

Securitized Banking and the Run on Repo

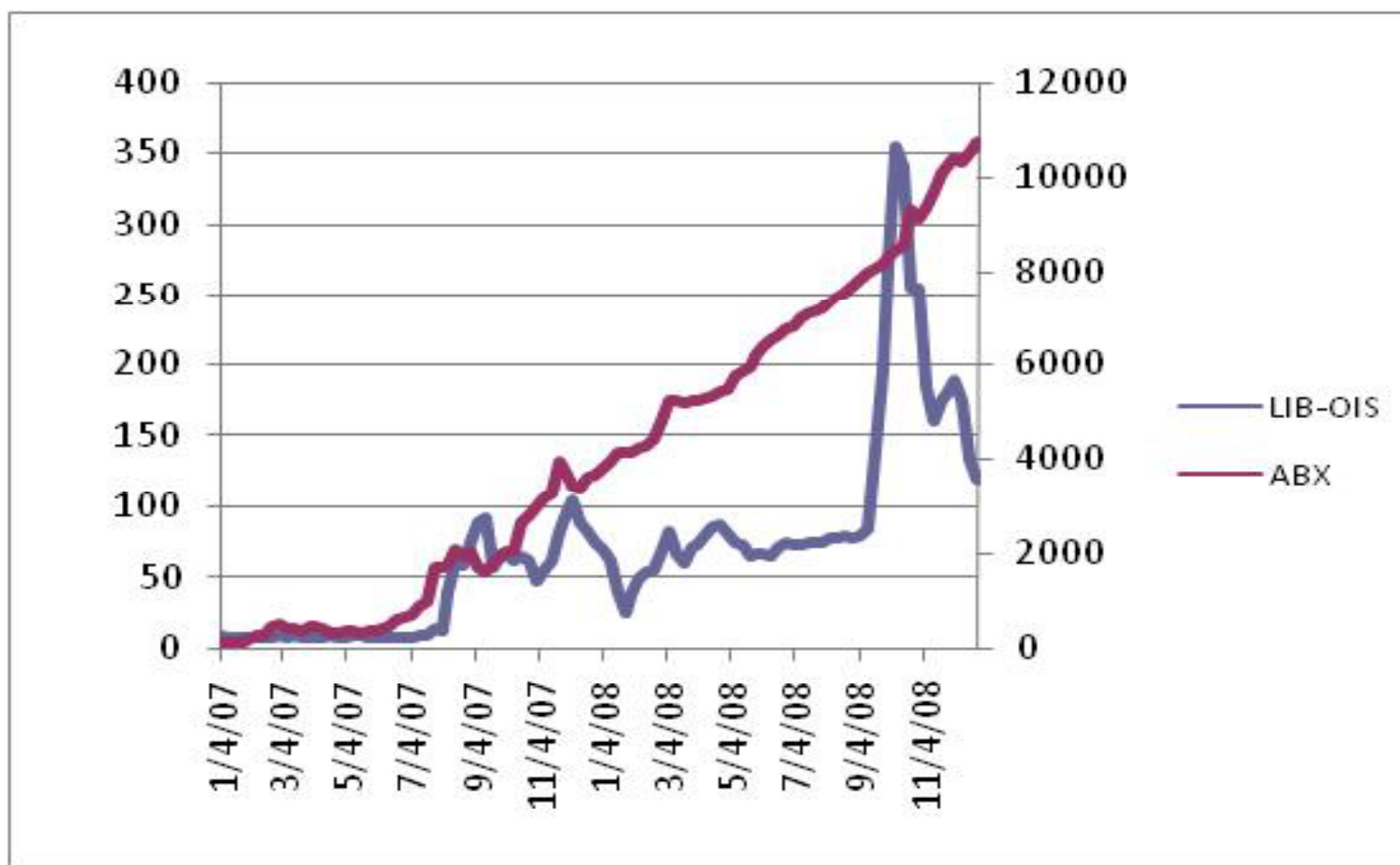
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The Crisis

