Regulating Shadow Banking

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Outline

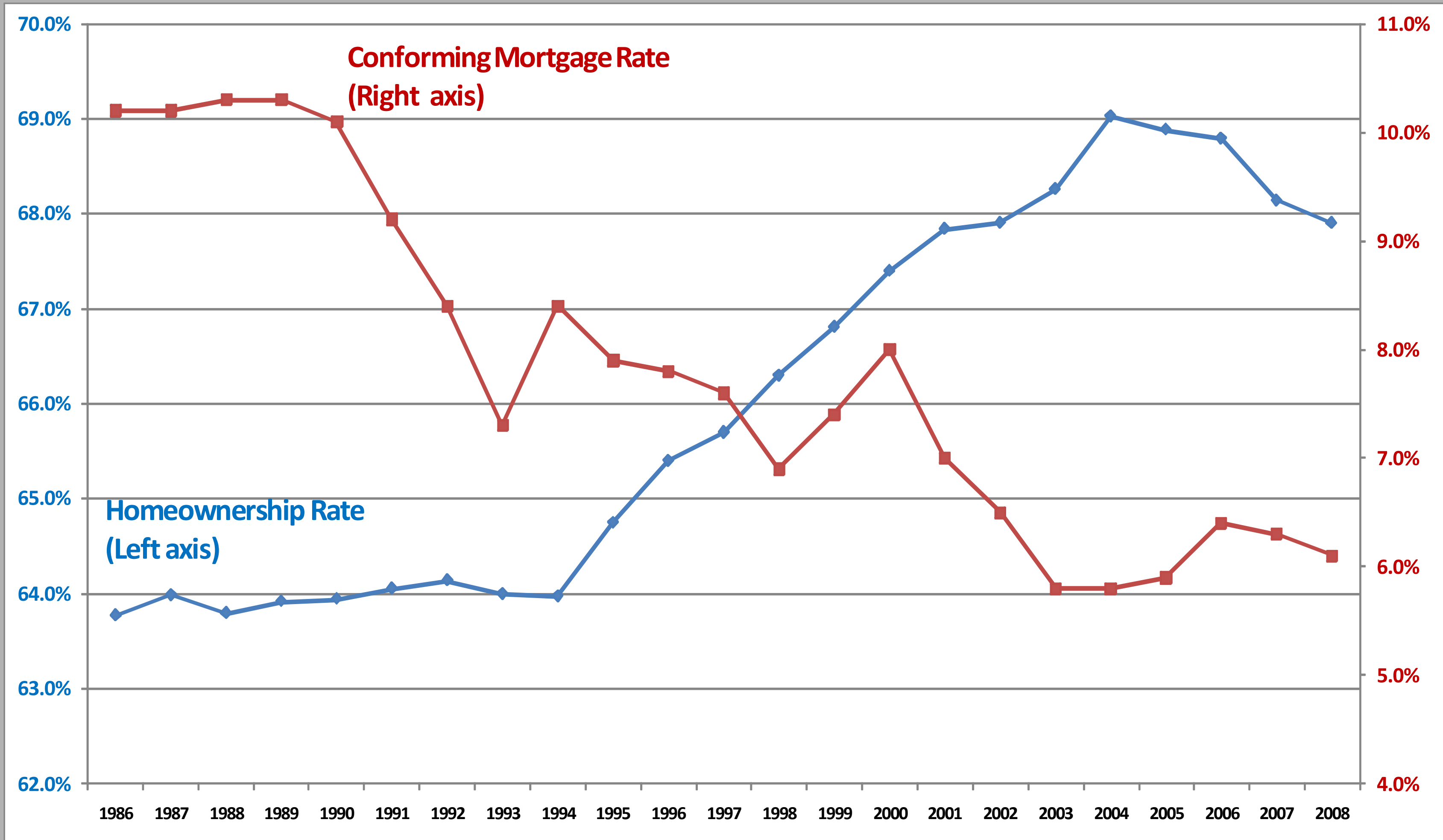
1. **Maturity Mismatch & Financial Crises: a classic story**
   - Low interest rates and lax monetary policy
   - Real estate boom
2. **New twist in the latest crisis: Shadow Banking**
   - Growth of securitization and repo markets
   - Growth in subprime mortgages
3. **How to regulate Shadow Banking?**
   - Incentives of originators and servicers?
   - Off or on the balance sheet?
   - Rating ABS
   - The role of CDS
   - Capital requirements

