FINAL

Black Swans – A Problem or an Opportunity

OP Conference
Helsinki, Jan 27, 2022

Bengt Holmstrom, MIT

Taleb's view (in one slide)

- Black Swan attributes
  - Rare and unexpected
  - Extreme impact
  - Retrospectively "predictable"

- Taleb's main theses
  - Established theories (statistical and economic) do not allow for black swans
    - Tail risks much larger than normal distributions would imply
  - History determined by black swans
  - We need radically new paradigms

My agenda

- Studying causes of crises is essential for advancing knowledge and growth
- Will analyze the Financial Crisis 2007-2009 to illustrate and support my claim
- We are still learning new things

- Three main points
  - Correlations major drivers of tail risk
  - In money markets diversification creates rather than eliminates correlations
  - Crises are information events, unique to money (ST debt) markets.

The Financial Crisis 2007-2009

Common view of causes

- Wall Street greed and wrong incentives
- Securitization created complex, opaque ABS
- Poor, complicit ratings

Michael Lewis “The Big Short”

- How could Wall Street trade without knowing really anything?

Universal call for more transparency

An alternative view

- Money Markets (ST debt) based on overcollateralization

  “No Questions Asked” = Liquidity

- Bagehot: “Every banker knows that if he has to prove he is worthy of credit, in fact his credit is gone”

- Ignorance is (almost) bliss

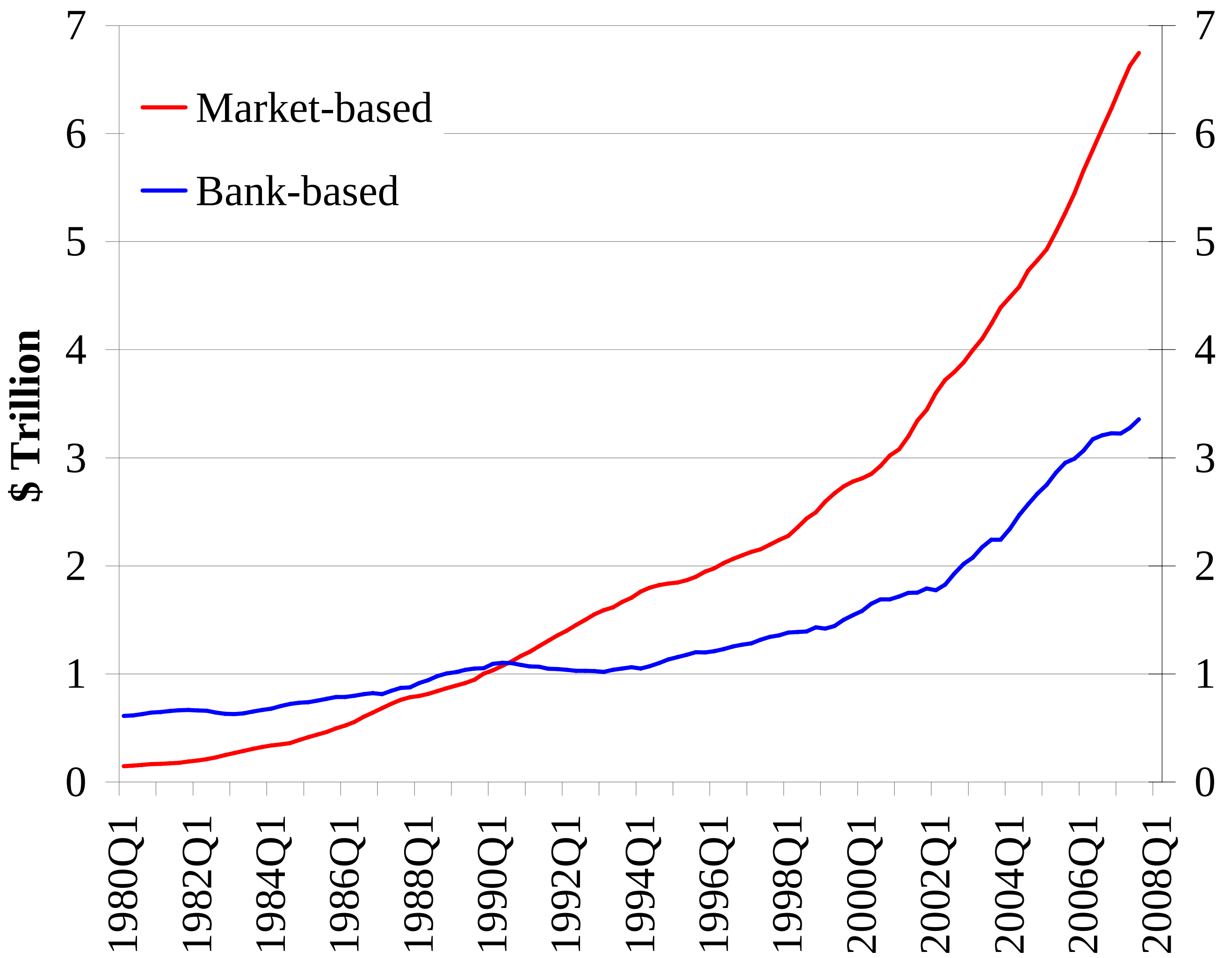
Two different ways to liquidity

Liquidity = symmetric information about payoffs

- Stock markets transparent
  - Continuous price discovery; expensive
  - Information sensitive (all information relevant)
- Money markets opaque
  - Collateral and coarse ratings; cheap
  - Information insensitive (safe, trusted asset)
- Repo – biggest market in shadow banking – modern version of pawnshop