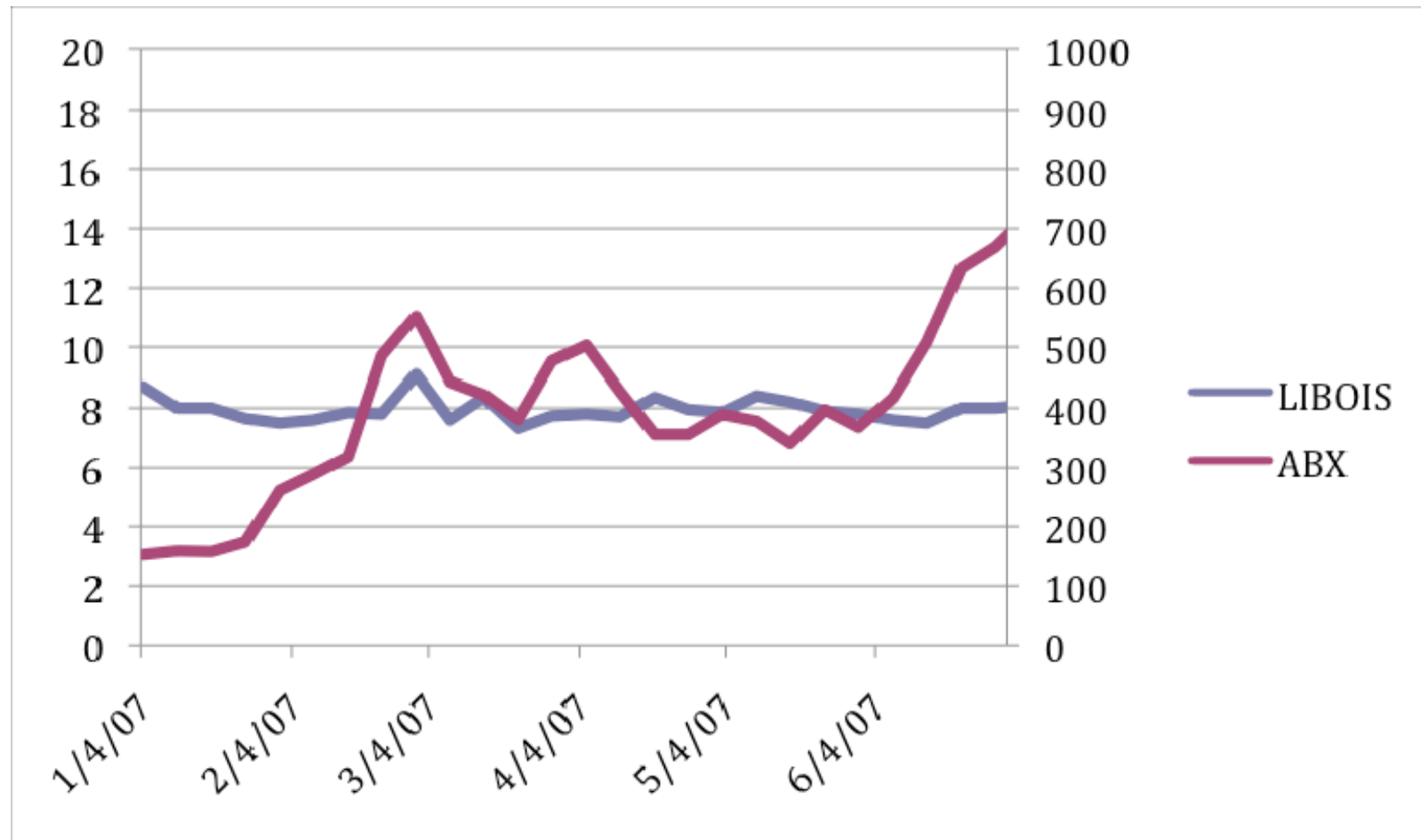
- Explaining the crisis requires explaining why the spreads of non-subprime-related assets rose significantly.

