Solvency Regulation and Credit Risk Transfer

Vittoria Cerasi and Jean-Charles Rochet

Discussion: Alan Morrison, Saïd Business School, University of Oxford

Cass Business School, 22 May 2008
Basic Set-Up

- The base model is similar to Homström and Tirole (1997)
- Banks have a valuable monitoring technology, but they cannot contract upon monitoring
- A regulator provides deposit insurance, and contracts with the bankers as a risk-neutral depositor would
- Bankers need a monitoring rent, which reduces their pledgable income
- When MH is severe enough, investment can occur only with some own capital
Solvency Shocks and Expansionary Lending

- At an interim date, the bank may experience a verifiable shock that reduces its success state payoff by $\alpha$
- After the shock, it can expand its loan portfolio by a factor of up to $\beta \leq 1$
- Monitoring decision comes after any portfolio expansion
- First best in this situation occurs when investors can commit ex ante to a state-contingent interim date investment policy
  - This must break-even in expectation (eq. 6)
  - Expected expansion level is therefore constrained
  - Expansion is more valuable in the non-shocked state, so this is where it happens
Implementation

- Suppose that a state-contingent contract cannot be written with investors
- Then the expansion is financed by loan sales
- Capital is transferred to the down state via a CDS: this ensures that the monitoring IC is satisfied after a solvency shock. It beats liquidity hoarding, which does not allow funds to be placed where they have the highest shadow value
General Observations

- This is a very interesting paper
- Loan sales, e.g. via securitization, serve a very different role here to CDS: the former provide liquidity when it is needed, and the latter insure against liquidity shocks, and hence allow incentive constraints to be satisfied as cheaply as follows
- Moreover, CDS trades in this model are part of an optimal regulatory contract: regulators have an interest in the most efficient use of limited bank capital, and a CDS allows them to accomplish this
Specific Comments: Expansion

- It would be helpful to be clearer about why there is no down state expansion in the paper. In at least two places, the paper appears to imply that this is to maximize banker incentives (e.g. p. 11, line 3). But state realization is independent of banker efforts.
  - The point is that expansion requires capital, which is in short supply. So it is used where it is most valuable, which is in the up state.

- Also, why are expansion opportunities proportional to initial investment? This is a critical assumption, as it renders time 0 capital valuable, but it is not discussed.
More discussion of the existence and the role of the regulator would be helpful

- Depositors here are presumably risk-averse, since they require deposit insurance. But the entire paper could have been written as a contracting problem between risk-neutral depositors and the bank.
Specific Comments: Basel Accord

- It would be interesting to relate this paper to the new Basel Accord
- The new Accord reduces capital requirements in up states, and decreases them in down states
- This happens in this paper, where capital is used to satisfy an IC constraint
- And, in this paper, the ability to use CDS trades to transfer capital between states reduces the ex ante capital requirement. So CDS trades should be part of the regulatory package
- How would this play out in GE?
  - All agents value down state capital over up-state capital, so the state price of capital after a solvency shock would probably exceed that of capital in the up state.
  - This would make the CDS more costly than the risk-neutral pricing of the paper
Specific Comments: Risk Management

- This paper relates to the Froot et al literature on risk management, which risk management transfers resources to the place where they have the highest shadow price
- In much of that literature, the resources go to the state where the investment opportunity is
- Here the resources go to the state where it is most expensive to satisfy the (binding ) IC constraint
- This is another point that could be usefully brought out in the discussion
In this paper, by design, only the regulator cares whether there is enough capital (since it acts like a risk-neutral depositor).

If the bank could avoid the CDS, it would, since this would facilitate more upstate lending.

CDS trades are generally unreported and opaque (cf. my JB paper).

Is this type of regulation feasible?
The paper is not as clear as it could be about who contracts, and who cannot contract. As a result it is sometimes unclear under what constraints the second best is derived.

For example:

- only at the end of the paper is the possibility of additional equity issuance, or of fresh deposit-taking, raised. The assumptions there would be better placed at the start of the paper, and I felt that they needed rather more explanation.
- the identity and the role of the “investors” mentioned immediately before equation (6) would be a source of confusion to a reader not well-versed in this type of model.

Given that all of the variables are verifiable, I wanted to know why there was any need for implementation via loan sales and CDSs: couldn’t we equally observe a single state-contingent time 0 contract?
Conclusion

- A very interesting paper, that makes an important point about the role of the CDS in ensuring efficient allocation of capital.
- A little more discussion of the regulatory and risk-management content would make it even more interesting.