ERM Enterprise Risk Management Symposium
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Session 4B: Systemic Risk

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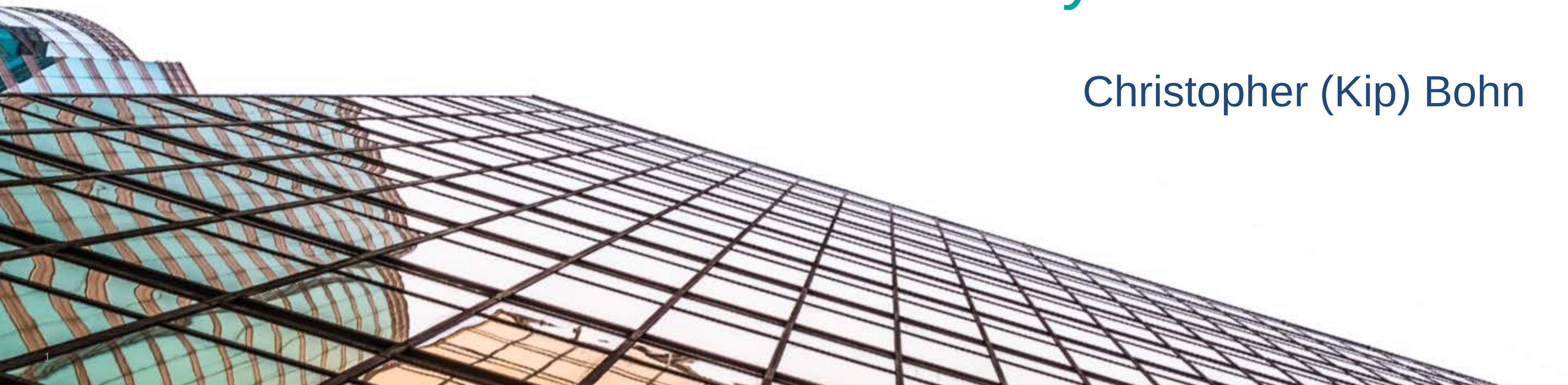
Systematic Risk

Christopher (Kip) Bohn



Background

- Based on a paper, *Is the Insurance Industry Systemically Risky?*
  - Authored by Viral V Acharya and Matthew Richardson
  - New York University Stern School of Business
- Financial crisis led to the passing of the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010
  - Did not create regulation directed at insurance companies
  - However, did impose regulation on non-bank holding companies
  - Applied to “Systemically Important Financial Institutions” (SIFIs)
- Regulation comes into play when there is a failure in a/the market
  - The 2007-2009 economic crisis was due to systematic risk
  - Aggregate capitalization of the financial sector became low
- Are there financial differences between the insurance and banking industries?
  - Most insurance risks in not necessarily related to the banking industry
  - Risks are typically deemed idiosyncratic or diversifiable

Are Insurers Exposed to Systematic Risk

- Potential arguments for
  - Willingness to provide insurance products may decline
  - Prices may rise
  - CAT loss impacts can contribute to the overall insurance cycle even when companies are not impacted by the CAT
  - Insurance companies invest in all sorts of financial product
  - Liquidity can impact a run on assets - fire sales
  - Risk Based Capital requirements can be an issue
  - AIG Example
    - $40.5B loss in the Capital Markets
    - Over $100B total loss
    - High level of interconnectedness to financial markets
    - $9.1T in life insurance policies at risk
- Systematic risk is all about codependence

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Are Insurers Exposed to Systematic Risk

- Potential arguments against
  - Traditional insurance liabilities are diversified than credit risks of banks
  - Leads to lower capital requirements
  - Illiquidity more commonly due to bad U/W decisions
  - Premium is received before claims are paid
  - Potential for rate increases
  - Most insurers weathered the financial crisis much better than most banking institutions
- Additional arguments for are dependent of theory that they are no longer traditional
  - More products that are not diversifiable
    - Investment oriented life insurance (AIG, Hartford Financial)
- Expanded role in financial markets
  - Annuities
- Insures against macro-wide events
  - Financial “insurance” (cover subprime mortgages)
- Is more prone to run/need for fire sales

Are Insurers Exposed to Systematic Risk

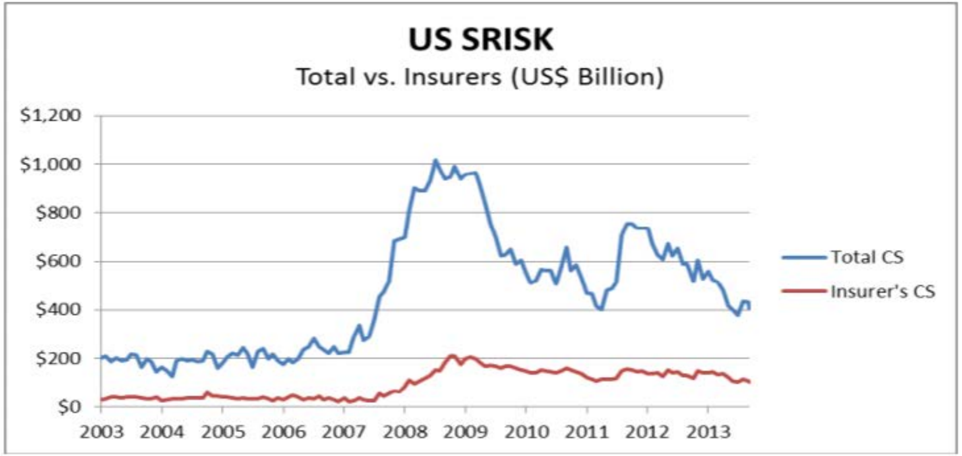
- But is the risk systemic?
- What is the likelihood of multiple insurers failing at the same time?

Why Measure Systemic Risk

- Most regulation looks at companies on a siloed basis
- Employ a model that takes into account
  - Social costs in a crisis in terms of a capital shortage (e.g. bailout costs)
  - Capital shortfall of the company in crisis

Why Measure Systemic Risk

- The authors also define capital shortfall (CS) risk during a crisis
  - SRISK = min(0, E – k (E + D))
    - E = Market Value in Crisis
    - D – book value of debt
  - k = Capital Requirement



Impacts of Regulation

- Most insurance regulation is at a state and not federal level
- There have been attempts for regulation to be taken over at the federal level
  - Argument it is interstate commerce
  - In 1869 ruled not interstate commerce by supreme court
  - In 1944 was ruled as interstate commerce by supreme court
  - In 1945 congress passed a bill that deferred regulation to the states
  - Thus federal government does not have the right to oversee are take greater responsibility for insurance regulation
- What implications does Dodd-Frank Act have
  - Would the insurance industry be better off being regulated at the federal level – a National Insurance regulator
  - Would a nation guarantee fund add stability
  - Is the current state level regulation inefficient
  - Does having state regulation allow for the ability to more quickly address issues
  - Can state address systemic risk were it to arise

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Thank You

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