Subprime Fundamentals and the Interbank Market



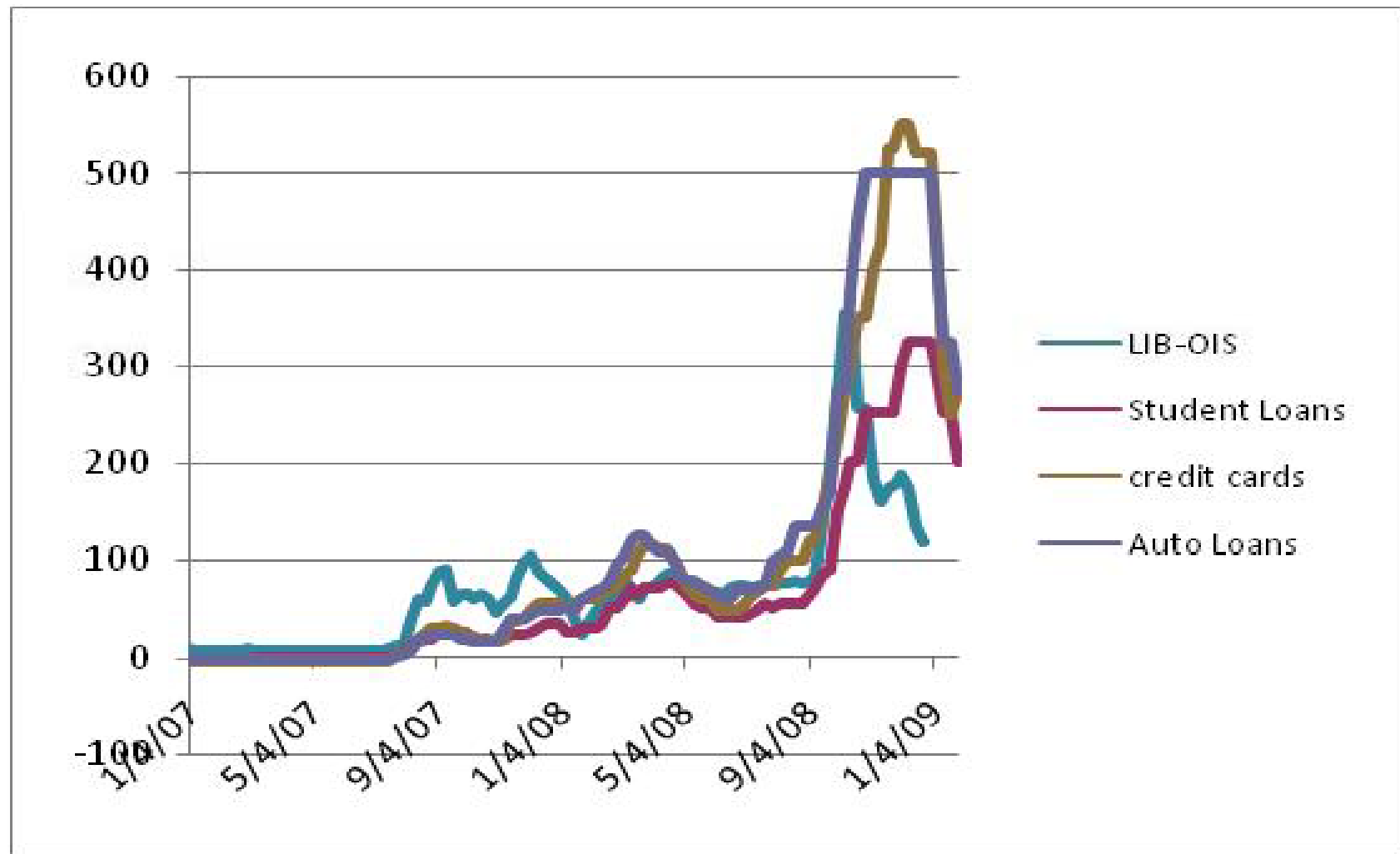
LIB-OIS on left-hand Y-axis, ABX spreads on right-hand y-axis.

