

# The Financial Crisis – Causes and Cures

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# When will it end?

- Banking sector may be healthier than thought
- Housing market showing signs of life (sale duration halved in key markets)
- VIX down to 35 (from 70)
- Spreads have stabilized (but still elevate
- China may have seen bottom
- Baltic Dry Index (trade measure) up a bit
- ....but,
- Credit still not flowing in US

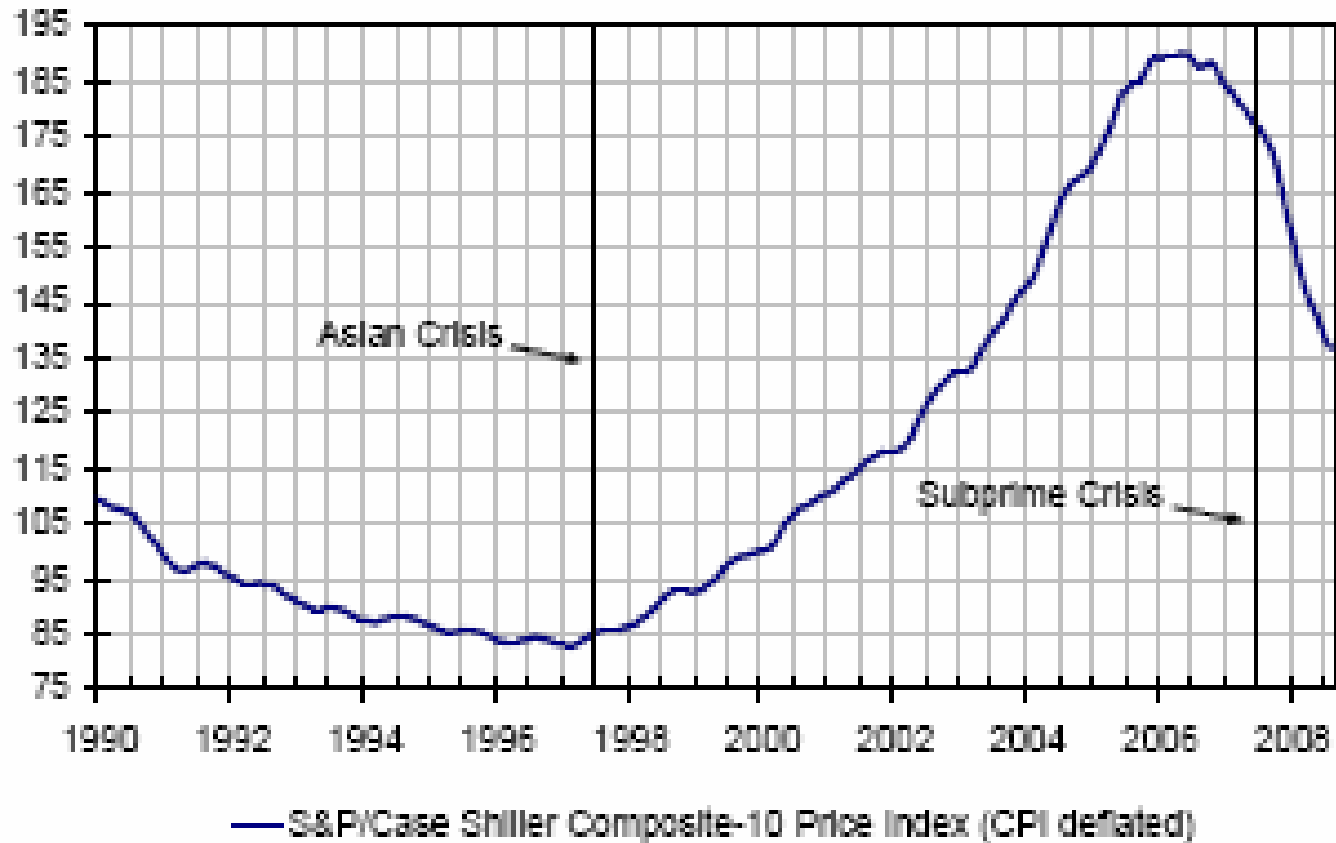
# Who is to blame?

