
***The Insurance Industry: Capital
Requirements and Risk Management
Following the Crisis***

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**For presentation: 10th International Conference on Credit
Risk Evaluation, 2011 C.R.E.D.I.T.**

Theoretical Foundations for Capital Ratios in Banking and Insurance

- ◆ It may be surprising, but I think it fair to say, that there is no fundamental theory for optimal capital ratios in either banking or insurance.
- ◆ Any optimal capital rule will depend on the economic environment ranging from the very general (e.g. limited liability) to the very specific (e.g. tax laws).
- ◆ Important example: if there were no frictions when capital is invested in a bank or insurer (such as taxes or agency issues), then the Modigliani-Miller theorem tells us that the capital ratio is indeterminate.

The Importance of Frictional Costs for Determining Bank and Insurer Capital

- ◆ In reality, banks and insurers limit their capital, implying a likely role for frictional costs of capital.
- ◆ What are these frictional costs?
 - Taxes that create tax shield benefits to debt;
 - Agency conflict between separate shareholders and managers, which may be solved with debt.
 - Asymmetric information/limits on contracting that constrain the resolution of agency conflicts.
- ◆ Practitioners and academics often disagree over the practical importance of these frictional costs.

How Capital Ratios Are Determined in Competitive Markets?

- ◆ If markets are competitive, and the only market imperfections are frictional costs of capital, the risk preferences of depositors and policyholders would determine bank and insurer capital ratios.
- ◆ Specifically, market determined capital ratios will be higher the more risk averse depositors/policyholders. Too big to fail, however, limits this market discipline.
- ◆ The process is more complex for multiline banks and insurers, since capital must be allocated across lines and industry structure must also be determined.

Comparing Banks and Insurers

- ◆ Bank deposits/liabilities create large liquidity and related systemic/contagion risks. Banks also feature major TBTF risk, which limits market discipline
- ◆ Insurance liabilities, in contrast, are quite opposite.
- ◆ Insurers also tend to avoid catastrophe lines which may have systemic dimensions and they tend to be easier to liquidate (runoff) when in distress.
- ◆ Insurance is intrinsically social and thereby faces a coordination problem for full participation. Insurance regulation is mainly consumer disclosure/protection.

The Special Role of “Soft” and “Hard” Markets for Insurance Pricing

- ◆ The existence of soft and hard markets for property and casualty insurance pricing is also distinctive.
- ◆ Hard insurance markets occur after insurers suffer substantial losses. To recover their capital base, they raise premiums (in lieu of new capital).
- ◆ While soft and hard markets are fundamental to insurance, they seem to have no systemic echoes.
- ◆ Banks, instead, participate in “vicious cycles” where which lending raises asset prices, creating more lending and so on, until the market crashes.

The Convergence or Interaction of Banking and Insurance

- ◆ While a banking/insurance convergence has been long anticipated, the actual event is limited.
- ◆ To be sure, some banks own insurers and some insurers own banks, but great synergy seems absent.
- ◆ The interaction of banks and insurers is, however, expanding significantly, creating new systemic risk.
 - Insurers purchase bank liabilities, including deposits, debt, and covered bonds.
 - Banks and insurers buy similar assets.

American International Group (AIG)

- ◆ My comment that insurers were not as systemically central as banks may have caused you to wonder whether AIG was an exception. It is not.
- ◆ AIG's CDS losses were located in its Financial Products Division that operated under a United States banking charter (literally an S&L charter).

U.S. insurance officials had actually denied AIG permission to sell CDS under its insurance charter.

- ◆ While the AIG insurance holding company did create a serious systemic problem, it did so wearing its banking hat, not its insurance hat.

Counterparty Risk in Banking Versus Insurance

- ◆ The AIG collapse was the result of its failure to meet margin calls required under its CDS contracts to control its counterparty risk (due to no capital).
- ◆ Margin calls are now recognized in academic papers as a primary cause of system risk.
- ◆ This would not happen to an insurance product. Insurance products have no mark to market margin requirements. Insurers may fail due to inadequate capital, but not due to a liquidity crisis of this kind.