First Half of 2007—Before Panic



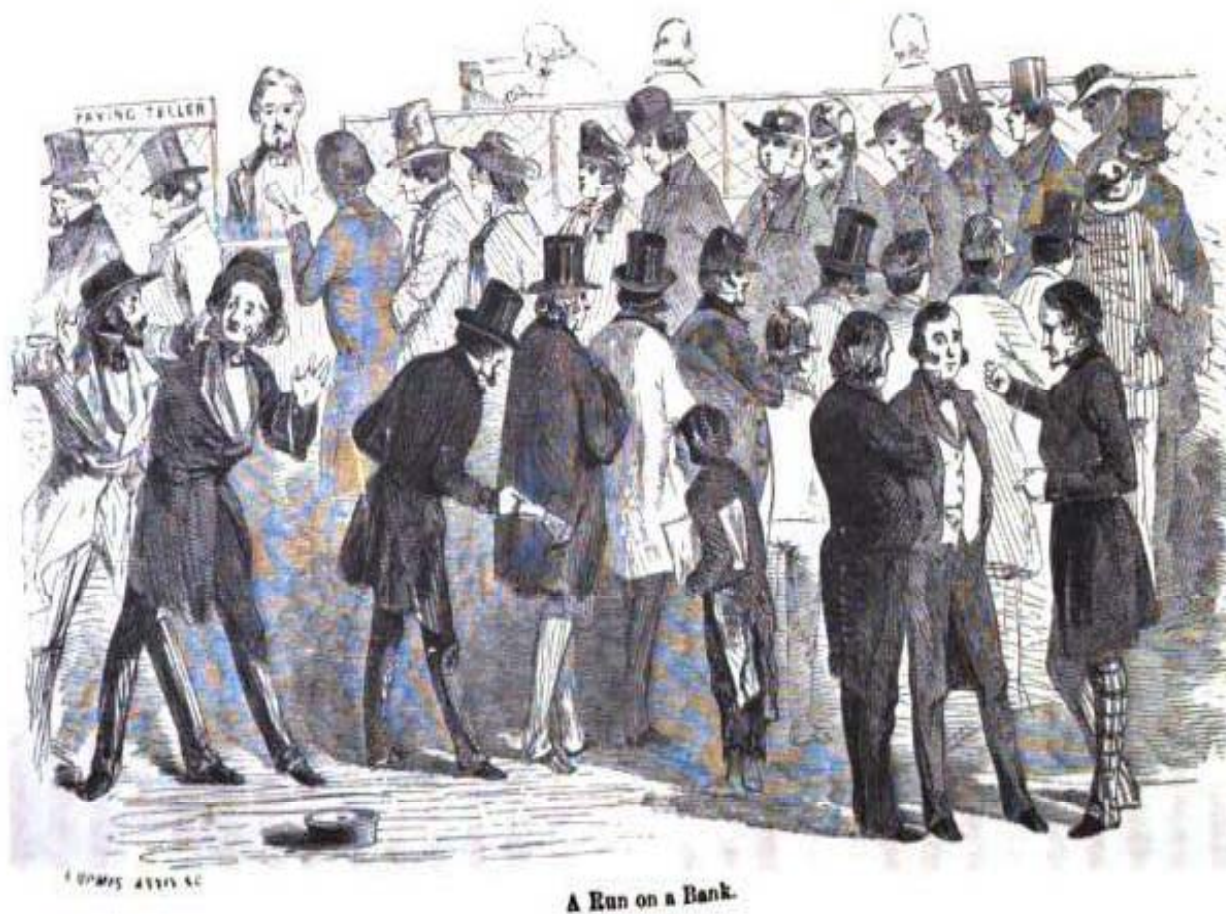
LIBOIS on left-hand Y-axis, ABX spreads on right-hand y-axis.

