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MPI Collective Goods

Martin Hellwig

Discussion of Gorton’s and Rajan’s Presentations on Banking Regulation

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Focus of the Presentations

- (recent) US experience
- Liquidity of bank liabilities
- Fragility from runs because of liquidity creation (money creation)
- Nothing about misselling of loans, MBS, fraud or LIBOR and other scandals

Narrowness of the Focus:

- What about other countries or other periods?
- Nonrobustness of underlying theories
- What about solvency problems

Other countries, other periods

- No account of Sweden 1992, Japan 1992,
- No account of S&Ls 1981, or S&Ls 1990
- Solvency problems
- S&Ls not „banks“? Why should economic analysis be a slave to the fragmentation of the US institutional and regulatory system?
- German law: A bank is any institution engaging in *one* of the following activities: Taking deposits from the public, issuing covered bonds, granting loans, trading letters of credit and checks, providing brokerage services, providing safekeeping and management services for investors, and so on.

Solvency versus Liquidity

- S&Ls 1980: Illiquid because of Regulation Q and competition from money market funds
- Insolvent because of a bad realization of interest rate risk
- Abolition of Regulation Q eliminated the liquidity problem without addressing the solvency problem
- And was followed by gambling for resurrection funded by federally insured deposits
- DI the culprit?
- What about Germany 1931? Schnabel 2004, 2009
- What about the US in 1930-33?

A first remark on equity

- August 2007: Breakdown of ABCP funding of SIVs (not repo, Krishnamurthy, Nagel, Orlov JF 2014)
- SIV portfolios taken over by sponsoring banks
- Equity shortage, not liquidity shortage, see Acharya, Schnabl, Suarez, JFE 2013.

The role of equity in the Gorton world

- Information insensitivity of bank debt is the greater, the more equity the bank is funding with
- Proper equity funding is a MUST in the Gorton world but never discussed
- „Production function“ metaphor problematic

Models: Theory or Ideology?

- „Ideology": a doctrine that serves to justify existing institutions and power relations (Marx)
- Jensen-Meckling research program: Explain real world phenomena as solutions to given incentive and information problems
- „If we see it, it must be efficient" brings theorizing close to being ideological
- Note however: Second-best is not first-best and may leave room for statutory intervention
- Arnott & Stiglitz: A government subsidy for fire extinguishers may improve the outcome under second-best contracting

Regulation as a Commitment Device?

- Hellwig 1998: Diversification à la Diamond 1984 may be eliminated by excessive risk taking if borrower size is variable, with a constant returns to scale technology
- Dewatripont: That is why large-exposure regulation is useful as a commitment device
- Diamond: The problem disappears if depositors can run
- My answer at the time: With opaqueness, they will not even observe the problem

Explanations of Short-Term debt Funding of Banks

- Diamond-Dybvig 1983, Gorton 2010, 2012, DeAngelo&Stulz 2015: Liquidity creation
  - Equity regulation would destroy liquidity benefits
- Calomiris and Kahn 1991, Diamond and Rajan 2000, 2001: A disciplining device
  - Equity regulation would destroy discipline
- Brunnermeier-Oehmke 2013, Admati et al. 2018: Maturity rat race and leverage ratchet effects; relevant for banks because of fragmentation of depositors
  - Equity regulation can be a commitment device

Which explanation are we to believe?

- Liquidity and discipline explanations rely on mutually contradictory assumptions about information and behaviour of debt holders
- Discipline explanations are odds with the Mises-Schumpeter-BoE view that bank create deposits by granting loans and use interbank markets to reallocate funds if necessary
- Discipline explanations are not robust to the introduction of information costs and the possibility of debtors�much freeriding on stock price information
- Evolution of bank funding 2000 – 2008 belies the discipline explanation.

