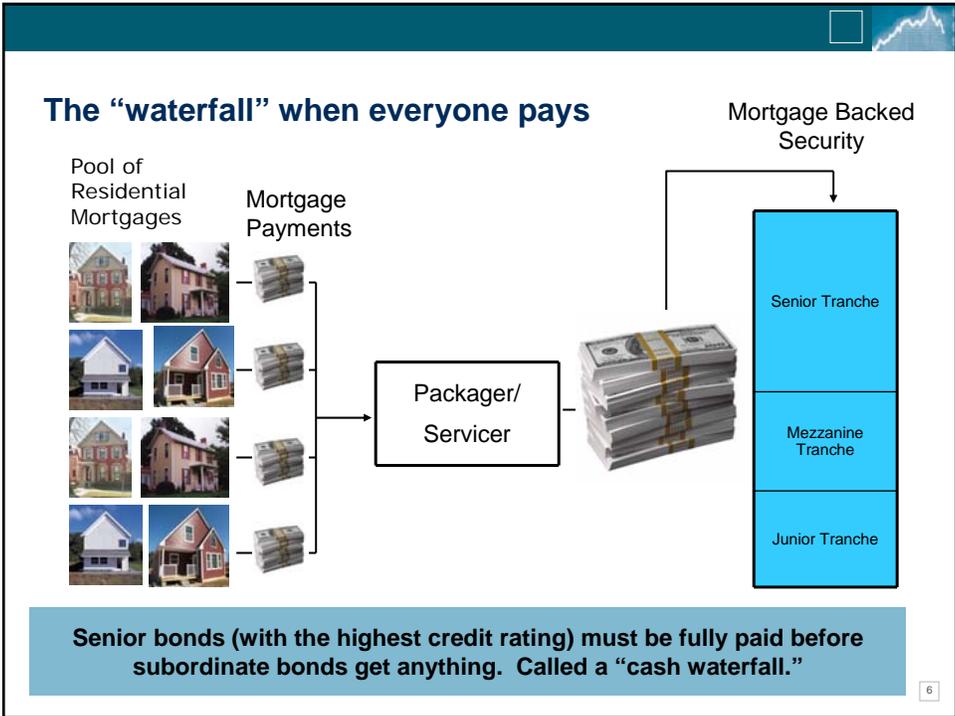
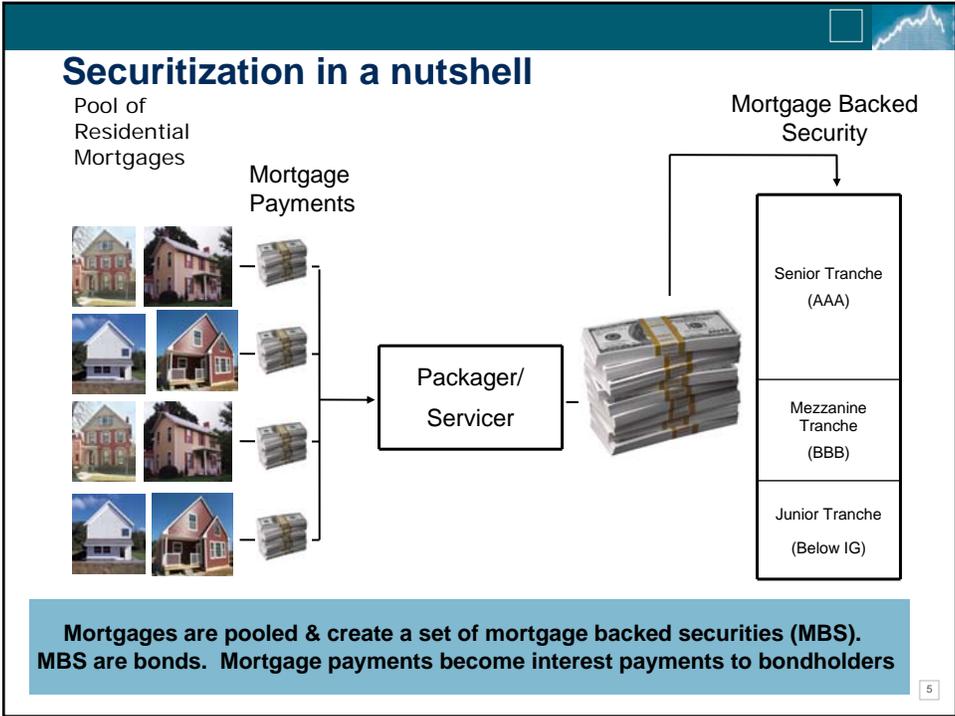
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