Financial Crisis Similarities

1. Low interest rates and lax monetary policy

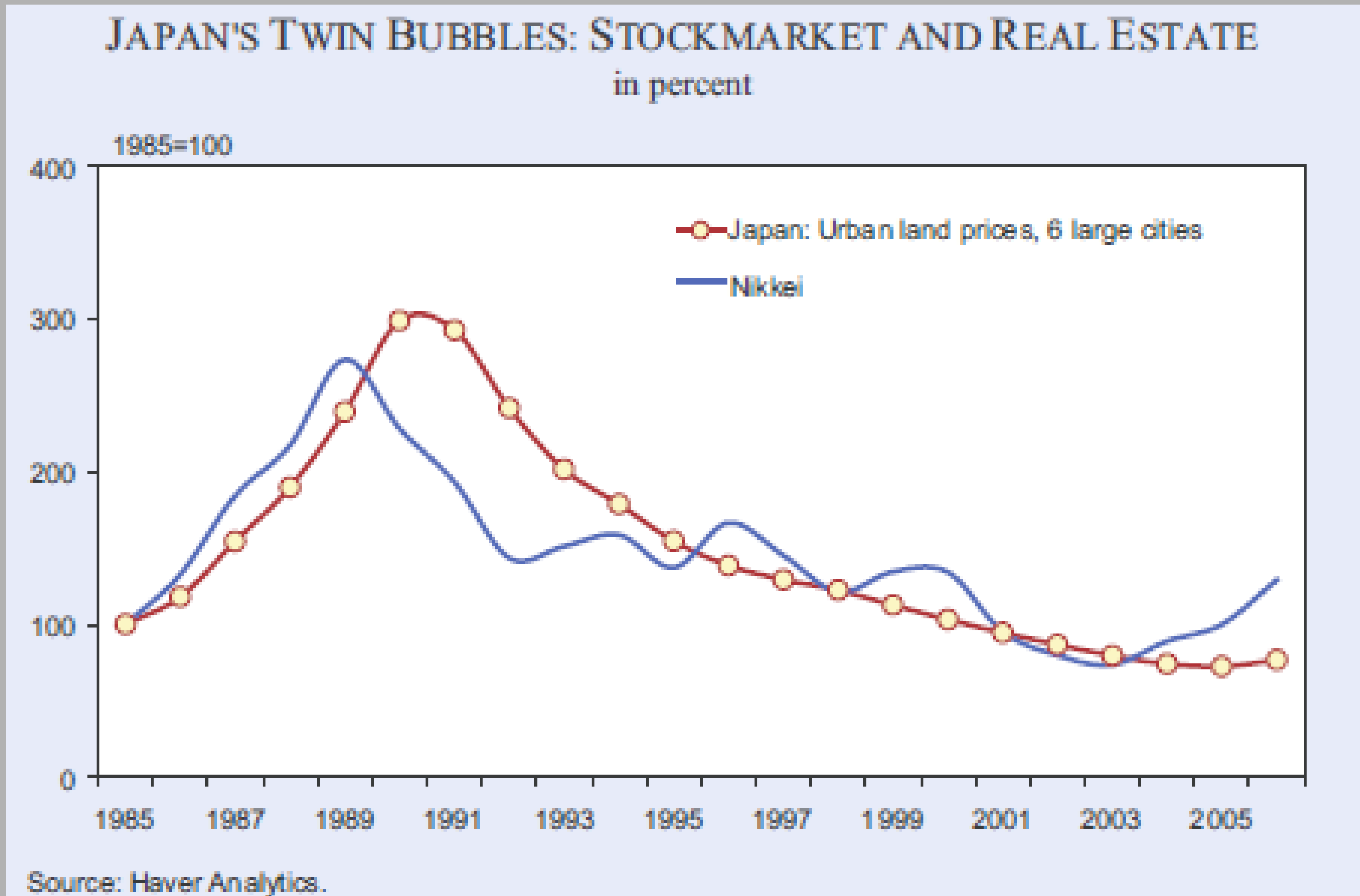
2. Real estate boom

Low interest rates and Real estate boom



(sources: US Census Bureau and Freddie Mac)

