Why Regulate Shadow Banking?

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Bank Capital Requirements

- **2010 Dodd-Frank Act did not mandate specific levels for banks' capital requirements – left it to Basel Committee on Banking Supervision**

- **September 2010 – Basel III:**
  - **minimum equity capital set at 7% of assets**
  - **counter-cyclical buffer of up to 2.5% of assets imposed by regulators during "good times"**

- **"Basel III is much tougher than Basel II…implies the bankers' incentive to game the system is even greater than before…" (*Financial Times*, 9/21/2010)**

Financial Crisis and Banking

- Financial crisis triggered by “systemic event” – increase in subprime mortgage defaults
- Caused bank run in “shadow-banking” sector – forced rescues (Bear Stearns) and bankruptcies (Lehman Brothers)
- Pre-1930s, bank runs occurred when depositors sought to withdraw cash *en masse*
- Collapse of liquidity in recent crisis due to run on repurchase market - rise in price of “haircuts” and cessation of “repo” lending on certain collateral

Shadow Banking

- Issuance of short-term money market instruments (repo) based on asset backed securities (ABS)
- Players: broker-dealers, structured investment vehicles, and money market mutual funds (MMMFs)
- 2010 – liabilities of $16 trillion
- Evolved over past 40 years due to:
  - competition – MMMFs and junk bonds
  - regulatory change – repeal of Glass-Steagall Act
  - innovation – derivatives and securitization

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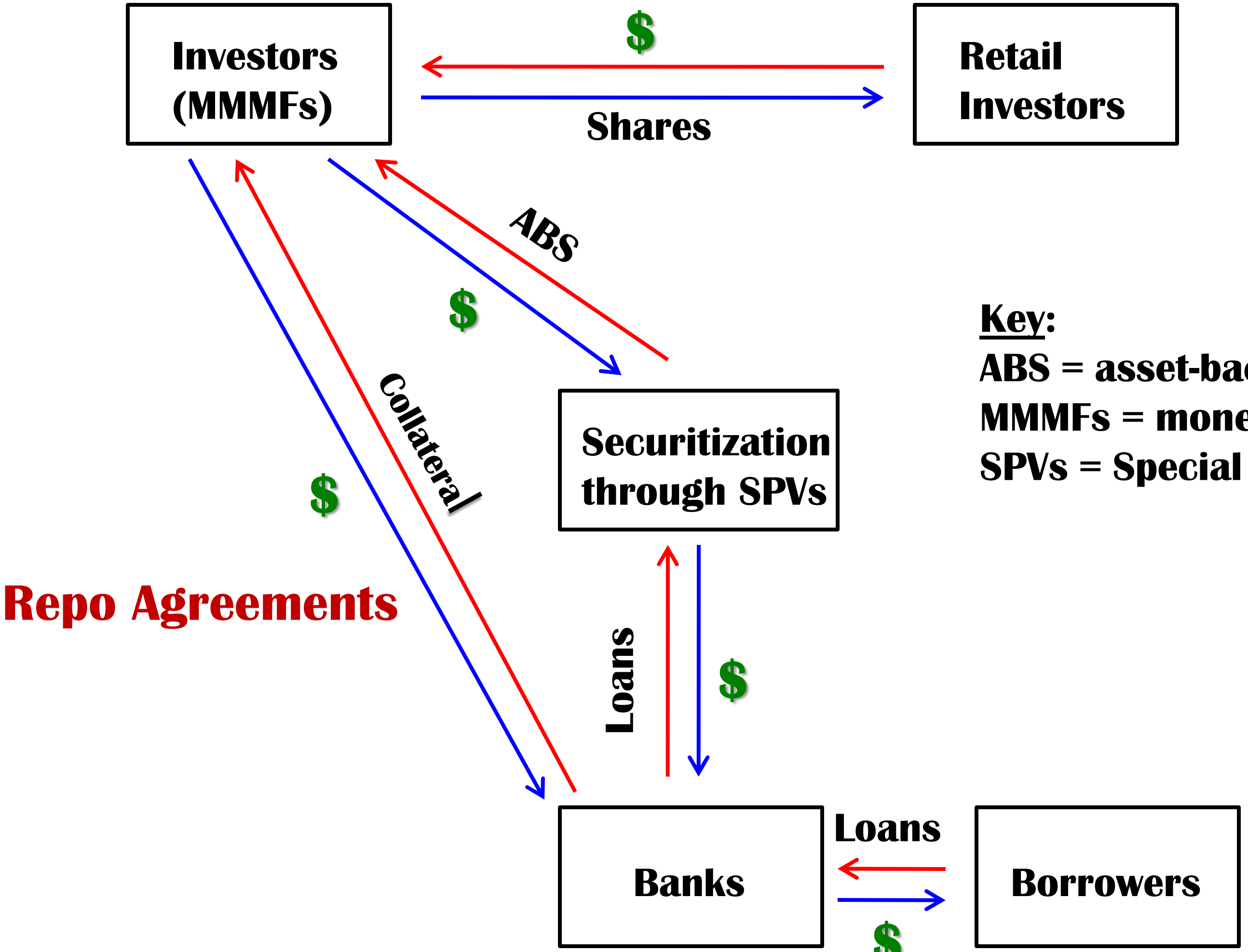
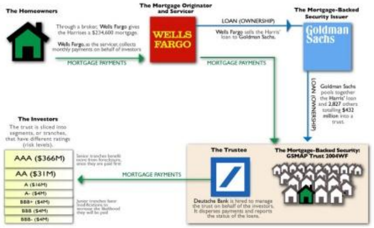
Shadow Banking