LIB-OIS and Non-Subprime AAA Assets, 2007-2008

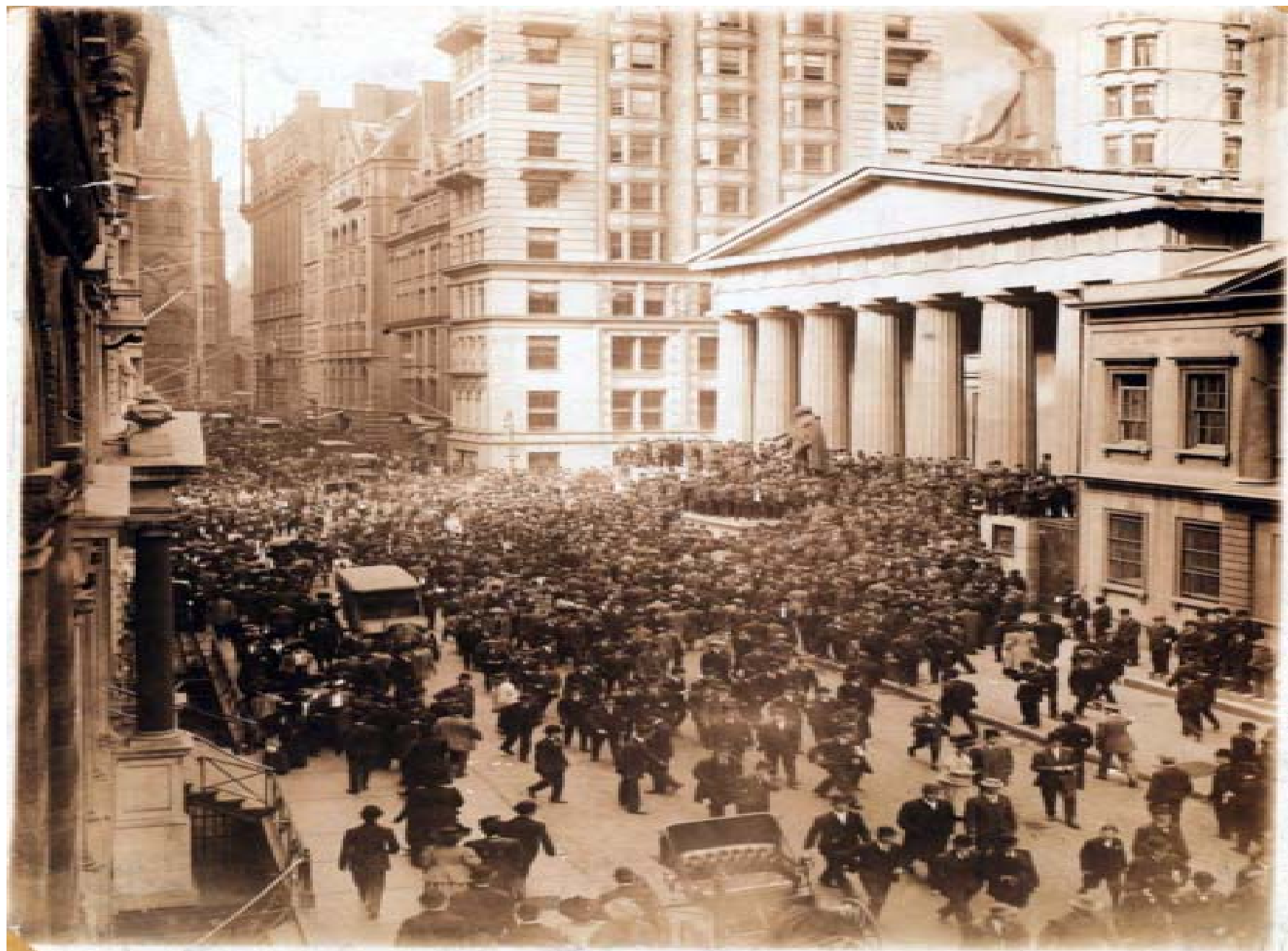


The Crisis

- Explaining the crisis requires explaining why the spreads of non-subprime-related assets rose significantly.
- Either:
 - Crisis is a unique event, or –
 - Crisis is structural, related to deeper issues to do with debt, trading, and liquidity provision generally.
- Very different policy recommendations.



J.S. Gibbons, The Banks of New York, Their Dealers, The Clearing House and the Panic of 1857 (1859), illustration by Herrick.