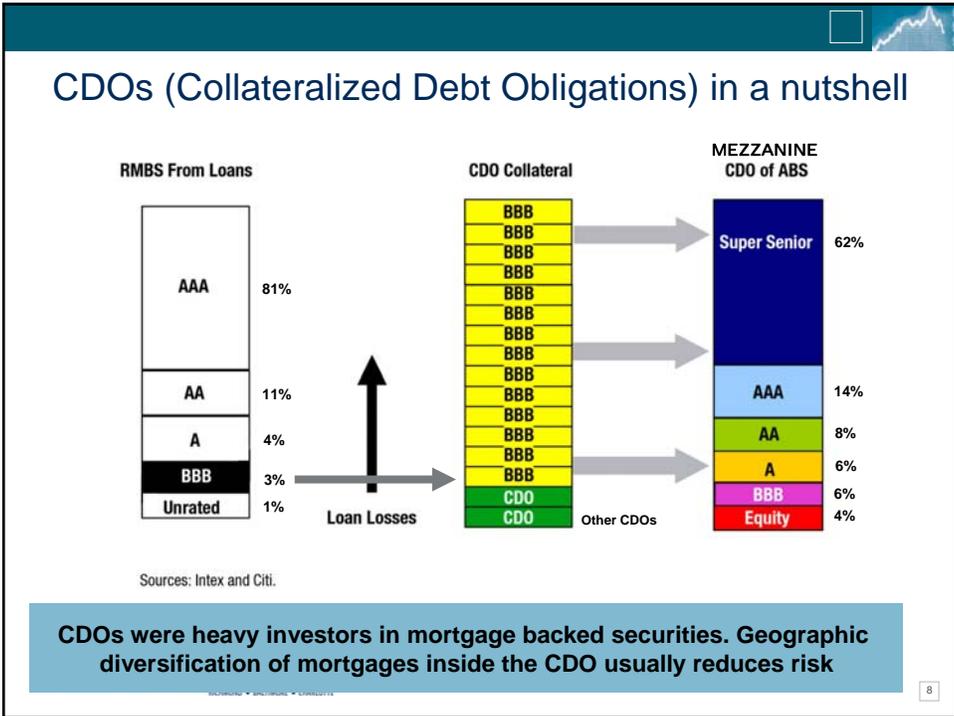
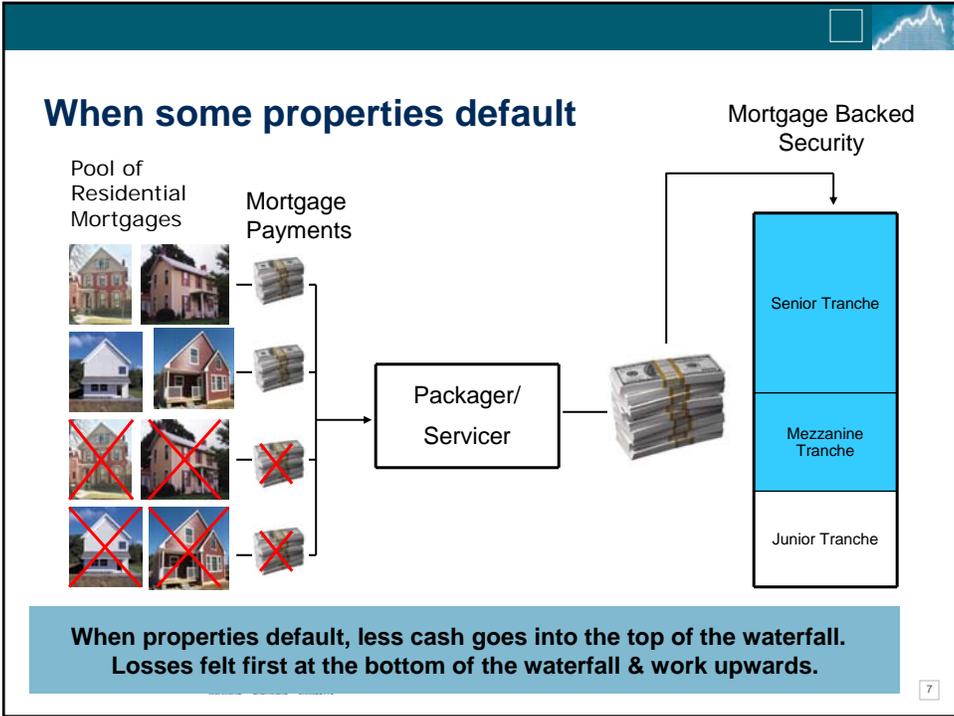