Low interest rates and Real estate boom



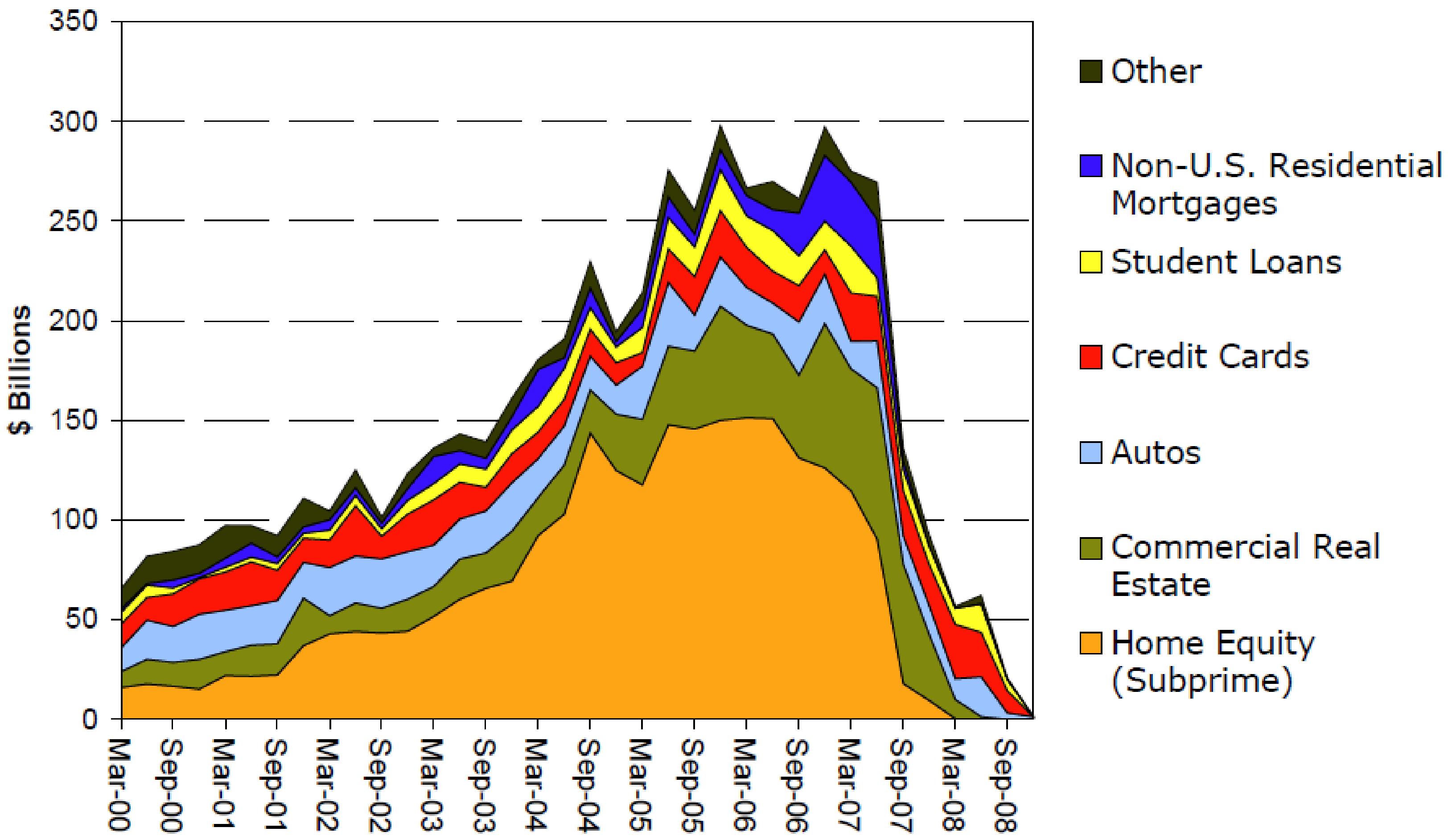
New Twist: Shadow Banking

1. Growth of securitization and repo markets

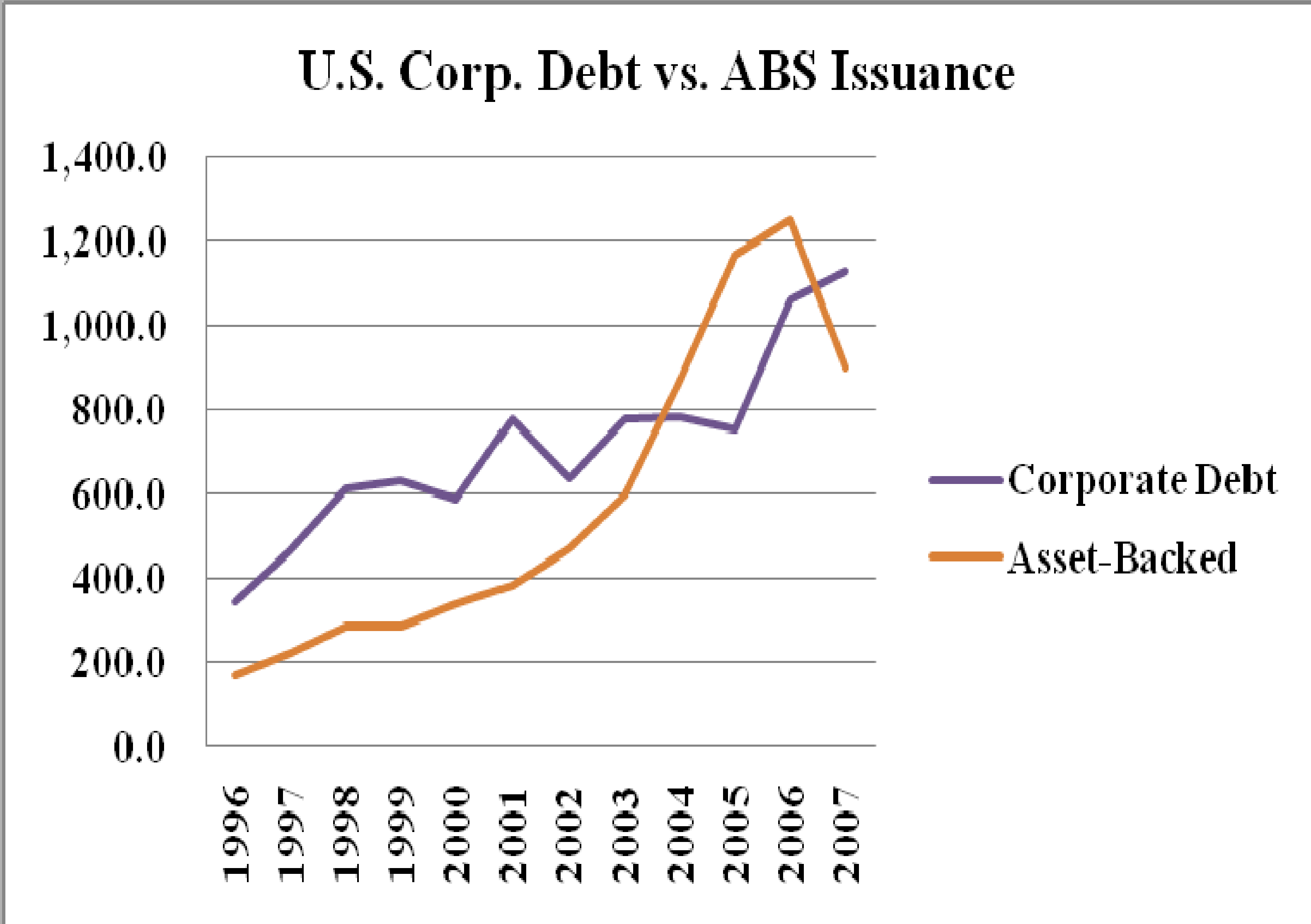