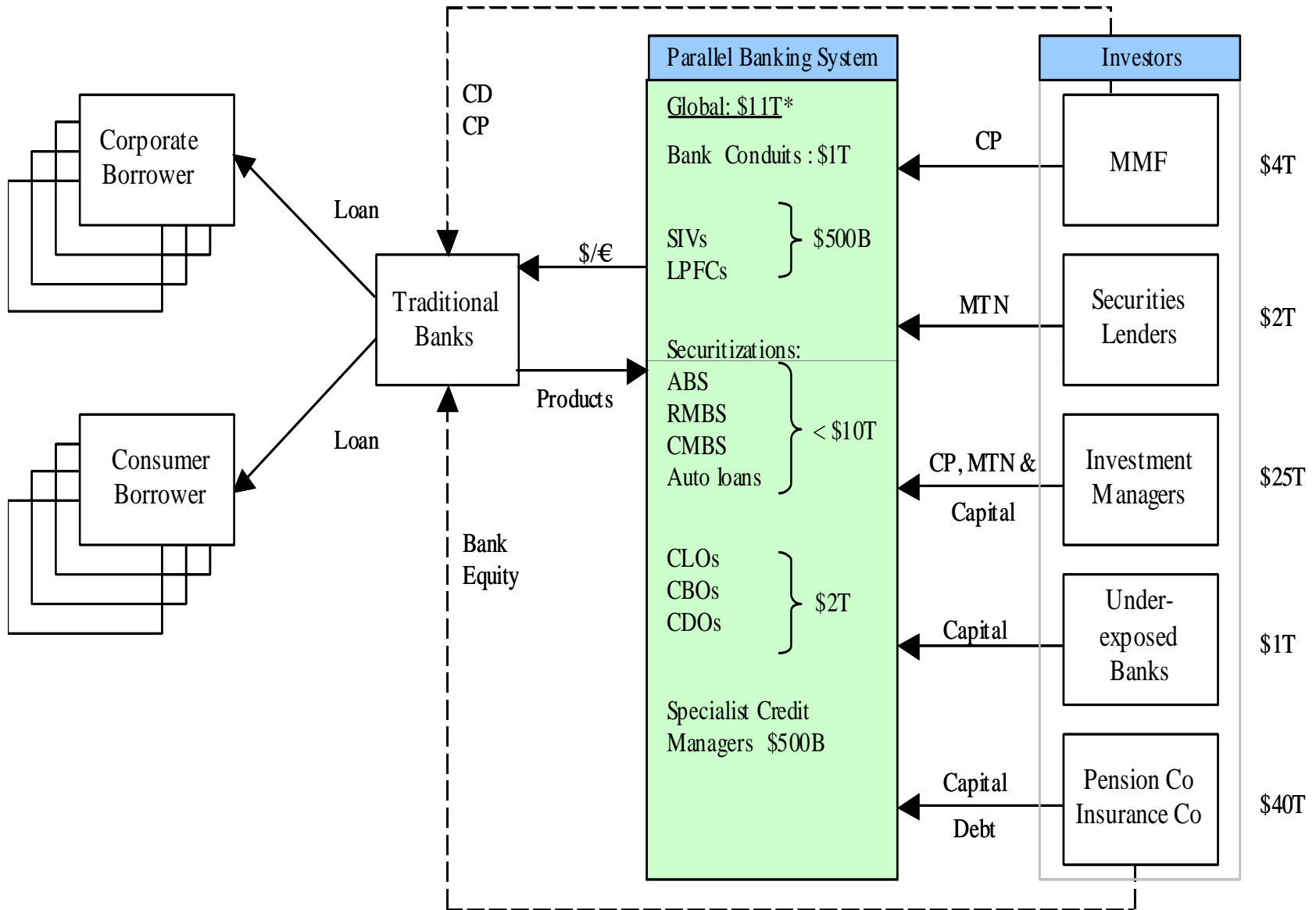


Debt and Crises

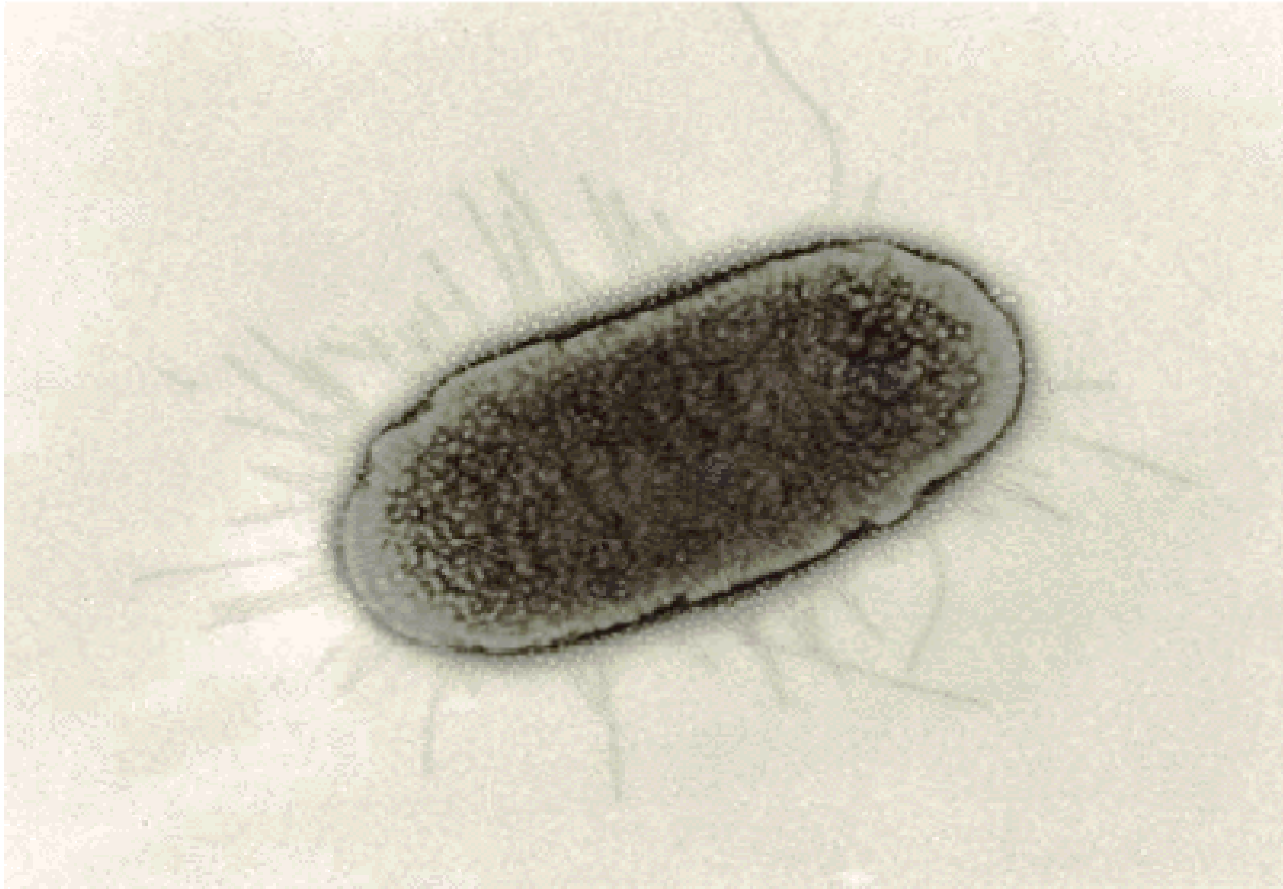
- Banks create debt that is information-insensitive
→ liquid. Gorton and Pennacchi (1990); Dang, Gorton, Holmström (2010a,b).
- To try to create riskless debt important to have a portfolio of collateral, so link to loans.
- Society needs debt/leverage to implement trade. But, a shock can cause a crisis where information-insensitive debt becomes information sensitive.

Repo: New Demand for Banking

- A sale and repurchase agreement (“repo”) is a deposit of cash at a “bank” which is short-term, receives interest, and is backed by collateral. Depositor takes physical possession of the collateral.
- Repo short term, but typically rolled.
- Trading is fast, minimal due diligence.
- Carved out of Bankruptcy Code; unilateral termination by non-defaulting party.
- Collateral may be rehypothecated.
- Collateral value may exceed the amount of cash deposited, i.e., there is a haircut. E.g., deposit \$98, receive a bond worth \$100—a 2% haircut.



Where did the sub-prime risk go?