Rise of shadow banking

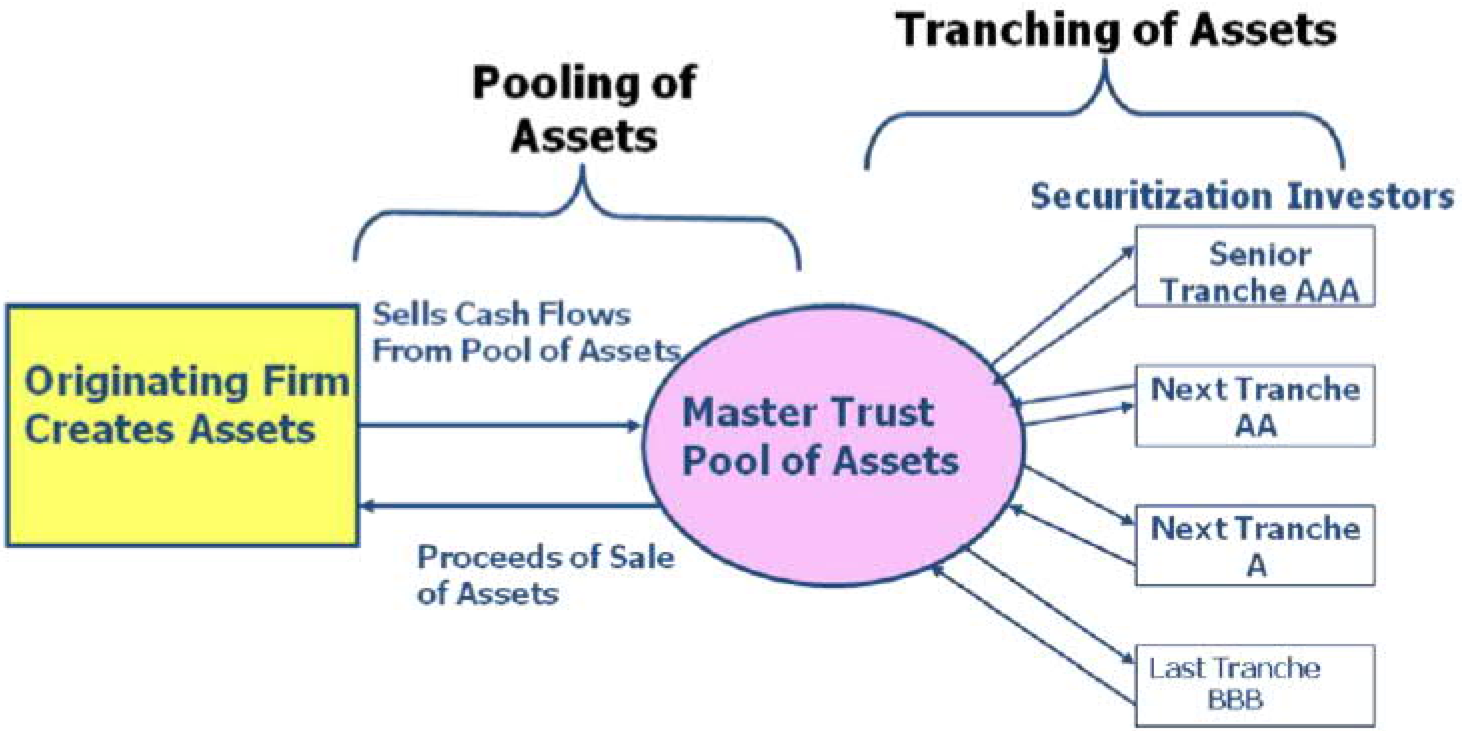
Share of US mortgage market 1980-2008



Shadow banking responded to “savings glut”

- Global “savings glut” created demand for safe “parking space” of money
- Big trades demanded large amounts of collateral
- Wall Street responded by creating asset backed securities
  - Originate-and-distribute model
  - Securitization: assets pooled and tranched
  - Diversification => tons of AAA-rated asset backed securities
- More efficient use of collateral
  - Home Equity Loans
  - Repo market offered great flexibility

The mechanics of tranching



Gorton (2009)