Key:
ABS = asset-backed securities
MMMFs = money market mutual funds
SPVs = Special Purpose Vehicles

Source: Gorton and Metrick (2010)

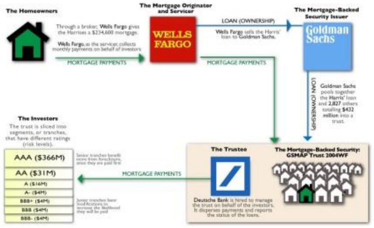
Securitization



- Loan originators can sell claims to cash flows
- Multiple loans "pooled", and assembled off-balance sheet in a trust - Special Purpose Vehicle
- Pool of loans "tranched" – designation of classes of claimants on cash-flows, i.e., AAA through to BBB

  Example: 100 loans in pool, BBB tranche loses money if 1 loan not repaid, AAA tranche only loses if all 100 loans not repaid
- ABS sold to capital market to finance purchase of cash flows from originator or used as collateral in repo agreements

Why Securitization?



- **<u>Benign Story</u>:**

  Securitization spreads risks across wider range of investors – lowers lending costs

  Also, if securitization done properly, senior tranches of ABS relatively easy for non-specialized investors to evaluate – expands buyer-base

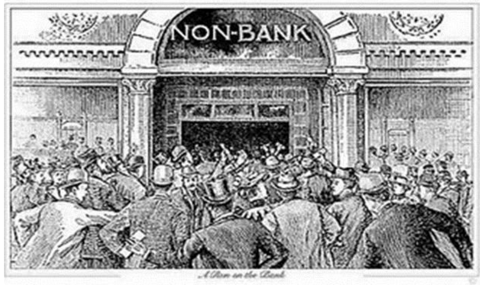
- **<u>"Regulatory Arbitrage" Story</u>:**

  Rules on bank capital requirements, i.e., 1988 Basel I provisions, avoided via off-balance-sheet vehicles