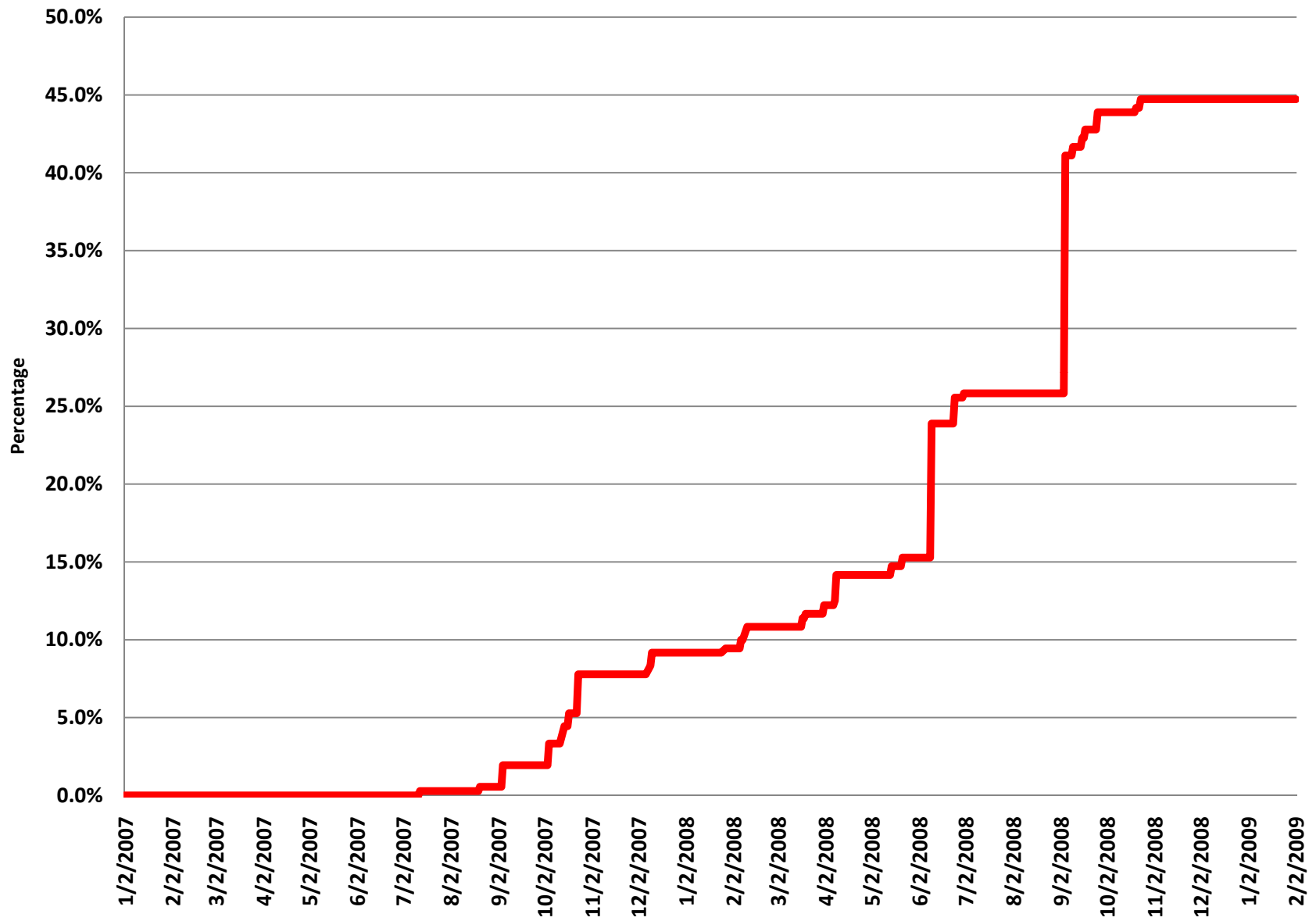
Haircuts

- Dang, Gorton, and Holmström (2009): A haircut is a tranching of the collateral to recreate an information-insensitive security so that it is liquid.
- The risk that is relevant here is different than the risks we usually think about, which are related to the payoff on the security.
- A haircut addresses the risk that if the holder of the bond in repo, the depositor, has to sell a bond in the market to get the cash back, he may face a better informed trader resulting in a loss (relative to the true value of the security).
- This risk is endogenous to the trading process.

The Panic

- Haircuts were zero on all asset classes prior to August 2007.
- A change to a positive haircut is a withdrawal from the securitized banking system.
- E.g., bank was financing a bond worth \$100 with repo (zero haircut). With a 20% haircut, the bank only receives \$80 for the bond. Bank must come up with the extra \$20 – the amount withdrawn.

Average Repo Haircut on Structured Debt



Fire Sales: AAA Spreads Above AA Spreads