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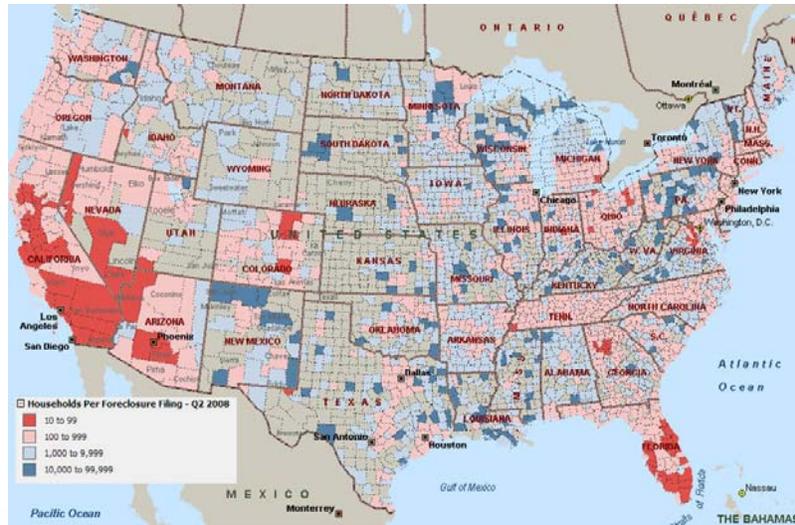
What I'll cover this evening

