

The Information View of Debt

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Common view of causes of crisis

- 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

- In Money Markets

“No Questions Asked” = Liquidity

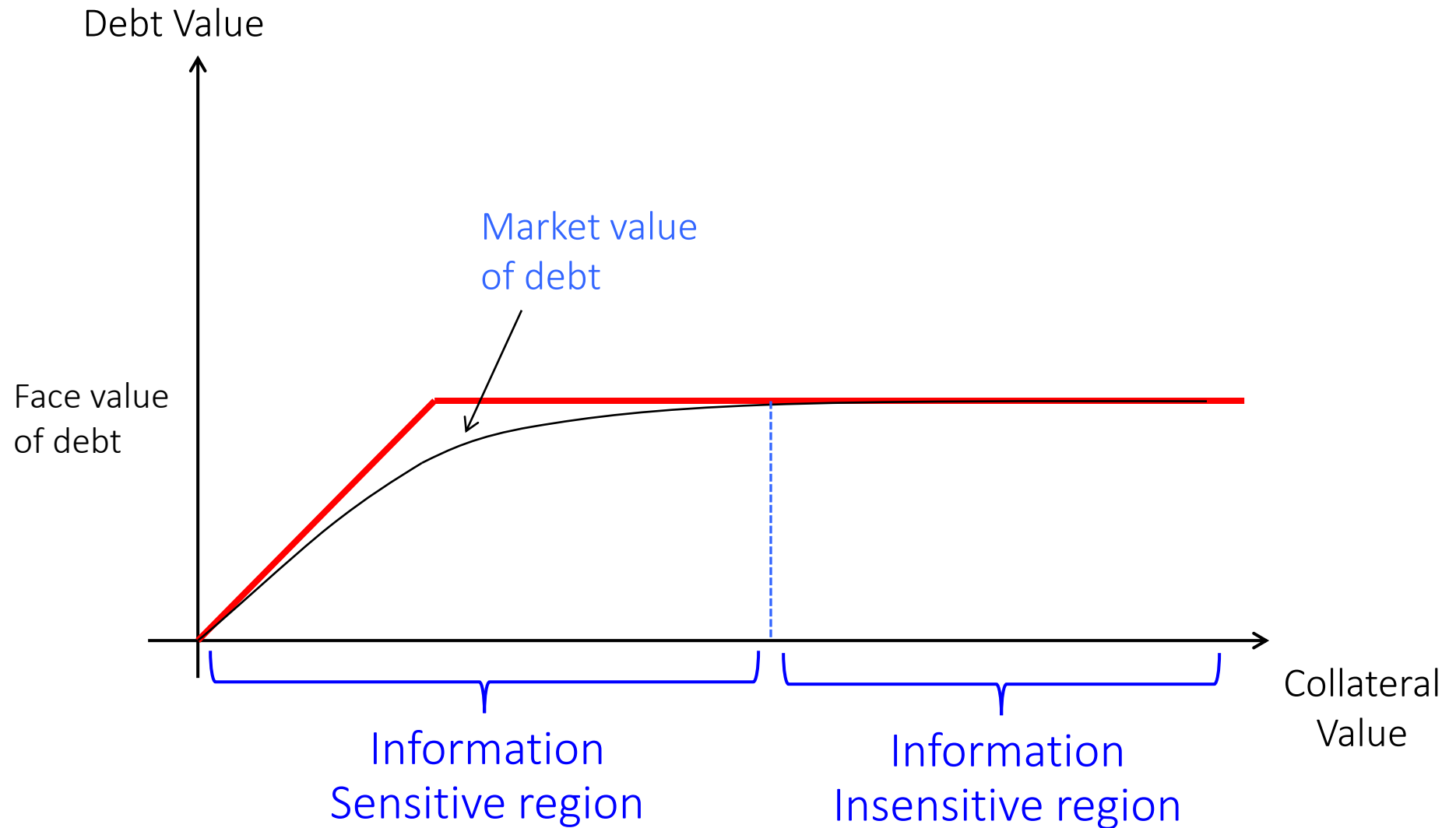
- Bagehot: “Every banker knows that if he has to prove he is worthy of credit, in fact his credit is gone”
- Ignorance is (almost) bliss

1. Why debt?

The age old logic of pawning

- Haggling over price is costly (or no feasible price)
- Clever solution
 - Pawnbroker buys pawn at safe price
 - Borrower given right to buy back pawn (with interest)
- No need for price discovery
- Repo
 - Modern day version of pawning

Debt designed to be information insensitive



Purposeful opacity

- DeBeers (wholesale diamonds)
- Credit ratings (coarse, mechanical)
- MMMFs (delayed info release)
- Banking (trust-based; invest in debt)
 - “Every banker knows that if he has to prove he is worthy of credit, in fact his credit is gone” (Bagehot)
- Central banking secrecy (discount window, etc.)