- Wall Street – greed and wrong incentives
- Securitization – opaque instruments
- Rating agents – became captive
- Government – subsidized lending
- Consumers – living beyond means
- Economists – failed to give warning

# My focus

- How did max \$500 B subprime loss turn into \$50+ T global wealth loss?
- Proximate versus underlying causes
- Tentative lessons

# Housing market



# Securitization and tranching

Bond Tranches	Thickness	"Loss Support"
AAA	80%	20%
AA	5%	15%
A	5%	10%
BBB+	2%	8%
BBB	1%	7%
BBB-	2%	5%
BB	1%	4%
Overcollateralization (Equity)	4%	0%

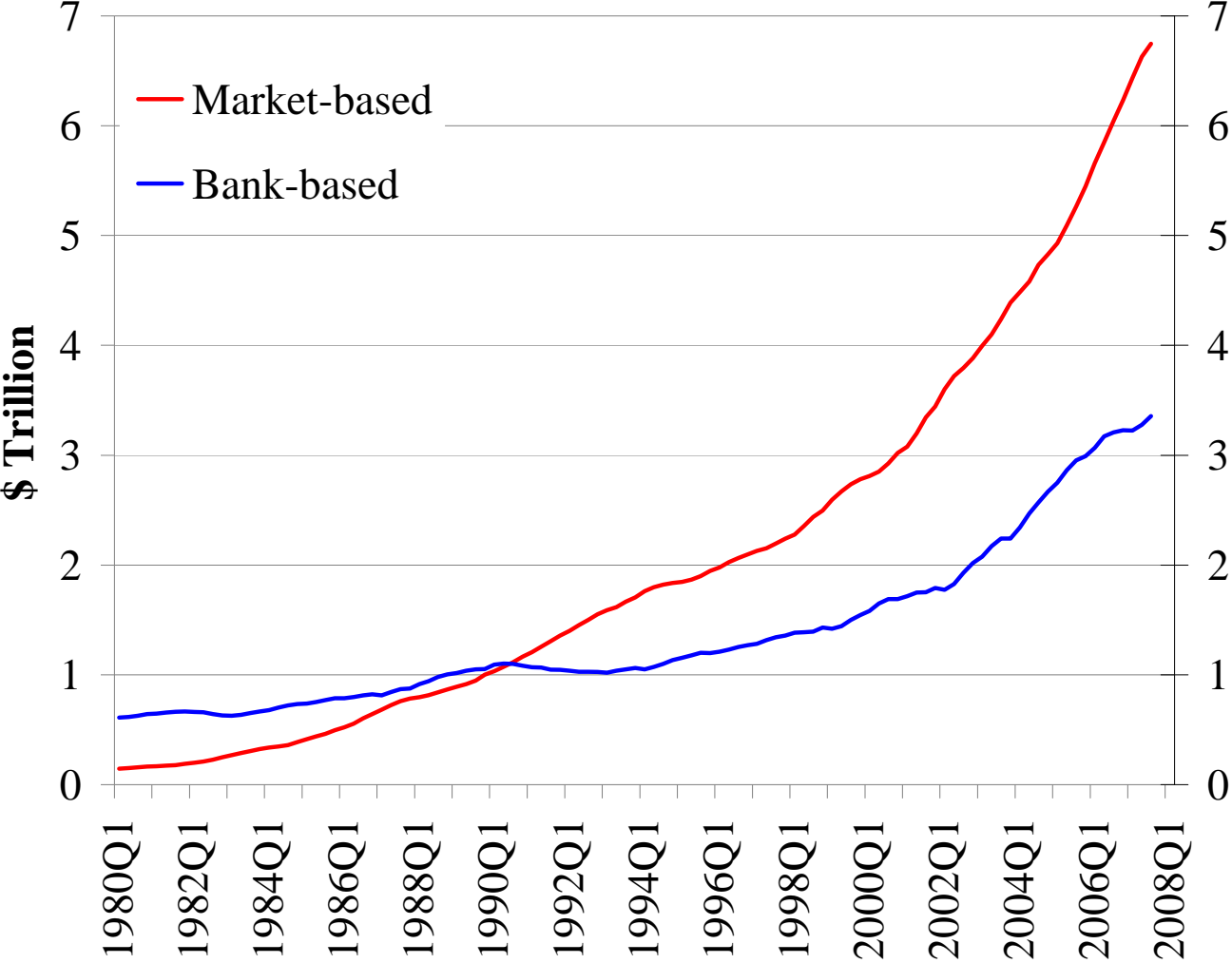
# The shadow banking system

- Investment banks (Lehman, Bear Sterns, etc)
- Largely unregulated; huge leverage (about 40:1 versus commercial banks 14:1)
- Funded in wholesale market, by **short-term money** (no deposit insurance; borrowing secured by various market assets)
- Repo markets the heart of the system

