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 pawnng

• 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 pawnning
Debt designed to be information insensitive

- Debt Value
- Market value of debt
- Face value of debt
- Information Sensitive region
- Information Insensitive region

Collateral Value
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 $1/10^{th}$ 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

Debt Value

Default boundary

Final value

Face value of debt

Information Sensitive region

Collateral Value
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