



Systemic Risk and Optimal Regulatory Architecture

by

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The current situation for handling systemic risk

- New Systemic Risk Authorities
 - European Systemic Risk Board (EU)
 - Financial Stability Oversight Council (US)
- Increased Attention to Systemic Risk by Existing Authorities



Our point

- Regulatory architecture should take into account the regulatory incentives
 - In particular, bias towards excessive forbearance
 - Incentives for information sharing among regulators
- Examine some consequences of alternative designs when these incentives are taken into account and systemic risk is a factor



- Literature
- Campbell, T.S., Chan, Y.S., Marino, A.M., (1992), Mailath, G.J., Mester, L.J., (1994).
- Repullo, R., (2000)
- Kahn, C.M., Santos, J.A.C. (2004), (2006)



- Structure of Model
- Two sources of shocks
 - Liquidity Shock (refinancing risk)
 - Solvency Shock (signal of value of assets)
- Systemic risks
 - Failure of systemic bank increases likelihood of failure of non-systemic bank, but not vice versa



- Structure of Model
- Regulator Objectives:
 - Minimizing financial cost of regulator (loans lost, deposit insurance paid out)
 - Avoiding bank failures
 - Tradeoff at less than social cost, therefore prone to excessive forbearance



- Regulator Architecture
- Separate bank regulator and lender of last resort
 - Regulator responsible for deposit insurance fund; can close bank at will
 - Lender of last resort responsible for losses on its loans, can refuse to provide funding
- Unified regulator
 - Holds powers and responsibilities associated with both regulatory functions



- Results
- In new environment confirm previous results:
 - Unified regulator is generally less forbearing than separate regulators
 - Exception: At high levels of liquidity shock, unified regulator is more forbearing than a separate lender of last resort



- Results
- Incorporating systemic risk
 - All regulators maintain standards for non-systemic institutions, increasing likelihood of closing non-systemic institutions after failure of systemic institution
 - All regulators relax standards for systemic institutions



- Results
- Comparative statics
 - The advantage of the unified regulator increases as cost of closures increases
 - Liquidation value
 - Bankruptcy cost
 - Severity of systemic risk



- Results
- Private information on degree of systemic importance
 - Generalizes result: informed regulator will not pass on useful information voluntarily
 - New result: if information once gathered must be passed on, separate institutions have less incentive to gather information than do unified institutions



- Results
- Better gathering and use of information by a unified regulator
- (Caveat: can generate extreme examples where less informed regulator is less forbearing)



- Limitations
- Have not considered dividing responsibilities according to systemic and non-systemic institutions
 - If systemic regulators not responsible for non systemic institutions, reduced forbearance
 - Different architecture from the hybrid oversight contemplated in US and EU



- Limitations
- Regulator objectives more complex than modeled here
 - Can vary greatly with political climate
 - Costs of additional failures may be non-linear
 - Nonetheless, the simple objective with excessive forbearance a good approximation of “normal” times



- Summary
- Current quest for improved regulatory architecture for bank supervision and regulation of systemic risk
- Important to understand and account for objectives of regulators in creating design
- Simply announcing responsibility for systemic risk is unlikely to be effective without providing instruments and incentives





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