- How home mortgages are used to construct different kinds of financial assets
- How increasing defaults on mortgages (which you've seen) affect the value of those assets (and caused the problems in *mortgage* markets to spread to *financial* markets
- How the crisis spread through the financial system, and the global markets, and to banks in the Federal Reserve's Fifth District
- A quick look at where we are now, including a quick look at the problems surrounding Lehman Brothers bankruptcy





Foreclosures spread across much of the country



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Source: Realtytrac

Investors in Collateralized Debt Obligations (CDO) & Mortgage-Backed Securities (MBS) were pressured

- As the value of their underlying mortgage collateral deteriorated, owners of CDOs and MBS suffered losses.
- Who were (some of) the buyers?
 - Banks, both domestic and foreign (roughly \$521.8 billion in reported losses to date)

Top 10 Institutions	Writedowns (\$ Billions)
Citigroup Inc.	55.1
Merrill Lynch & Co.	52.2
UBS AG	44.2
HSBC Holdings	27.4
Wachovia	22.7
Bank of America	21.2
Morgan Stanley	15.7
Washington Mutual	14.8
J.P. Morgan Chase	14.3
Lehman Bros.	13.8

Source: Bloomberg

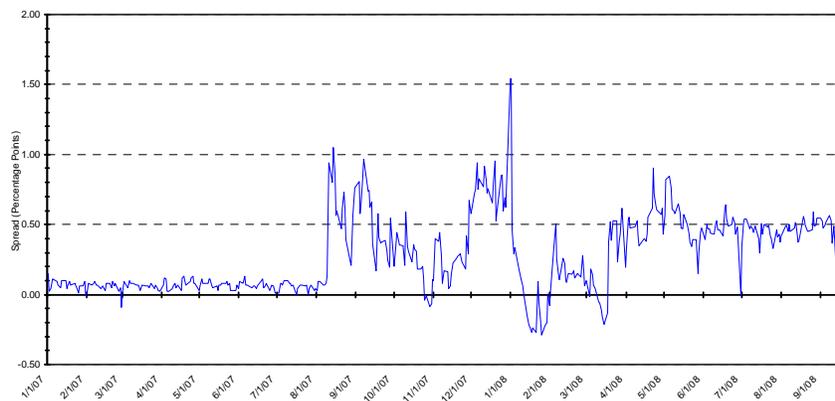
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The crisis spread abroad

- Uncertainty in US financial markets led some institutions to retreat from providing funds to European money markets.
- Put pressure on European financial institutions and lending markets.
 - London Interbank Offer Rate (LIBOR) is a short term international benchmark interest rate.
 - LIBOR rose relative to US short term rates (Fed Funds).
 - It spiked again when the troubles with Lehman Brothers and AIG were announced.

30-Day LIBOR Over Effective Fed Funds Rate

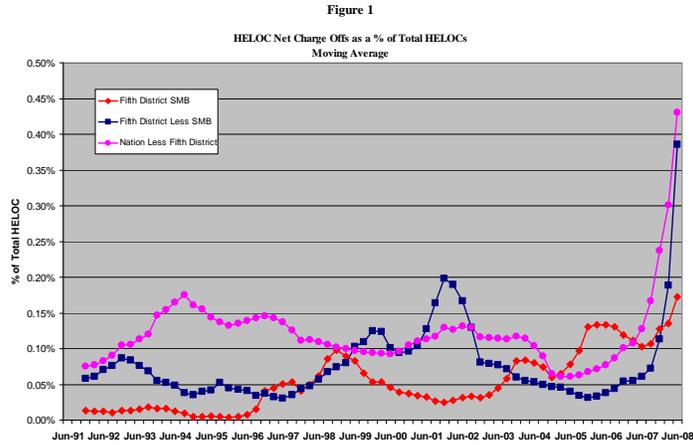
July 1, 2007 to September 22, 2008



Source: Federal Reserve, Bloomberg

Elevated spreads mean that international money markets are under pressure. You also care because much of the US adjustable rate debt is tied to LIBOR.

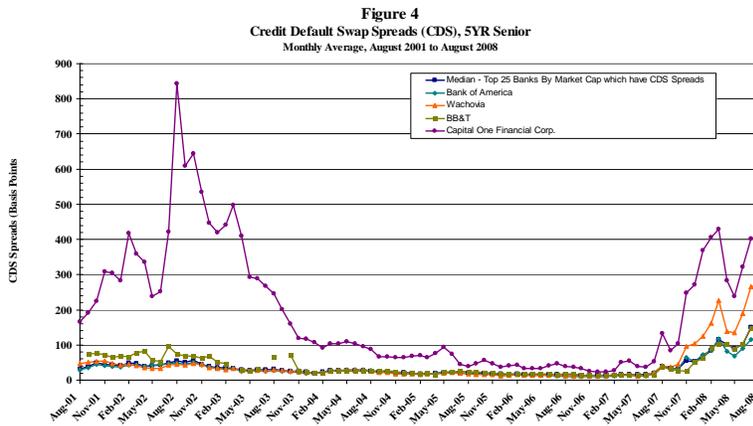
Banks in the Fifth District haven't escaped unscathed