2. Growth in subprime mortgages

Securitization before the crash

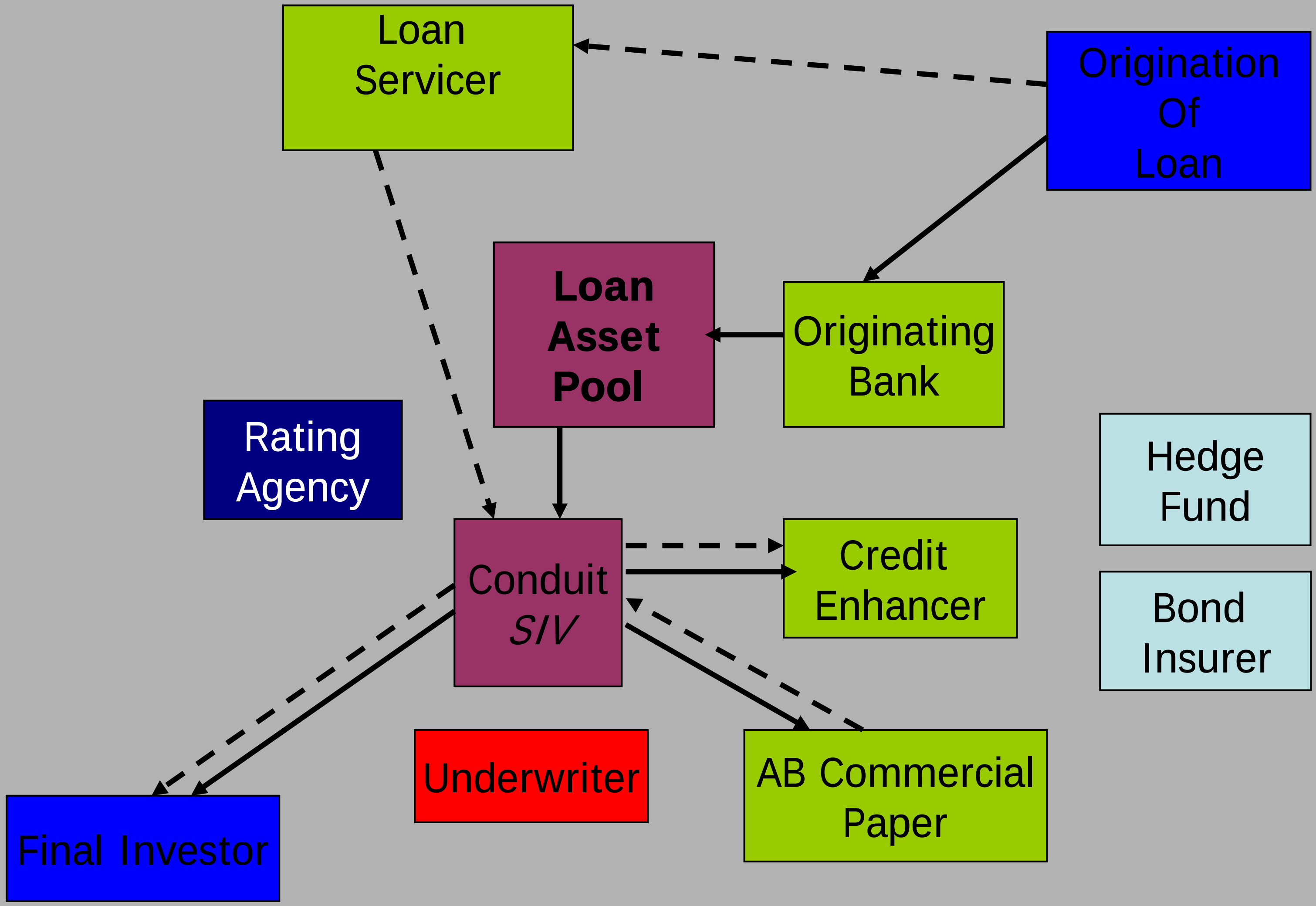
Figure 4. New Issuance of Asset Backed Securities in Previous Three Months (Source: JP Morgan Chase)