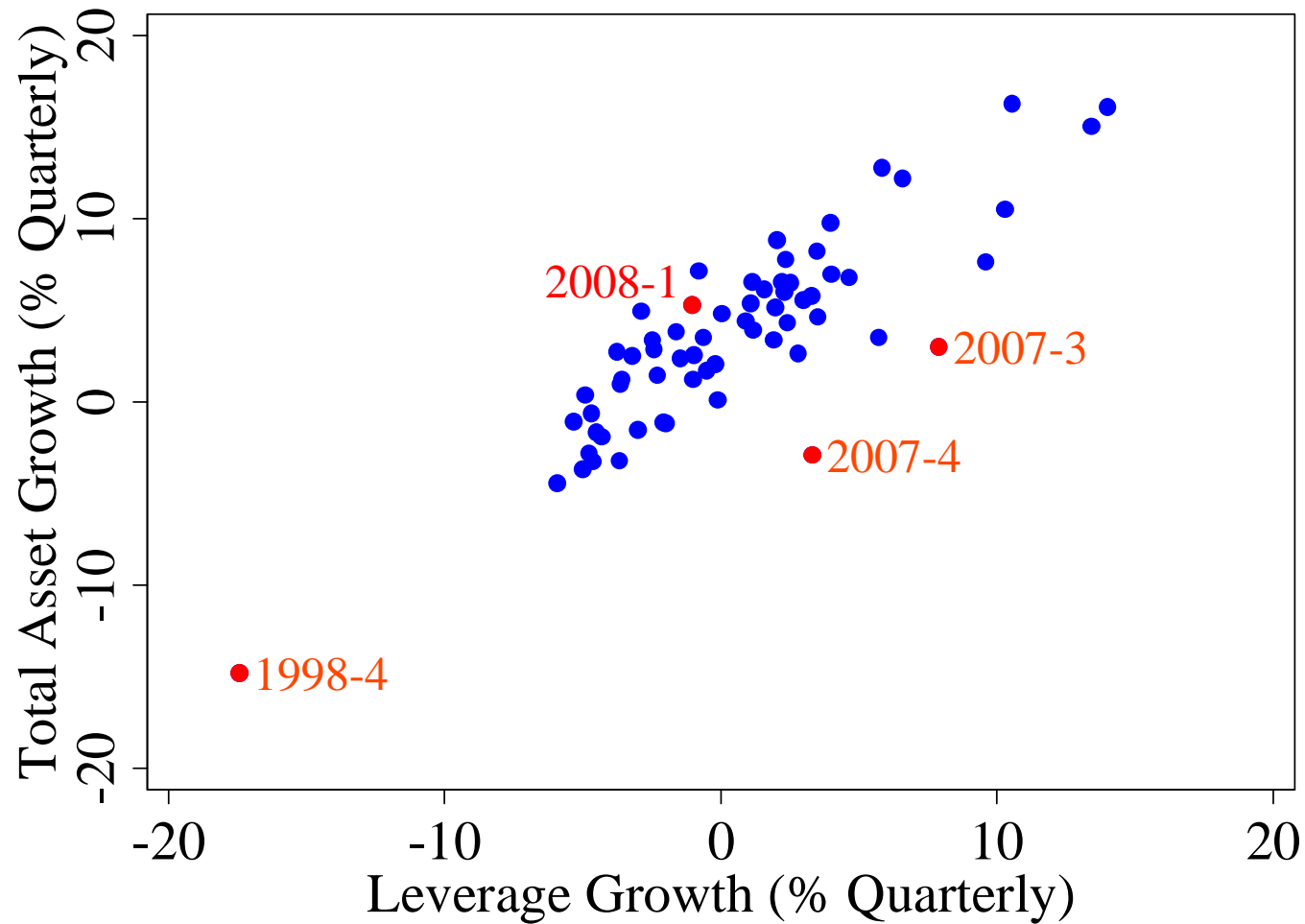
# Repo transactions (\$10+ Trillion)

- Party A sells security to Party B
- Simultaneously, Party A agrees to repurchase security from Party B (often tomorrow)
- De facto: Party A makes secure deposit with Party B (eg investment bank).
- Overnight + secured = “riskless” (zero haircut)
  
- Why?
  - Large amounts can be securely deposited (overnight)
  - Cheaper funding; banking without regulations
  - Very flexible (all kinds of securities, terms)