The Special Case of Catastrophe Insurance

- ◆ The law of large numbers applies to many insurance lines, such as auto insurance, where insurers hold very little capital above the premiums.
- ◆ Catastrophe insurance by its nature is very risky.
 - Applies to natural disasters, terrorism, and a range of financial guarantee insurance lines.
 - For cat insurance to be free of counterparty risk, the firm's capital = the maximum possible loss.
 - The old Lloyd's of London solved this through the ingenious and unique device of the “names”.

Government as An Insurer

- Europe may be different, but the U.S. government is an inefficient insurer, especially of cat risks.
- U.S. government insurance legislation typically requires actuarially sound/risk-based premiums.
- But the result is invariably subsidized insurance with the greatest risks receiving greatest subsidies.
- The implication is that the U.S. government induces its citizens to put themselves in harm's way for floods, hurricanes, and earthquakes.

Insurance Regulation in the United States

- ◆ I now turn to insurance regulation, first in the U.S., then in Europe, and finally a comparison.
- ◆ U.S. insurance has the unique feature that there is no federal regulation; all regulation is by the states.
 - Although there is some standardization across states, it remains a cumbersome system locally.
 - And internationally, as I will come to.
- ◆ States set capital requirements, investment rules, and consumer protections (including premium ceilings, and guarantee associations).

Insurance Capital Requirements in the United States

- ◆ The U.S. instituted a major revision in insurance capital requirements in 1993, following a “model law” of the National Association of Insurance Commissioners adopted (with variations) by states.
- ◆ Required capitals is basically the maximum of: are:
 - A minimum ratio;
 - A risk-based ratio.
- ◆ For a European audience, I should add this is highly “ruled-based” and not “principles-based”

Insurance Regulation in Europe

- ◆ European insurance regulation has been based on Solvency 1, which had no risk-based capital ratios.
- ◆ Solvency 2, replicating Basel III in many of its structures, promises to be a significant change:
 - Risk-based capital requirements that integrate insurance risk and asset risk.
 - A “principles” basis that promises to avoid the inefficiencies of a rigid “rules” based system.
- ◆ But is the equivalence of insurance and banking regulation warranted given fundamental differences?

Reinsurance Regulation: The U.S. Versus Europe

- ◆ State based regulation of U.S. insurance has created a bias against “out of state” reinsurance. State regulators require such reinsurers to post collateral.
- ◆ This is despite the fact that market discipline is probably strongest in reinsurance.
- ◆ New U.S. proposal for strength-based (rating) proposal to allow no collateral for highest ratings.
- ◆ This is part of an even bigger U.S./European issue of whether U.S. insurers will satisfy the requirements for equivalence under Solvency 2.

Conclusions for Banking and Insurance Regulation

- ◆ Banking/insurance must continue to be regulated separately to recognize their unique risk attributes.
- ◆ But, regulatory actions for the two industries must be coordinated, since all regulatory actions will likely have significant impacts on both industries.
- ◆ Example: one key area of interaction is RBC for insurers concerning bank debt/covered bonds.
- ◆ The ultimate trigger for regulatory action must be carefully considered and could differ for the two.
- ◆ Insurance groups also require more attention.

Expanding CDS Regulation

- ◆ The AIG CDS collapse has left U.S. regulators looking for alternative regulatory mechanisms to control the counterparty risk of CDS contracts.

I think there are similar developments in Europe.

- ◆ The primary idea is to require CDS to become exchange-traded, or at least centrally cleared.

A compromise would have one set of CDS traded on exchanges, providing public information on prices and open interest, while another set continue to trade on an over the counter (OTC) basis.

Catastrophe Insurance and The Monoline Concept

- ◆ I have already noted that many insurers avoid cat risks due to their potential to bankrupt an insurer.
- ◆ One result is that government takes over many cat lines, which has its own drawbacks.
- ◆ The U.S. also has a private market mechanism that is worth mentioning: monoline insurer.
 - The idea is that the insurer serves only one line, so there is no contagion to other policyholders.
 - This can apply to a subsidiary within a group.
 - It is similar to the Volcker Rule in banking.