Securitization in Perspective



Securitization and the *loan-chain*

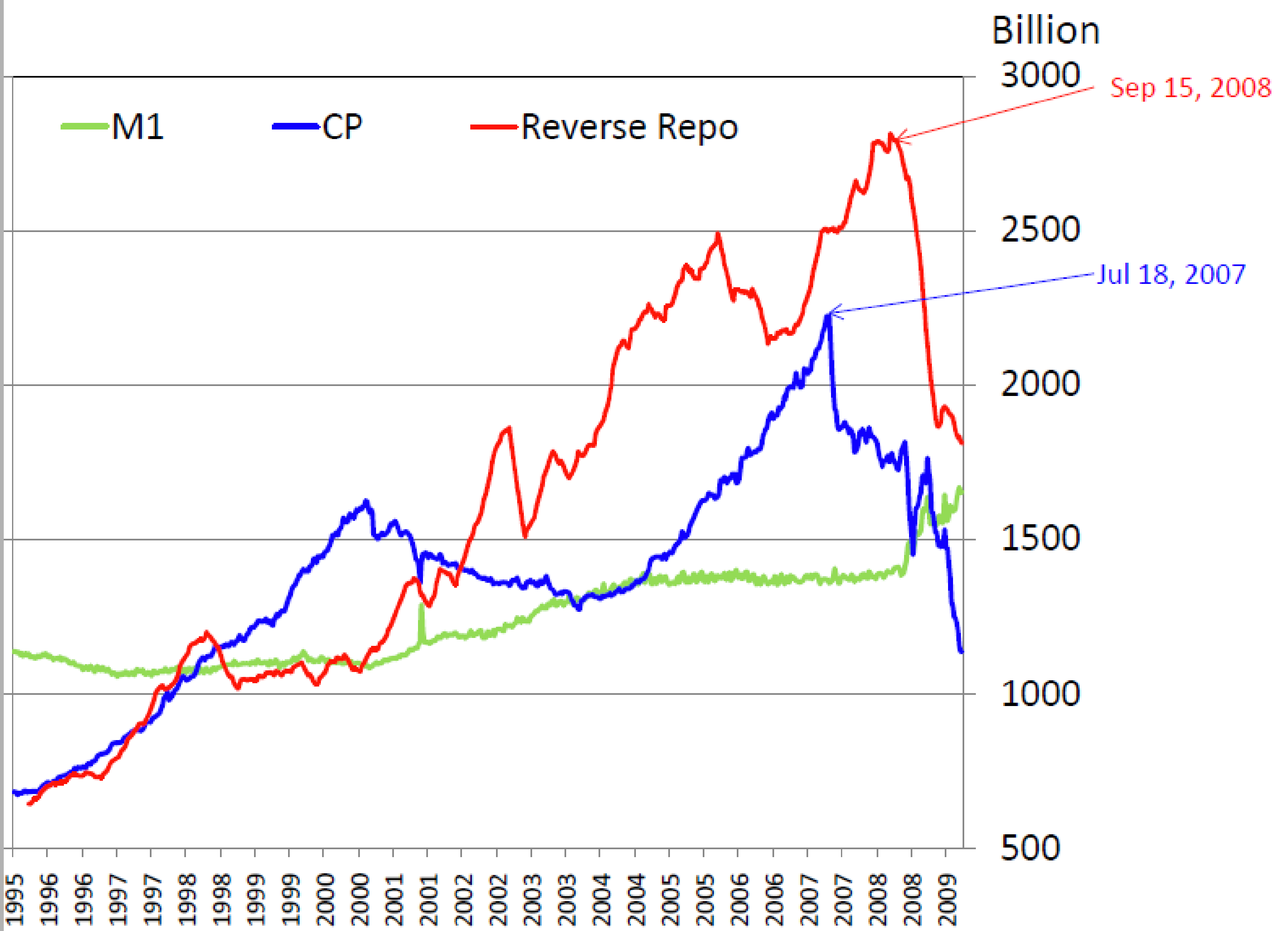


Why issue?

4 main reasons:

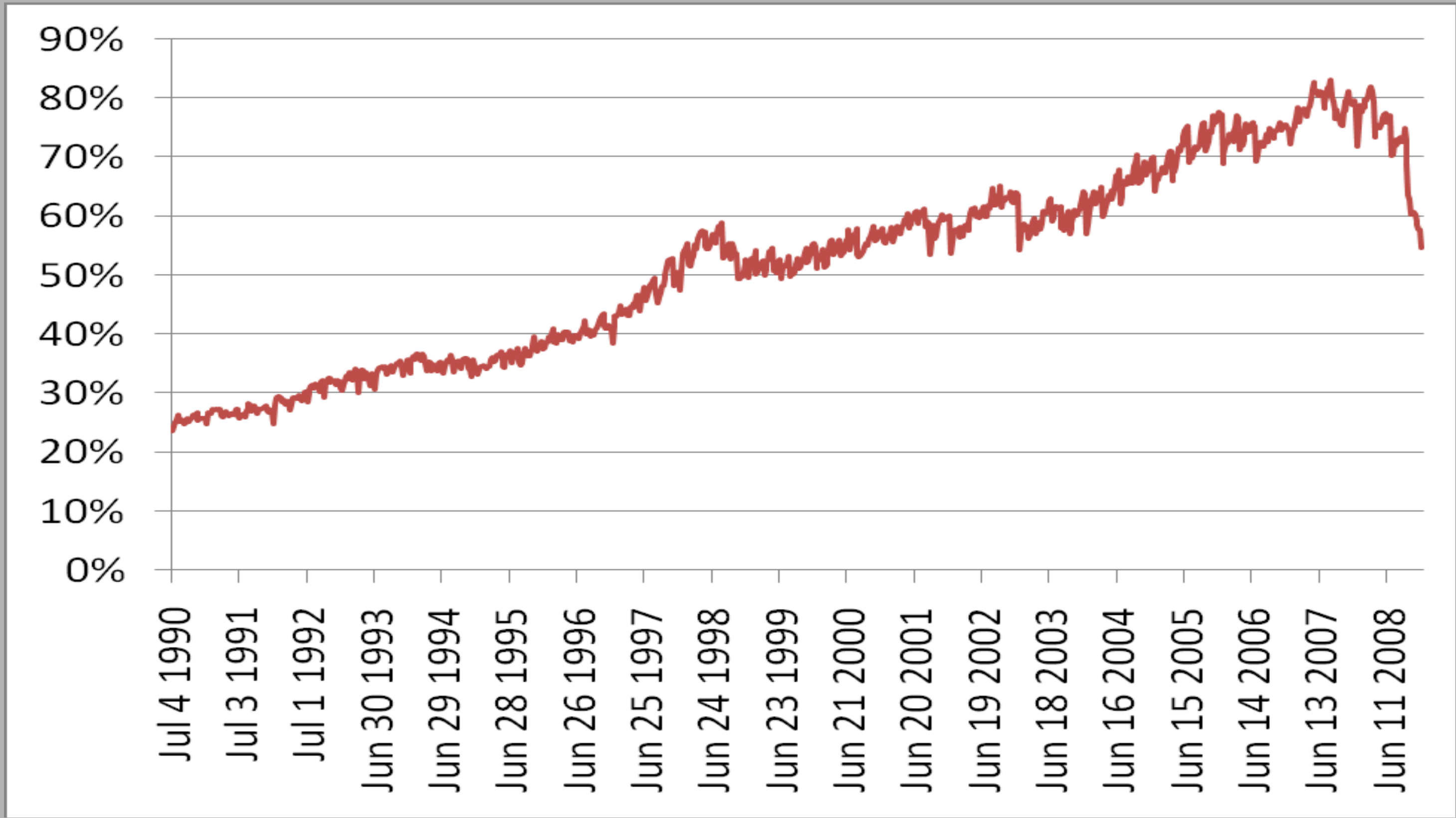
1. **Risk Diversification**
   – diversified asset pools
2. **Distribution to long-term investors**
3. **Asset-liability matching**;
   – Match asset income with debt expense.
   – Reduces interest rate risk.
4. **Conserve on Capital**;
   – Transform illiquid assets into cash.
   – Use cash to make more loans.