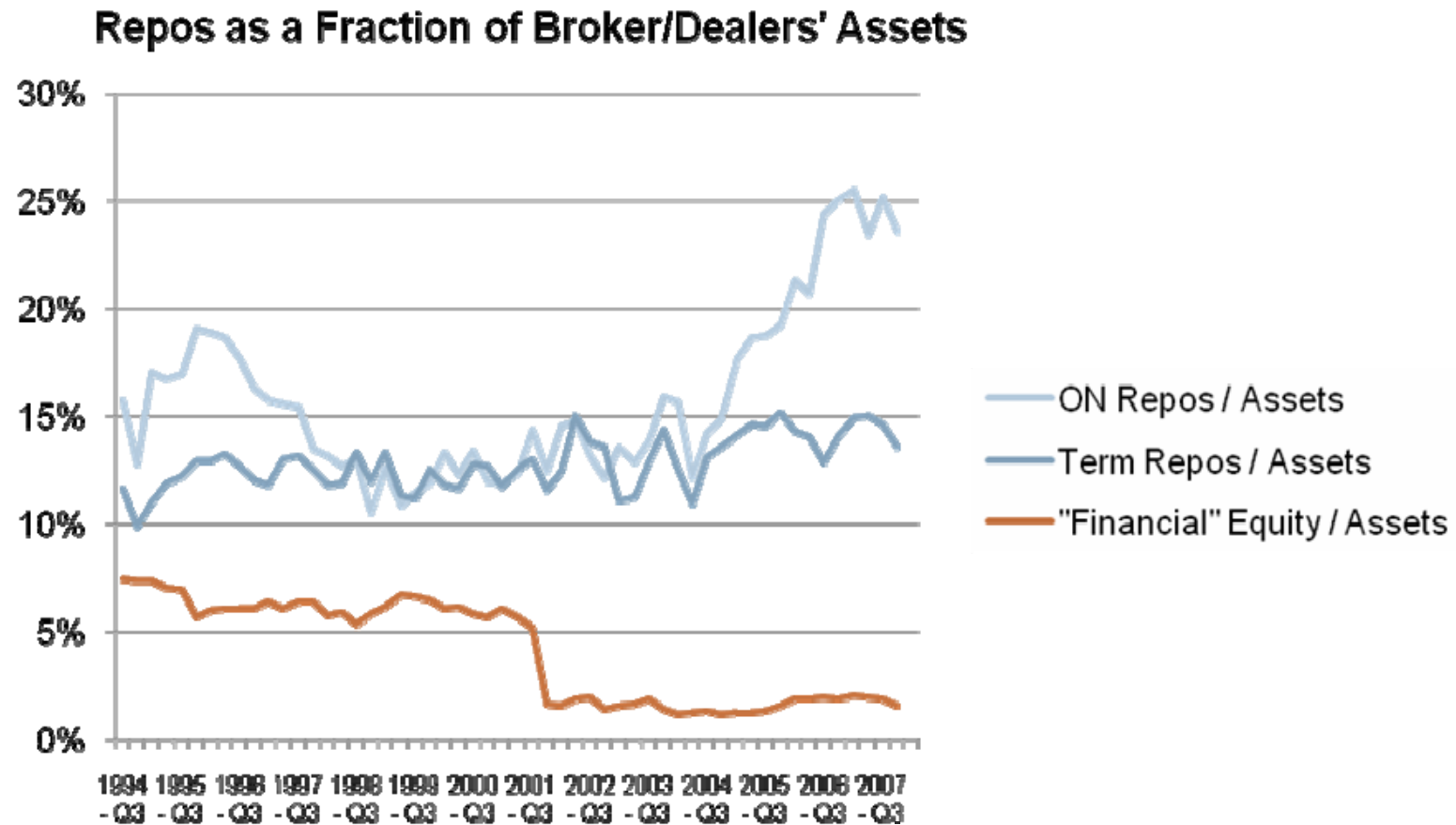
# Rise of shadow banking: share of mortgage funding