Two polar systems of liquidity provision

- Money markets
 - Urgent (Trillions of repo rolled over every day)
 - Information insensitive
 - **No price discovery** (course ratings; OTC)
 - Shared understanding, trust-based
- Stock markets very different
 - Can wait to trade shares
 - Information sensitive (minute information matters)
 - **Price discovery** (continuous trading on exchanges)
 - Thrives on heterogeneous beliefs

2. Financial crisis

The dark side of debt

- Relying on debt, securitization, coarse ratings, mechanical rules... makes sense in good times

but....

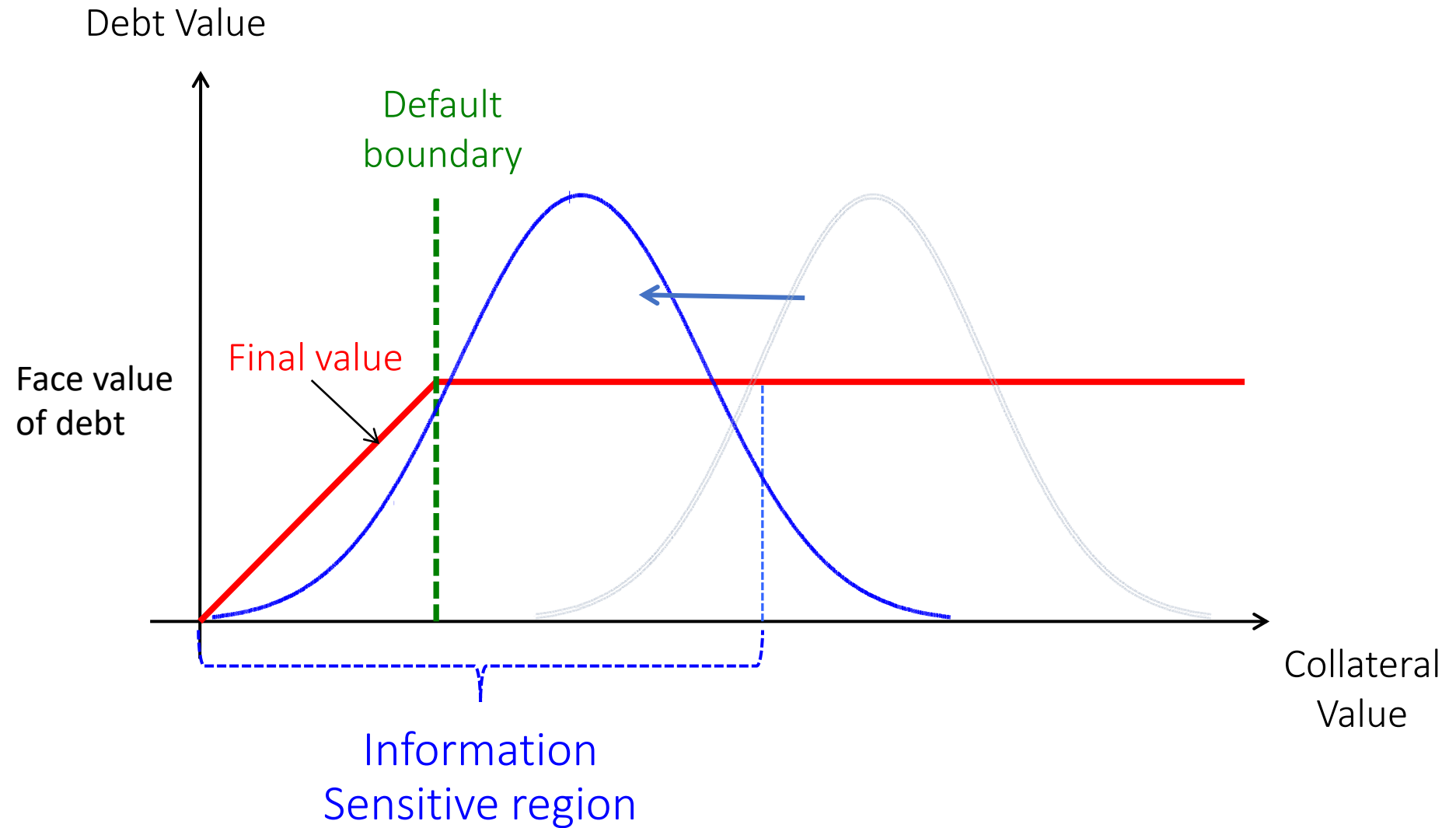
- pushes risk into tail
- hides systematic risk

The **social trade-off**: Everything that enhances liquidity (expands NQA region) increases severity of tail risk