Repo Agreements

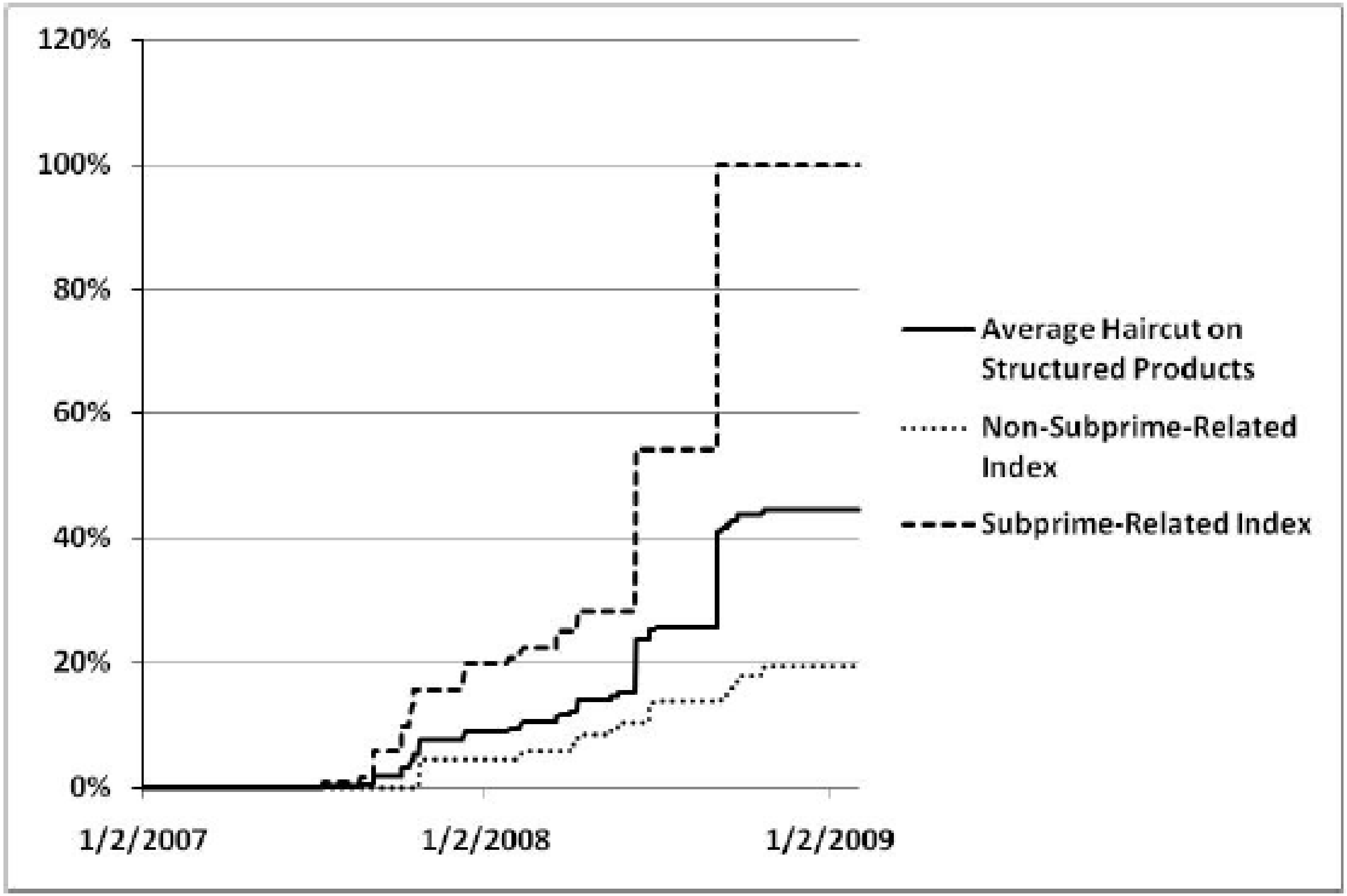
- **With cap on deposit insurance, large institutions have no access to safe short-term investments**
- **In repo market, Bear Stearns sells assets (collateral) to Fidelity for $5m, and buys assets back at $5.1m, where (5.5-5)/5 = 10% is "repo rate"**
- **Investor keeps collateral if bank defaults on promise to repurchase**
- **Amount investor deposits with bank typically less than value of asset, i.e., there is a "haircut", e.g., if bank sells asset worth $2m for $1.6m, "haircut" = 20%**

The Run on Repo



- **2007, investors became concerned about quality of ABS and began to pull back on short-term lending – causing run on repo, with sharp increase in haircuts**
- **If borrower has $1 billion of ABS, and haircuts rise from 2% to 50%, equivalent to deposits falling from $980 to $500 million**
- **Borrowers forced to liquidate ABS, depressing prices via "fire-sale" effect, reducing value as collateral, and causing further pullback in short-term lending**
- **Liquidity crisis eventually backstopped by Federal Reserve after Lehman's collapse**

The Run on Repo



Source: Gorton and Metrik (2010)

Shadow Banking Regulation

AND THE* MAYBE

- Shadow banking ought to be regulated as it is new form of banking with same vulnerabilities as traditional banking

- What might regulation consist of?
  - the "Good": independent of market conditions, minimum haircuts should be charged
  - the "Bad": expansion of federal safety nets
  - the "Maybe": limiting creation of "pseudo-riskless" securities

* Stein (2010)

Thank you

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