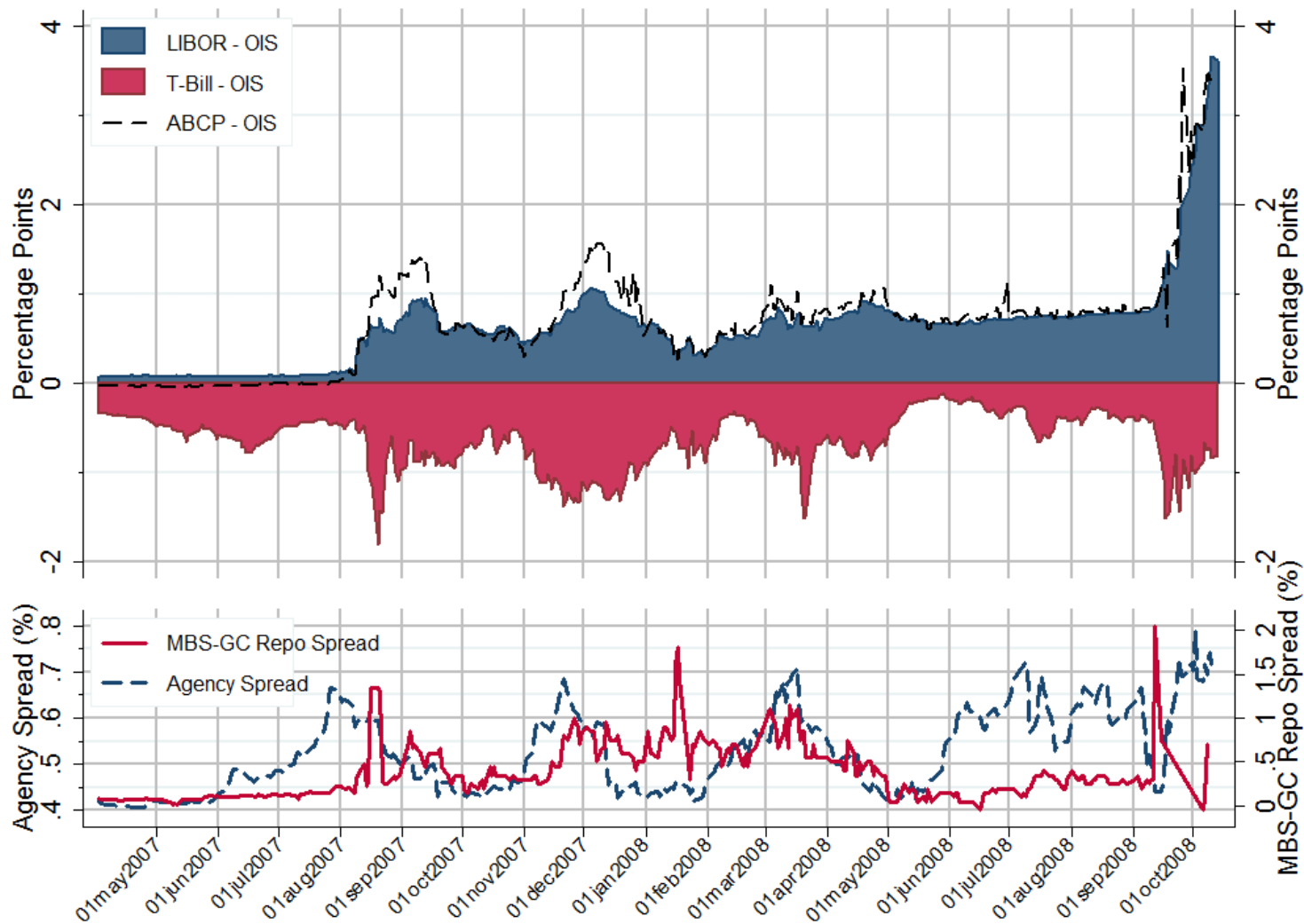
# Risk 1: Procyclical leverage



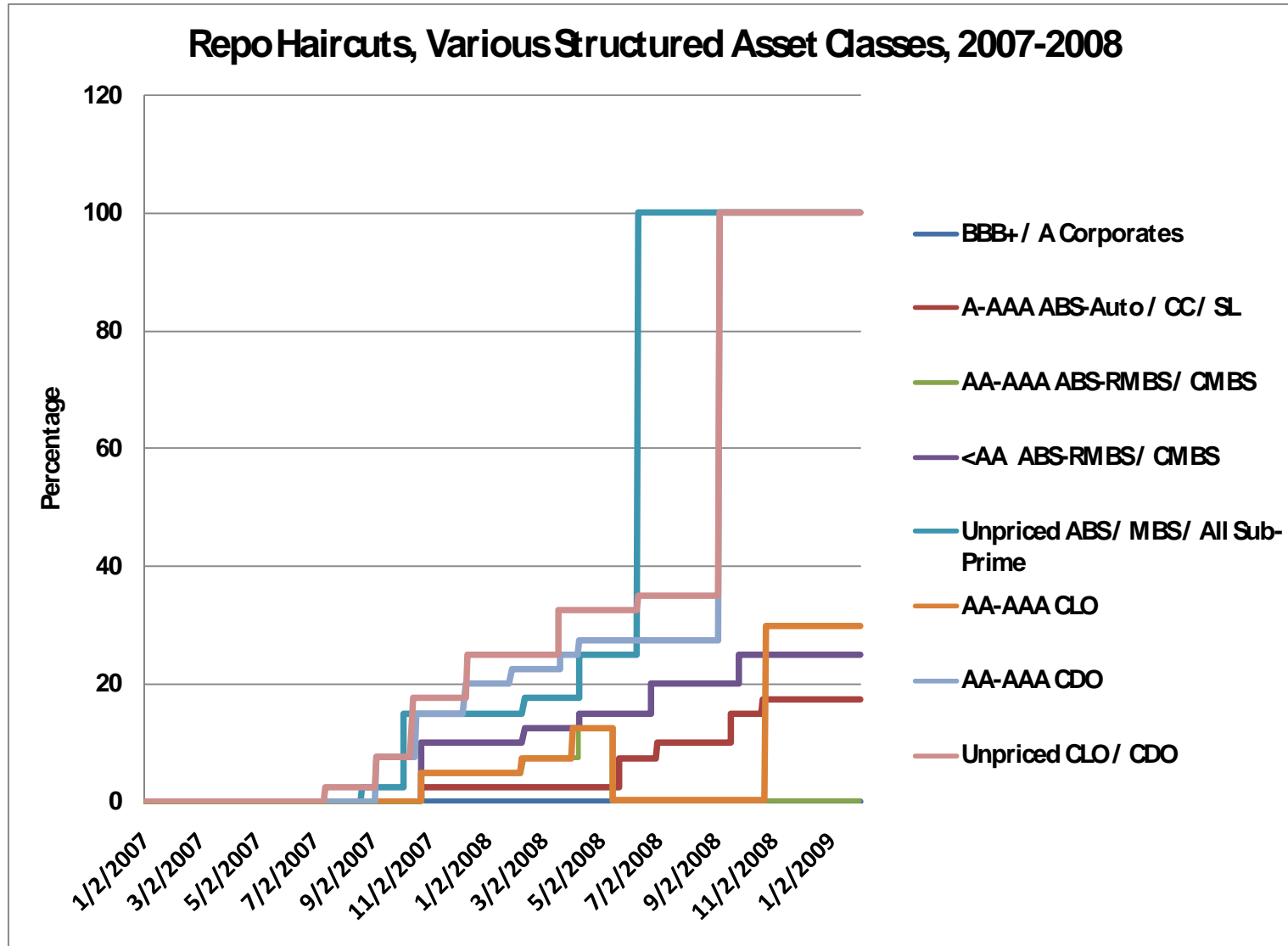
# Risk 2: Increased