Source: Call Reports, 2008Q2

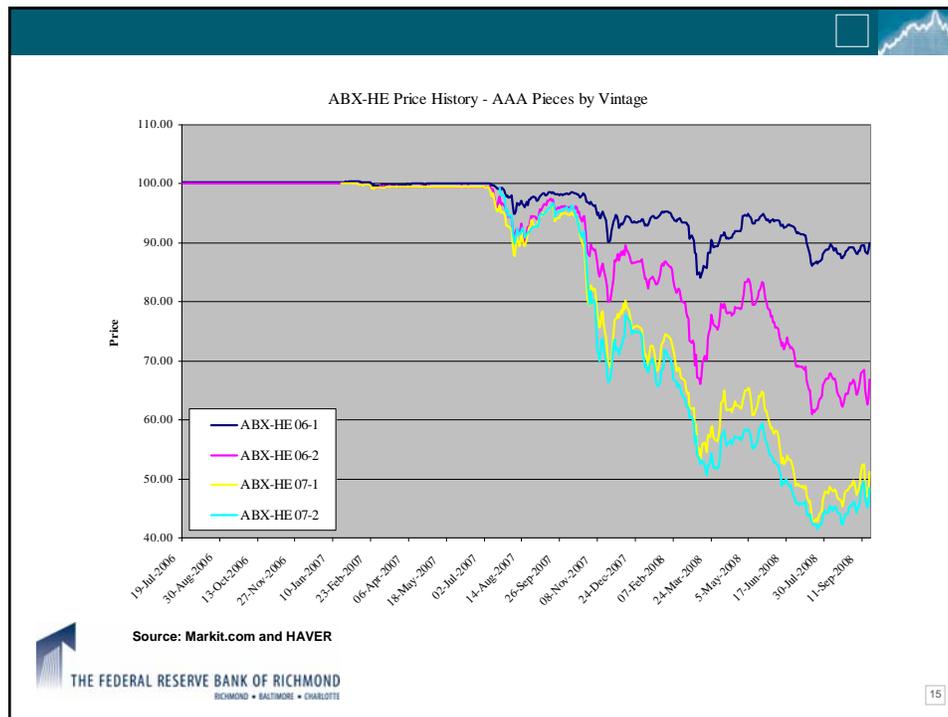
Asset quality is deteriorating. Charge offs and delinquencies for all major loan categories are the highest since the early 1990's Home equity lines of credit charge offs are on the rise

(CDS) Credit default swap spreads are rising



Source: Markit.com

CDS spreads represent the market price of protection against a default event. Rising spreads indicate markets' rising perception of risk



Where are we now?

- Valuation of mortgage related assets is uncertain
 - Home prices are still falling.
- When assets values are hard to determine, they become illiquid (hard to trade & exchange for cash).
- Liquidity puts pressure on financial institutions. “How do I meet my obligations if my assets are illiquid?”

Lehman Brothers

- From 2004-2007 Lehman grew its mortgage-related assets by \$300B and with only an additional \$6B in equity (lots of leverage).
 - Leverage works both ways
 - Losses in 2007: Residential MBS, \$4.7B; Commercial MBS, \$1.2;
 - Total losses at least \$8.6B
 - Losses in 2008: at least \$12.3B
- Counterparties pulled back, forcing a liquidity crisis. Failed to find a strategic partner to inject capital.
- On 9/25/08 Lehman Brothers, a 158-year old investment bank, filed for bankruptcy protection.

American International Group

- AIG sold a lot of credit default swaps (a type of financial insurance).
 - Big losses on those swaps. At least \$26B
 - AIG required to post more collateral, stressing their capital
- Had AIG failed, CDS values would fall, so would value of insured assets.
 - More losses for financial institutions
- AIG also issued debt that others insured. They would have had to pay claims on AIG's debt.
- The Federal Reserve and US Treasury agreed to provide AIG with \$85B line of credit for two years.



Questions?

- Robert E. Carpenter
 - Robert.Carpenter@rich.frb.org



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robert.carpenter@rich.frb.org