Shadow Maturity Transformation



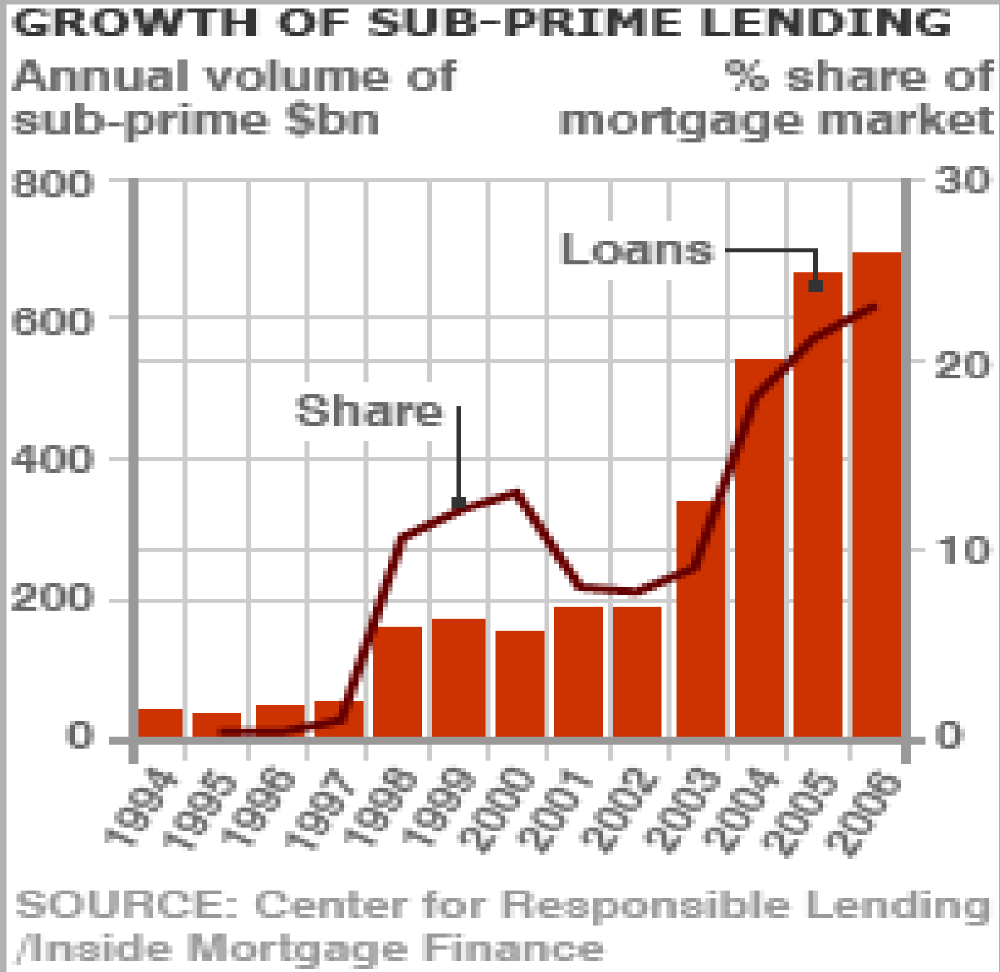
Source: Federal Reserve Board

Shadow Maturity Transformation

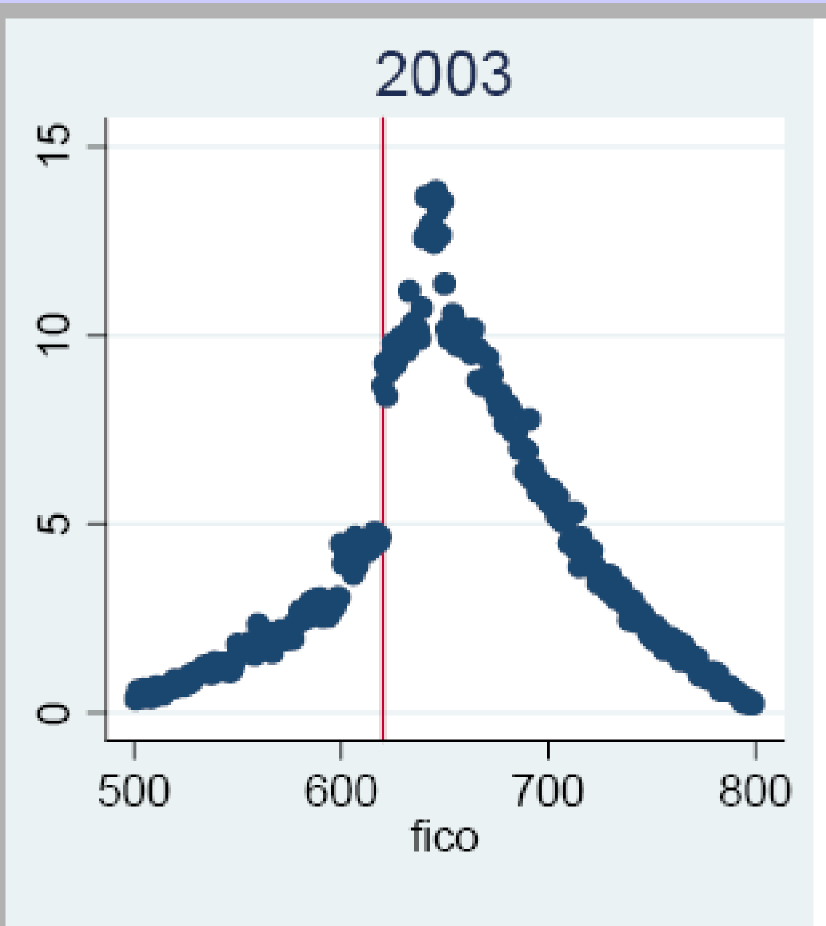


Primary Dealer Repos + Financial Commercial Paper as a Fraction of M2. (Source: Federal Reserve).