maturity mismatch



# Signs of trouble: TED spread

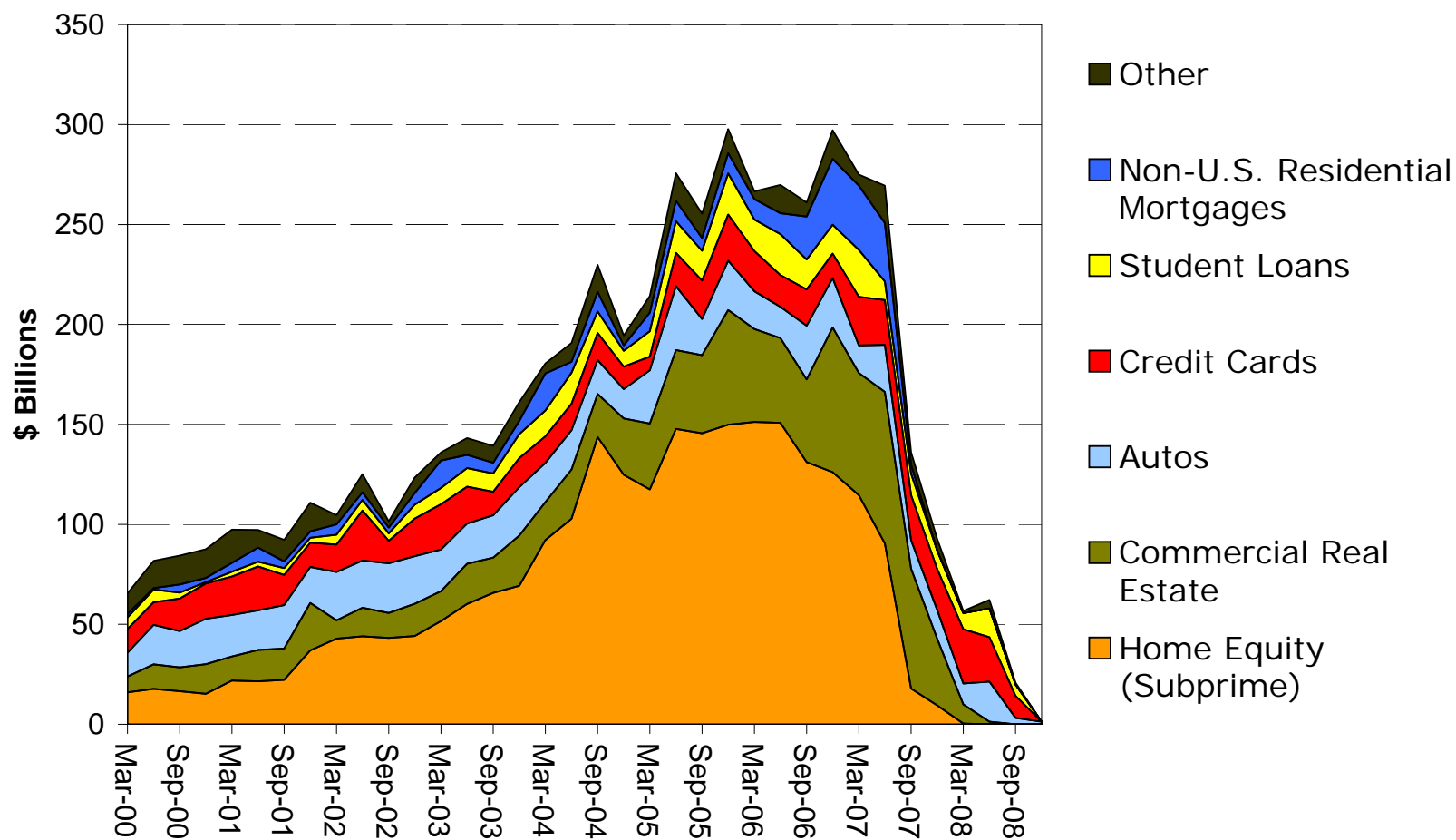


# Bank run on repos



Gary Gorton (2009)

