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Three essays on banking

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Chapter 5

Conclusion

In this thesis, three essays are presented in each chapter. Chapter 2 studies a global game model of debtor runs on a bank and the role of a lender of last resort in mitigating strategic debtor behavior and bank moral hazard. I argue in this chapter that banks may be subject to risk of failure even when they have strong fundamentals due to a coordination problem among debtors. As a result of collective strategic default a solvent borrower may claim inability to repay if she expects a sufficient number of other borrowers do so as well, thus reducing bank's enforcement ability. I provide a model in which borrowers take simultaneous actions on the basis of imprecise private signals about bank's portfolio. The model has a unique equilibrium in which an attack against the bank occurs when bank's fundamentals are above some threshold level (i.e., bank fundamentals are bad). The model also helps us understand the role of the central bank as a lender of last resort under opportunistic behavior from borrowers. While an ex-post bailout policy is often believed to reduce bank incentives, in this case it mitigates moral hazard, with banks screening more their potential borrowers when the intervention cost of providing liquidity is high. I find that the presence of the lender of last resort reduces the extent of bank failures by lowering debtors' incentives for strategic default.

Chapter 3 experimentally studies the impact of uncertainty about bank and borrower fundamentals on loan repayment. These two sources of uncertainty are natural proxies for the regulatory rules for transparency and disclosure, and for the state of the economy. I show in this chapter that solvent borrowers are more likely to default strategically when stricter disclosure creates common knowledge about bank weakness. Borrowers are also less likely to repay during phases of higher uncertainty regarding other borrowers' financial health (i.e., during economic downturns), regardless of disclosure rules. Borrowing from the behavioral literature on coordination games I identify concepts that explain the observed variation in repayment. I show that uncertainty about fundamentals changes the risk dominance properties of the coordination problem, and that these changes subsequently explain borrower's default. For the individual borrower, loss aversion and negative past experiences reduce repayment, suggesting that bank failure can be contagious in times of distress.

Finally, chapter 4 revisits the relationship between bank capital and risk-taking. The traditional view is that higher capital reduces excess risk-taking driven by limited liability. I argue that this effect is diminished when banks can choose projects with high tail risk. Moreover there is an important opposing effect, associated with the costs of compliance with capital regulation. While a poorly capitalized bank may act risk-averse to avoid breaching the minimal capital ratio (which would force a costly recapitalization), a bank with higher capital may take more risk as it has a lower probability of breaching the ratio. Still, in the presence of tail risks, the highly capitalized banks do not internalize all the consequences of its risk-taking. The key result is that when banks have access to high tail risk projects, this can lead to excess risk-taking by highly capitalized banks in equilibrium. This demonstrates the limits of traditional capital regulation in mitigating banks' incentives to take tail risks. The results are consistent with stylized facts about pre-crisis bank behavior, and have implications for the optimal design of capital regulation.