Subprime lending



Moral Hazard in Origination

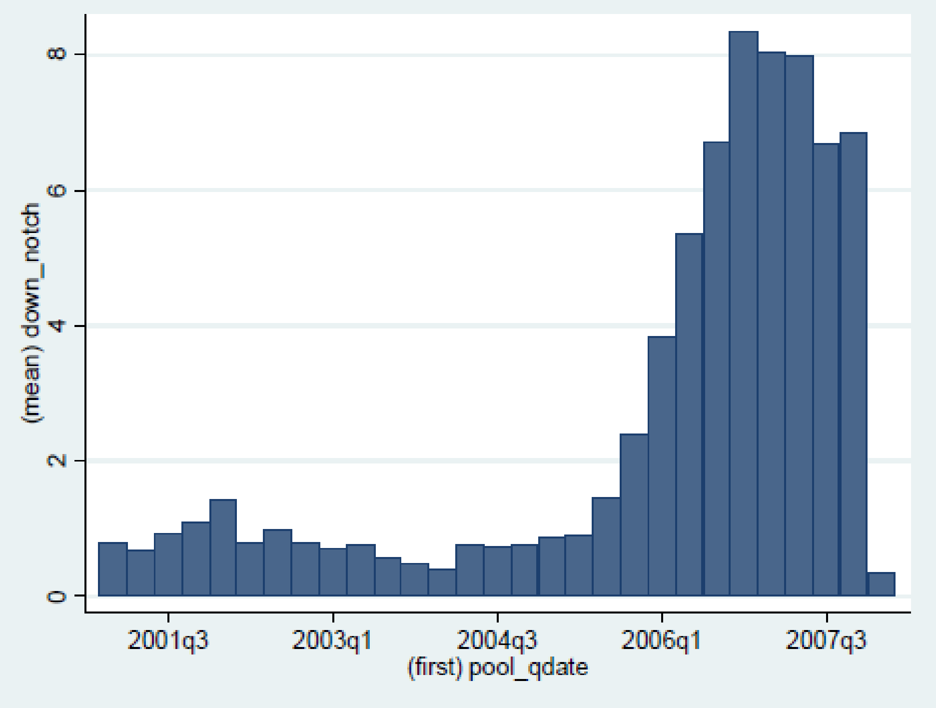


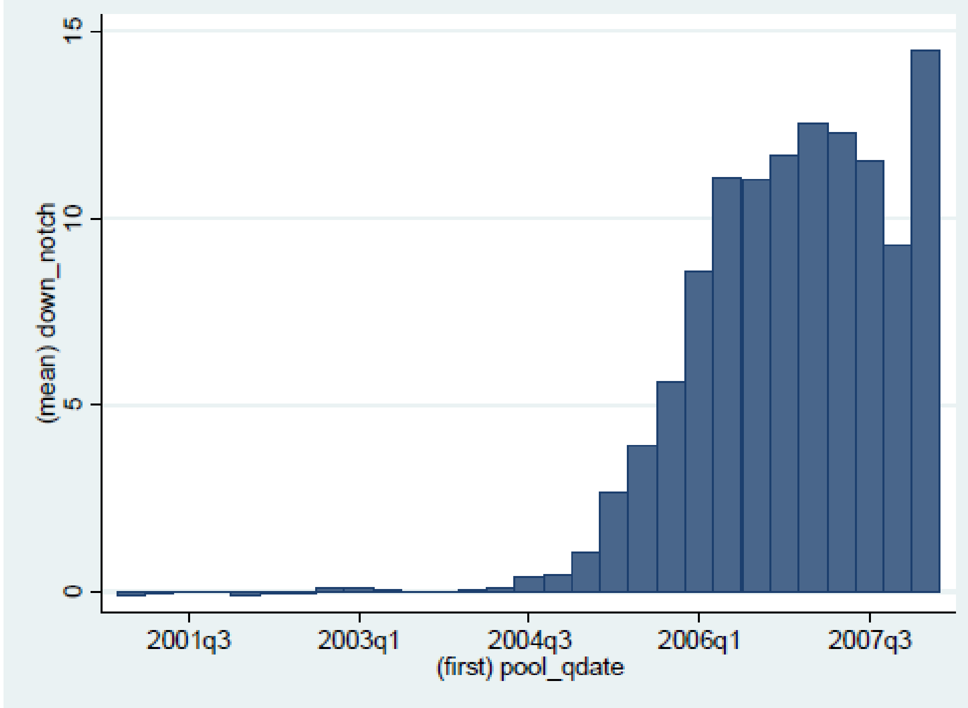
Number of Loans (Low Documentation)

Keys, Mukherjee, Seru and Vig (2008)

MBS Credit Ratings Failure

Subprime	Alt-a





Average number of downgrade notchess by vintage (source Ashcraft-Vickery-Goldsmith (2008)

MBS Credit Ratings Failure

Credit Ratings Agencies:

1. Failed to foresee downturn in real-estate prices
2. Did not foresee refinancing risk for subprime loans
3. Relied on imperfect historical data of past prime lending
4. Ignored moral hazard in origination,
5. Invited manipulation through tranching, credit enhancement, etc.

How to regulate Shadow Banking?

1. On or off the balance sheet?
2. Incentives of originators and servicers?
3. Rating ABS
4. The role of CDS and repos?
5. Capital requirements

On or off the balance sheet?

The **covered bonds** alternative:

- Fixed-income obligations backed by pool of mortgages and other assets
- Underlying mortgages are kept on BS
- Investor in a covered bond has recourse to the issuer
- delinquent loans in the pool are substituted by new performing loans
- *Overcollateralization* can also be adjusted
- Inability to upgrade asset pool at request of bond trustee is a default event

On or off the balance sheet?

- covered bonds are best way of aligning incentives for origination and servicing of the loan
- covered bonds require higher equity capital commitments, but one role of equity capital is to align incentives at origination
- covered bonds make it easier for regulators to see extent of leverage (no implicit obligations; all obligations are explicit)
- tranching and allocation of risks still feasible with covered bonds

Regulating Ratings Agencies

- Unlike auditors CRAs are not regulated
- Financial services committee bill of US house of representatives (HR 3890) proposes to give *SEC oversight* over CRAs
- Question is not whether to regulate but how to regulate
- Potential pitfalls: public agencies → amounts to an *implicit guarantee*
- *Key issues:* disclosure, liability, pay model, competition, NRSRO accreditation
- So far, debates have mainly focused on disclosure and competition

Shadow Maturity Transformation, CDS & repos

- Securitization can reduce the risk associated with maturity mismatch for originator
- There is no value in transferring maturity transformation off balance sheet
- Why did shadow maturity transformation arise, when there is no *deposit insurance* in shadow banking?
- Treatment of repos and CDS in bankruptcy provides a *subsidy* to short-term financing and maturity transformation

CDS & Repos

- ISDA netting agreement for OTC derivatives markets =>
- No stay on CDS execution in the event of bankruptcy
- Same for collateral collection with repos
- These financial claims have the highest priority – higher than secured debt
- Implicit subsidy for these modes of financing
- Need to reconsider the *wisdom* of excluding derivatives from stay in bankruptcy that applies to all other claims

Repo market

- "Repo": A sale and repurchase agreement; like a deposit of cash backed by collateral.
- When collateral exceeds the amount of cash deposited, there is a *haircut*.
- The borrower/bank has the right to buy back the bond.
- Repo short term, but typically rolled over.
- Collateral may be rediscounted.
- Repo collateral: treasury & corporate bonds; mortgage backed securities