# New Issuance of Asset Backed Securities (prev 3 mths)



Source: JP Morgan

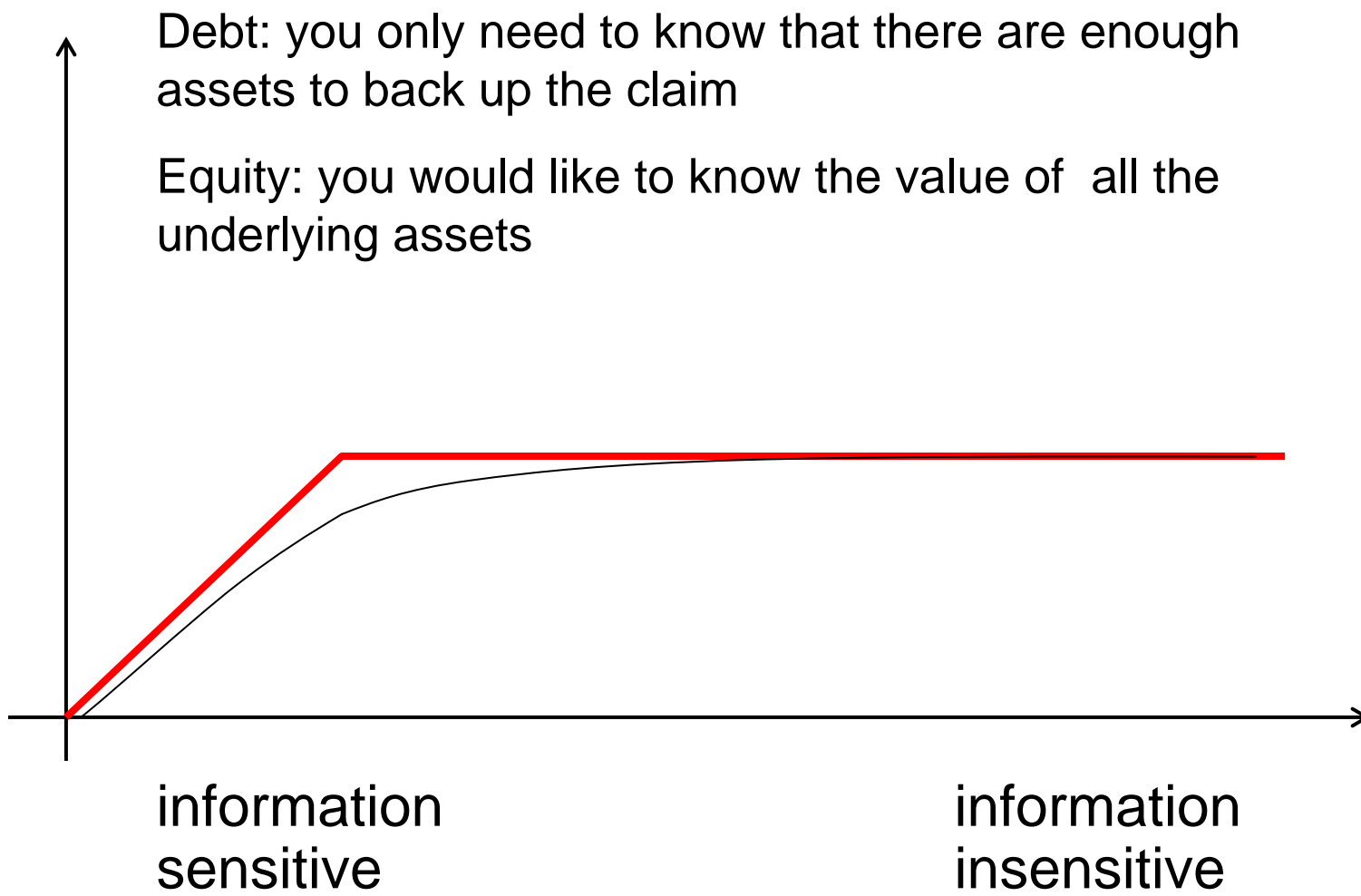
# Was originate-and-distribute model (shadow banking) the culprit?

