Interplay Between Deposit Insurance and Subordinate Debt in Banking System Stability

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Abstract

Banking failures are contagious on account of the information asymmetry inherent in the bank portfolio, which induces uninformed depositors to cause run on seemingly *similar* banks. While deposit insurance can add implicit liquidity to the system by preventing such bank runs, the associated cost of moral hazard makes it difficult to implement. Lack of monitoring by depositors induces banks to shift the risk and choose a level of risk which is socially suboptimal. Risk shifting can be effectively checked by a market oriented *at-risk* stakeholder such as subordinate debt. Being subordinate in claims, the investors in these securities have greater incentives to closely monitor banks.

While subordinate debt can be an effective instrument for market discipline, it can do so if it can monitor *total* risk consisting of systematic and non-systematic risk of a bank. The issuance of subordinate debt to diversified investors may not serve the purpose, as diversified investors lack the necessary incentive to monitor the firm-specific risk of a bank. This is especially important in case of banks where the inherent opacity of banking portfolios entails large firm-specific risk to be kept by banks. The first part in this dissertation explores whether non-diversified investors price firm-specific risk in their investments; and if so, what can be an effective market configuration for subordinate debt using non-diversified investors.

The second part of the dissertation presents a model of a bank with endogenous risk choices, where delegated monitoring by an active market in subordinate debt helps in containing risk shifting by banks in the presence of deposit insurance. In comparison to

static *ex-ante* contracting, the active market enables dynamic incorporation of subordinate debt signals by the banks which penalizes them to shift their risks. Active market signals from subordinate debt also correct for moral hazards associated with deposit insurance. The model helps to derive optimal level of subordinate debt required to achieve equilibrium where banks chooses risk level consistent with the first best as envisaged by a social planner. The optimal quantity of subordinate debt further eliminates any risk shifting associated even with risk insensitive premiums.

The last part of the dissertation presents a model of multiple banks with endogenous risk choices in an economy, where the provision of deposit insurance and active monitoring by subordinate debt influences systemic risk shifting by banks. The model here shows that subordinate debt along with deposit insurance can incentivize banks to keep their asset correlation low. While deposit insurance can eliminate the possibility of costly *ex-post* regulatory forbearance, subordinate debt is shown to force banks to choose strategies with lower asset correlations so as to reduce systemic risk endogenously.

To summarize, the work here can be looked up as a design of banking capital structure which can help in ensuring banking stability by market forces. The dissertation seeks an active monitoring role of subordinate debt as an instrument for market discipline to stabilize the banking system. While information based bank runs are prevented by explicit deposit insurance, subordinate debt helps in checking moral hazard associated with it. The utility of active monitoring by subordinate debt also extends to engender countercyclical incentives for banks with regard to their asset allocation. Moreover, the

joint structure of deposit insurance and subordinate debt helps in macro stabilization of banks by checking the systemic risk shifting incentives.

Key Words: Deposit insurance, risk shifting incentives, subordinate debt, moral hazard, market discipline.

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