Illustrative case: diversification in debt markets

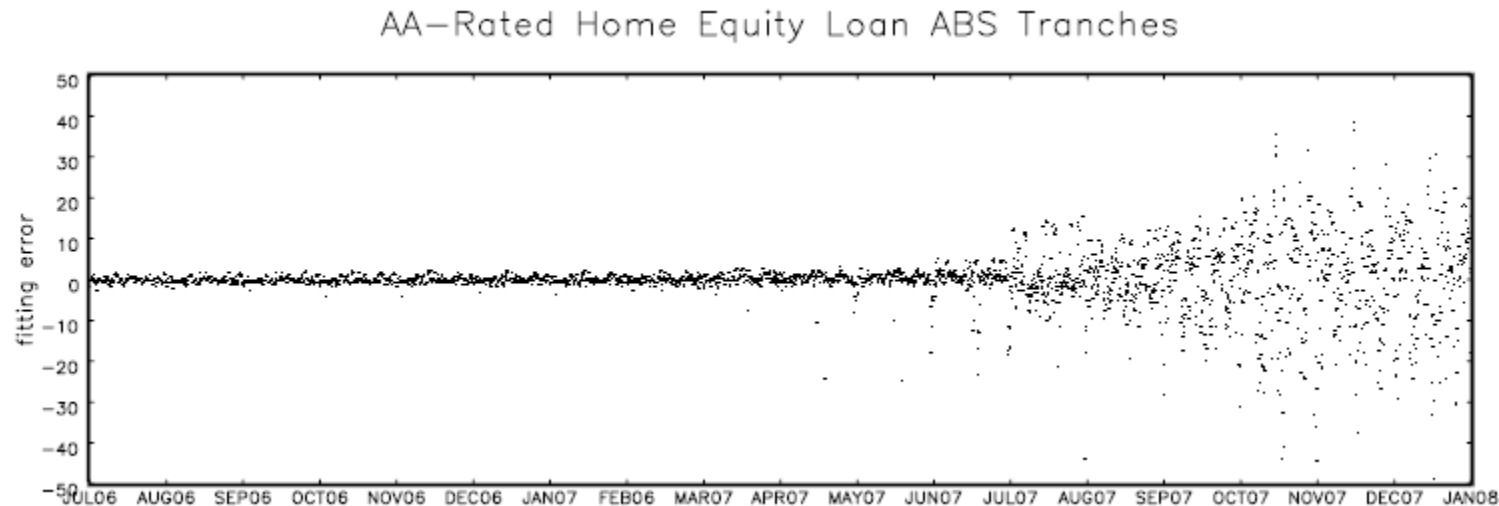
- Standard theory: any asset can be priced using state prices
 - Everyone should hold a share of the fully diversified market portfolio
- In money markets diversification creates maximal tail risk
 - Example: Ten identical banks, each holding $1/10^{\text{th}}$ of the total pool of debt
 - Each bank fully diversified, which looks great, but
 - The banks perfectly correlated
- Pre-crisis, diversified bank portfolios was thought to permit increased leverage; crisis revealed strong correlations in tail risk