- Weaker incentives to monitor led to poorer lending standards (subprime, NINJA)
- Repeated tranching created complex, opaque instruments
- Structured credit vehicles became “toxic” – hard to price and clean up

# Transparency – a misunderstood concept

- Nothing transparent about traditional banks
  - No mark to market
- De Beers and diamonds: customers aren't allowed to inspect quality
- Liquidity = symmetric information about payoffs
- Scandinavian 90-91 crisis happened without any securitization

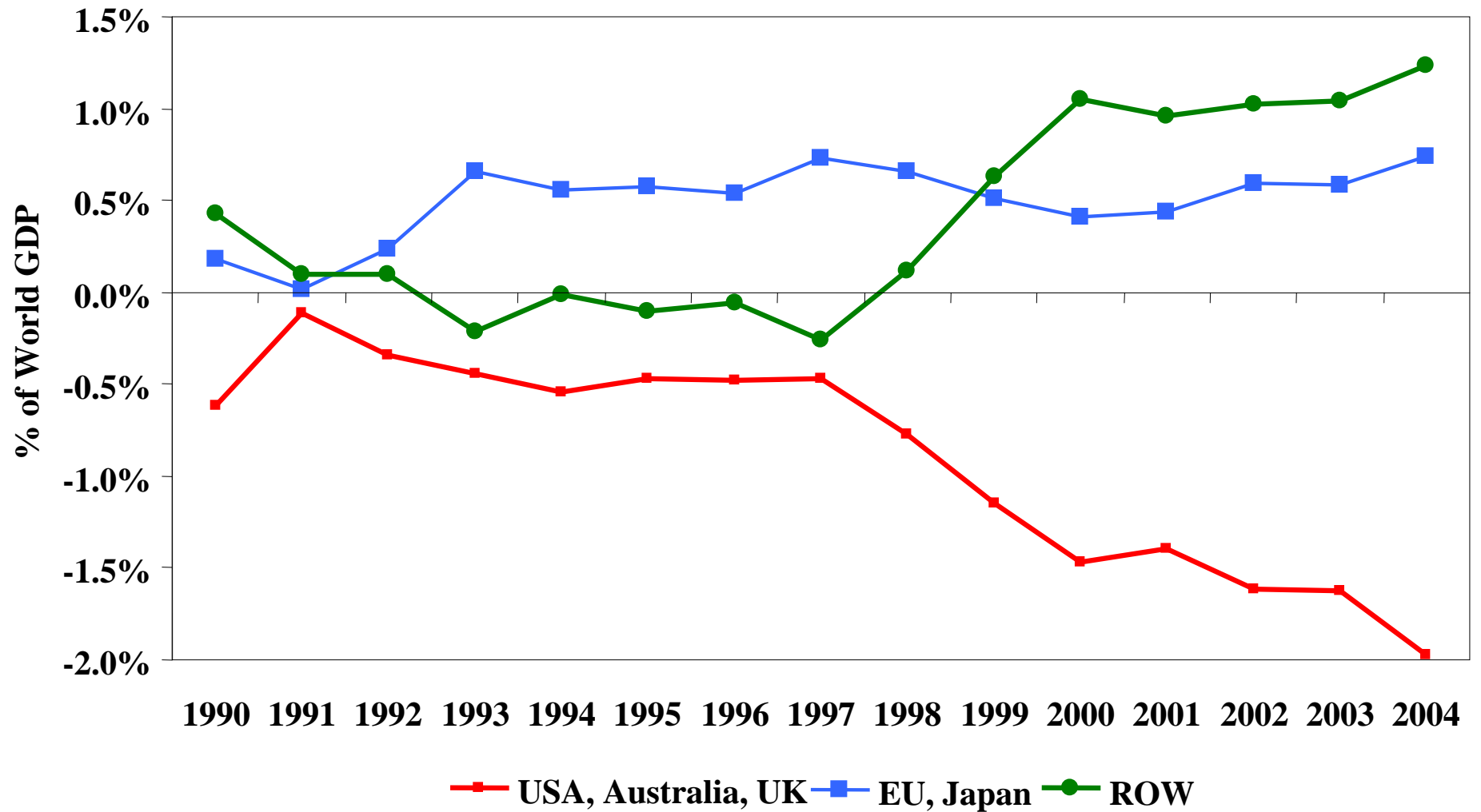
# Liquidity and information sensitivity



# Underlying causes

- Increased foreign demand for savings (“parking space”)
- Creating parking space Wall Street’s role
  - More lending (more marginal, but subsidized by Freddie and Fannie)
  - Home equity loans
- Securitization = contingent liquidity = more efficient use of parking space
- **The mistakes?**
  - Risk ended up in wrong hands
  - Leverage excessive

# Savings glut



# Lessons

- Originate-and-distribute -- an implementation problem
- Liquidity provision very different from risk sharing – keep a distance
- Transparency – a mixed blessing
- Key regulatory issues:
  - How to measure and control systemic (tail) risk in debt markets?
  - How to control leverage and maturity mismatches?
  - How to plan orderly debt-equity swaps?
- Financial markets in global economy – national vs global regulations