Discussion
Reinsurance Networks and Their Impact on Reinsurance Decisions: Theory and Empirical Evidence

American Risk and Insurance Association Meetings 2013
Washington, DC

Charles Nyce
Florida State University
Overall Comments

– Interesting Paper
  • I like the explicit modeling of contagion costs
  • I like the idea of modeling relationships

– Model comments

– Empirical comments
Theoretical Model Comments

• **Page 6 — N reinsurers that are identical**
  - Paper is about reinsurers network – not clear when this network is formed – different reinsurers have different networks -> NOT identical

• **Reinsurance cost to the insurer is only a function of the reinsurer (distress costs, contagion costs, search costs), not at all related to the underlying risk of the primary insurer.**
  - This implies that all primary insurers are the same
Theoretical Model Comments

• Each reinsurer has portfolio Y
  – Assumes new policy X/n with rho(x,y) = 0
  – But we have retro-reins policies where reinsurer Q has assumed some of reinsurer K’s risk and if K is one of insurer F’s reinsurers, this assumption is violated (if the retro policies are the same as the original reinsurance policy, assuming 1/n of portfolio)
  – One way reinsurance costs have been modeled is to see how much additional load has to be added to take on a policy that is correlated with the existing portfolio
  – You have replaced this with assuming there is no correlation of the policy with the portfolio, but assume correlation on the back end through the contagion cost of reinsurance (breaking the loading into components) How different is this then just modeling reinsurance cost with a positive rho?
Empirical Comments

• **Reinsurance Data Availability**
  – Much of the reinsurance market is international
  – Using NAIC data only gets the US subsidiary reinsurance information
  – Not sure you are getting a very good measure of reinsurer relationships
  – Also not sure how you fix it.

• **Primary Insurer Controls**
  – LOB and Geographic Herfs, adding some controls for exposure to LOB and Geographic areas that utilize reinsurance more
    • Difference between HO in MT and HO in FL
Empirical Comments

• **Reverse Causality**
  – % reinsured = f(# of reins, reins network, ...)
  – Concern that the function goes the other way (pg. 26) use the lag measures of explanatory vars
  – However, you explicitly mention the stability of reinsurance programs through time
  – Need better causality tests (Granger, etc...)

• **Other Controls**
  – Consider size interactions
    • State Farm reinsuring 10% is much different from Florida Farm Bureau