Debt turns information sensitive – a crisis



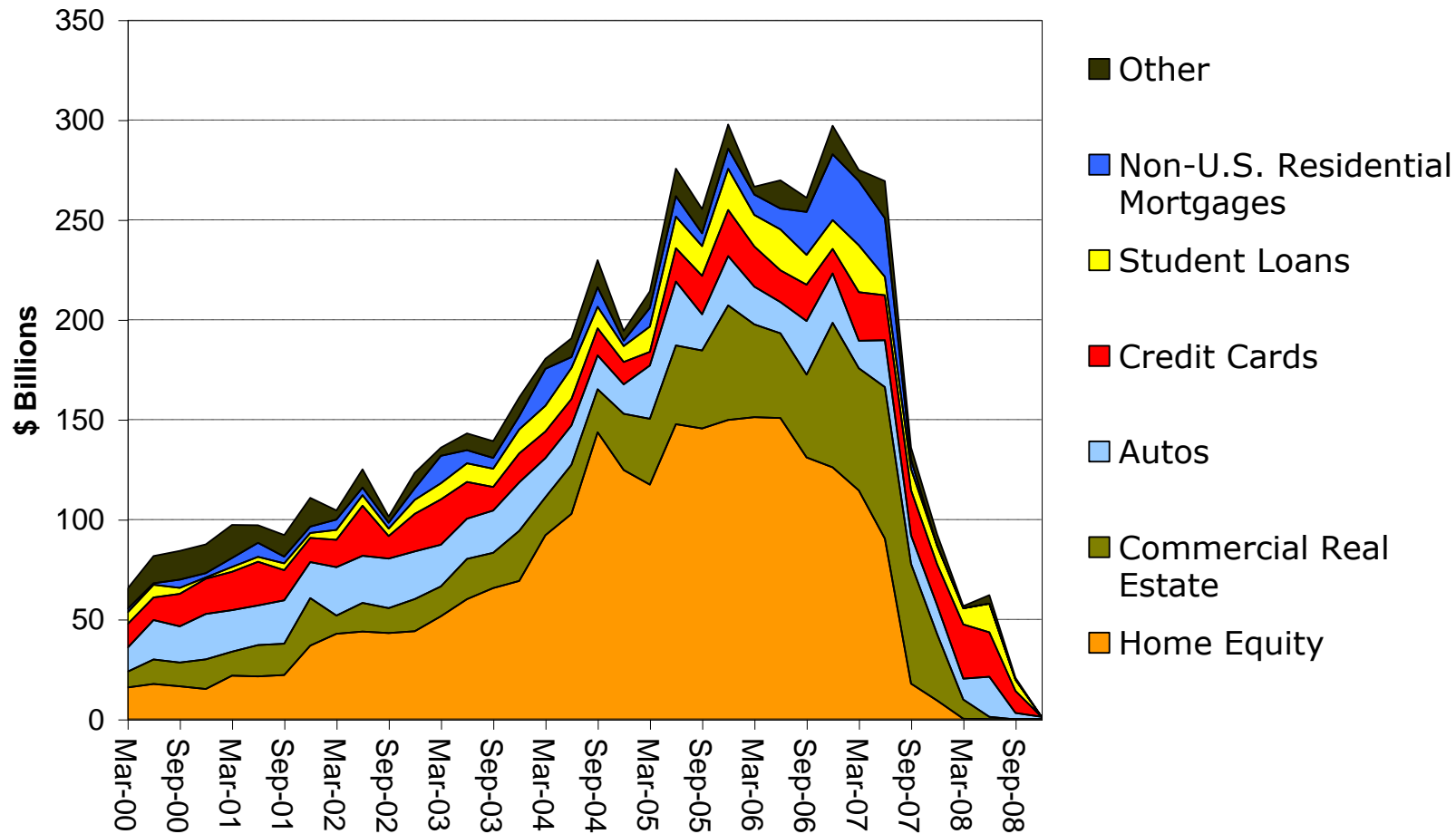
Panic in Home Equity Loan markets Aug 2006-Jan 2008

- Ex ante: shared understanding (NQA, benchmark pricing)
- Bear Fund collapse Jul 2007 releases “trapped information”
- Ex post: Private information relevant => price heterogeneity



Perraudin-Wu (2008)

The rise and fall of Asset Backed Securities: Quantities rather than prices adjust



Source: JP Morgan

3. Summary of information view

Two polar systems of liquidity provision

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Insights from information view

- Explains:
 - Why people didn't ask questions in good times
 - Why ratings were course
 - Why contagion to MMM fund “breaking the buck” was such a shock
- Role of government in crisis:
 - Get back to NQA state (only government can do it)
 - Transparency alone won't take us out of crisis; US vs EU
- Regulatory considerations:
 - Higher capital ratios; liquidity ratios questionable
 - Stress tests with corrective action (elevator test)
 - **Transparency can reduce liquidity** (MMF a success)

4. Big Data – promise of inclusive financing

FinTech revolution has led to new credit systems in emerging markets

- China leapfrogged from cash to mobile payments in a short time. Being far behind has been an advantage.
 - China a cashless society
 - Alipay, WeChat pay has 80% of payment volume
- Payment systems generate massive amounts of data upending traditional substitution between information and collateral.
 - **Information is the new collateral**

Mobile credit superior version of credit cards

- Credit extended (pushed) based on data from platform
 - Credit assessment with AI and machine learning
 - 3-1-0 system – offers rather than applications
 - “We know you, but don’t know who you are”
- Enforcement by exclusion and continuous monitoring of fraud
- Dramatically lower costs than traditional credit cards
 - Minimal fraud (mobile identity and fraud detection)
 - Lower default rates due to more accurate assessment of credit risk
 - **Inclusive financing**

Bkash in Bangladesh transformative payment system

- Established 2011; Today
 - 65 Million registered customers (30 M active users)
 - Daily volume 11 M transactions
 - Yearly transfers \$ 40-50 Billion
- Bkash only a domestic operator, still growing fast
 - Major investors: Alibaba, Softbank, Bill Gates, IFC...
 - Inclusive finance: reaching “bottom of the pyramid”
 - Bkash experimenting with databased credit
- Bangladesh recently surpassed India in GDP/capital

Enormous opportunities ahead

- Microfinance based on behavioral credit scoring promises truly inclusive financial services across the globe.
 - Reliable and scalable
- Microfinance based on community monitoring or new property rights inferior because they don't scale easily.
 - J-Pal evaluating data based projects in many emerging economies
- Blockchain technology (secured by government or private trusted party) is revolutionizing record keeping with almost limitless potential for valuable, secure applications

Thank you