The dark side of tranching

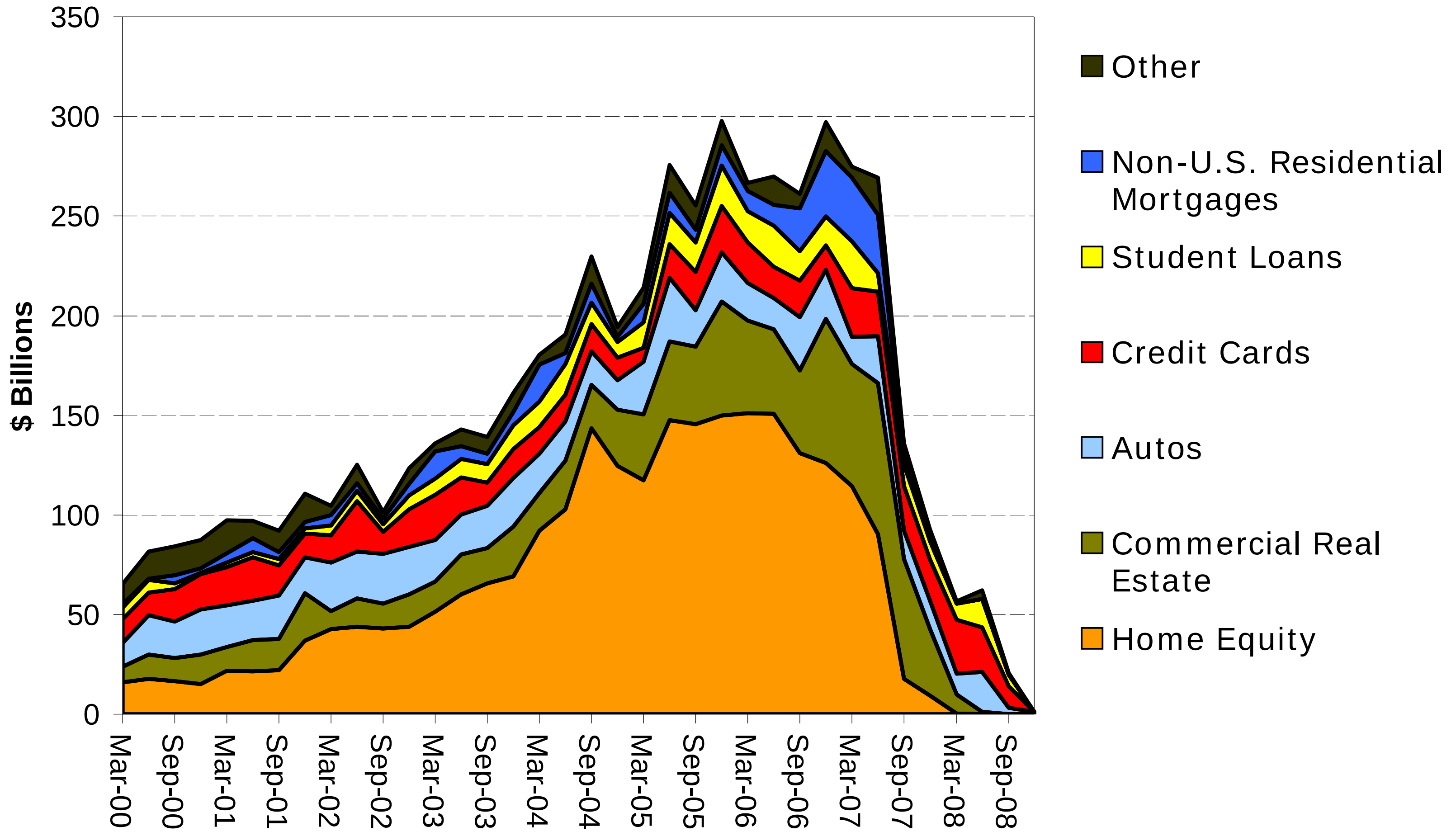
- Diversification of assets expanded liquidity: the amount of information insensitive debt

But….

- pushed risk into tail
- hiding systemic risk

The social trade-off: Coarse information (opacity) enhances liquidity (private money), but increases the severity of a crisis

The rise and fall of Asset Backed Securities (issuance Mar 2000- Sep 2008)



Source: JP Morgan

A nod to Taleb: diversification magnifies tail risk in money markets

- Standard theory: any asset can be priced using state prices
  - Everyone should hold a share of the fully diversified market portfolio

- However: in money markets diversification creates maximal tail risk
  - Example: Ten identical banks, each holding 1/10th of the total pool of debt
  - Each bank fully diversified, but the banking system perfectly correlated

- Empirical finding: correlation was a black swan in the financial crisis
  - Caused contagion across similar assets and intermediaries

Lessons from information view

- Don't regulate money markets based on insights from stock markets – the two based on opposite logics of liquidity
- More transparency => less liquidity in money markets
  – MMF transparency cut market in half
- Stress tests – with corrective action: EU vs US
- In crisis, get back to NQA (opaque) state
  – Putting toxic assets in bigger, recapitalized bags
  – Draghi's "Whatever it takes"

Concluding remarks

Current concerns

- Stablecoins – another attempt to create private money
  - Fnality fully backed by currency deposits
  - Tether far from fully backed – risk losing trust

- DeFi – a risky battle for the soul of intermediation

- Government always the backstop – unless it breaks
  - Martti’s concern over dollar

Can crises be prevented?

- A fundamental paradox:
  - The safer people believe the financial system is, the riskier their behavior becomes
  - Small boats vs big boats
- We don’t want to eliminate all crises; opportunities to learn and rebuild
  - But maybe we want smaller, more frequent black swans

KIITOS!