My own view

- I tend to give more weight to the liquidity provision explanation than to the discipline explanation,
- ... But I do consider the debt overhang problem to be important
- The Gorton-Winton/DeAngelo-Stulz message that equity funding of banks would reduce liquidity provision is false if liquidity benefits require banks not to be in bankruptcy
- Moreover, in a Brunnermeier-Oehmke version of the model, laissez-faire outcomes are far from second best

Summary on Bank Funding

- Regulation serves as a substitute for the missing ability to commit subsequent (or even simultaneous funding decisions)
- Regulation, in particular equity regulation or large-exposure regulation, can even be privately beneficial
- In addition, regulation can mitigate systemic externalities.
- Ex interim or ex post, regulation is painful. In a competitive market the pain may be partly borne by borrowers, so the banks mobilize them.
- Politically effective but potentially welfare reducing

A gap in the contract-theoretic foundations of the analysis

- Contract theory explains debt, i.e. non-contingent obligations, as a consequence of problems with observability and verifiability of contingencies
- Such problems are natural with bank-specific shocks, but not with for macro shocks
- Why do we not see more conditioning on macro variables? For example interest rates?
- Such conditioning would reduce incentive distortions from risk in these variables

Interest rate risk

- Hellwig EER 1994: A second-best outcome would have full liquidity provision but no interest rate risk taken by the bank
- Short-term investors should bear the valuation risks of long-term assets, long-term investors the reinvestment opportunity risks of short-term assets – implemented by perfectly matching maturities of debt issues to maturities of assets
- Liquidity transformation need not be coupled with maturity transformation

Why macro risks?

- Why do we not observe this? Brunnermeier-Oehmke (JF 2013), Admati et al. (JF 2018): lack of commitment – What we see need not be efficient!
- Maturity rat race, leverage ratchet effects
- Excessive risk taking: Why macro? Risk premia from systematic, macro risks?
- US experience: Why the combination of micro *and* macro risk transfer through MBS? Covered bond finance in Europe separates the two!
- But the prepayment option! Why is that taken as god given? In Europe it is not!

Response of a banker 1992

- ... To my explaining that I was studying why banks are so exposed to interest rate risk?
- „But we are not so exposed! We use asset and liability management for maturity matching!
  … well, almost.“
- ... Using money markets and, later, swaps.

An example (Swiss Journal 1995):

- 480 institutions 1,2,3,…
- Institution i borrows at maturity i-1 months and lends at maturity i months.
- Maturity mismatch at any institution: 1 month.
- System maturity mismatch: 40 years.
- System risk is hidden in the correlations of counterparty credit risks and underlying
- Typically neglected in risk assessments
- Also neglected in regulation

Is the example surreal?

- Transactions chain:
  - Investor – money market fund – structured investment vehicle (sponsored by a bank) – special purpose vehicle 1 (creation of MBS CDO) – special purpose vehicle 2 (creation of MBS) – mortgage bank – mortgage borrower – real estate
  - Delusions about maturity transformation
  - Delusions about liquidity risks – due to neglect of systems effects
  - Delusions about credit risks – perhaps insured with AIG

Delusions about maturity transformation 1

- Sachsen LB, equity < €4bn., liquidity commitments to SIVs > €40bn.
- Supervisor did not apply large-exposure rules because commitments had maturities below 365 days.
- No attention was paid to the fact that assets held by SIVs and therefore the refinancing needs of SIVs had maturities of much more than 365 days.
- (In parentheses: Margin was 10 – 30 bp!!!)

Delusions about maturity transformation 2

- Gorton 2010: Subprime mortgage lending funded by MBS held by SPVs and banks financed by asset backed commercial paper and repo involved no maturity transformation because the subprime mortgage was effectively a short-term security.
- Contract designed in such a way that the mortgage is bound to be renegotiated after two years.
- Delusions about credit risk and its correlation with the underlying

Delusions about maturity transformation 3

- UK experience of late 1980s: Rate adjustments in response to high market rates of interest induce defaults and foreclosures
- High rates of interest also go along with low collateral values
- Building societies had insured credit risk with insurance companies – delusions about credit risk
- Problem: The „final“ asset is long term and its service provision is fixed

Different forms of macro risk exposures

- Early 1980s, early 1990s – outright exposures in parallel among many banks
- Nowadays hidden in counterparty credit risks
- Encouraged by Basel II (1996 amendment to Basel I) – see the 2008 UBS report to shareholders
- Encouraged by greater consciousness in bank risk management
- Often a way to fool oneself and the regulators

Concluding Remarks

- Second-best need not warrant laissez-faire
- Look at the entire system of transactions and positions – general equilibrium rather than bilateral contracting
- Worry about solvency as well as liquidity
- Think about equity regulation as a commitment device, improving conditions for providing liquidity
- With significant equity, liability of shareholders is more effective, systemic externalities smaller,
- ... and many other interventions are superfluous.