

**Acharya and Schnabl:
Do Global Banks Spread Global Imbalances?**

**Discussion
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Central question(s):

- Did global imbalances lead to excessive concentrations of risk in deficit-country financial sectors?
- Was financial-sector risk concentration the channel by which imbalances lead to the financial crisis?

Summarizing Acharya and Schnabl

- They look at an important product produced by global financial sector – ABCP – and examine the geography of it
- They find:
 - Banks built these conduits where capital regulation made it profitable to do so.
 - US, UK, Germany, somewhat Canada, NOT in Spain and Portugal
 - Bank stocks fell, and probably generalized financial stress created, with correlated geographic profile
 - Unrelated to the geographic profile of imbalances

Acharya and Schnabl also show

- Conduits constructed from paper originating in both deficit and surplus countries, but tilted toward deficit countries:

○ Country	GDP weight	Ormond Quay weight
○ US	24%	37%
○ UK	4.4%	22%
○ Germany	6.0%	3.8%

- Financed with 75% USD CP
- Note: losses on conduit assets were probably even more tilted toward deficit countries.

Two views of crisis

- Financial sector seizure

- Small losses in heavily levered banks and shadow banks set off a range of vicious cycles of deleveraging, asset sales, and reduction in credit creation which hurt liquidity, further reduced asset prices, led to the seizure of some markets, and frightened main street
- A reduction in the “supply” of intermediary capital

- Adjustment from imbalance

- Overleveraged consumers faced declining asset prices (homes in particular) and increased savings, reduced consumption, so that employment fell, and triggered the vicious cycles on the real side of the economy
- A reduction in the “demand” for intermediary capital

Two views of crisis

- Was the “financial crisis”
 - Effectively losses on the underlying instruments in these conduits?
 - Or the stress in financial intermediaries?
- Imbalance story continues to have traction as an answer to the former.

Two views of crisis

- The supply of capital story has traction because of high risk concentration in securitized instruments in the financial sector.
- Puzzle: why was risk concentration so high?
 - Securitization was supposed to avoid the highly intermediated risk concentrations that occurred in many developing country crisis or in Japan in the 90s. Even at the cost of additional moral hazard.
 - Supposed to create better risk sharing. Even if the incentives are bad, the losses are in investor portfolios and not at the center of credit and liquidity creation.

We see a similar puzzle in other environments

- Catastrophe risk
 - Risk in natural perils is concentrated in insurer portfolios, and then “reinsured” by reinsurers whose portfolios are highly concentrated in these perils
 - No endogeneity
 - Events are random (not caused by imbalances)
 - Lots is objectively known about likelihood and full distribution of losses from natural perils
 - Not systematic events, so risk neutral pricing is more reasonable

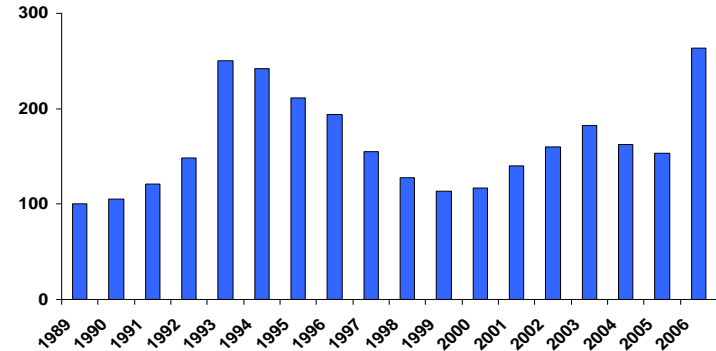
Concentrations of cat risk

- Puzzle 1: in spite of the existence of reinsurers, most catastrophe risk that accumulated in insurer portfolios was not shared.
 - Marginal rates of risk sharing were low
 - Theory says marginal risk sharing should be greatest for large events, since these can bankrupt insurers
 - In fact marginal risk sharing was better (though still poor) for more normal events
- Puzzle 2; reinsurers hold portfolio concentrated in cat risk and therefore apply a high cost of marginal capital.

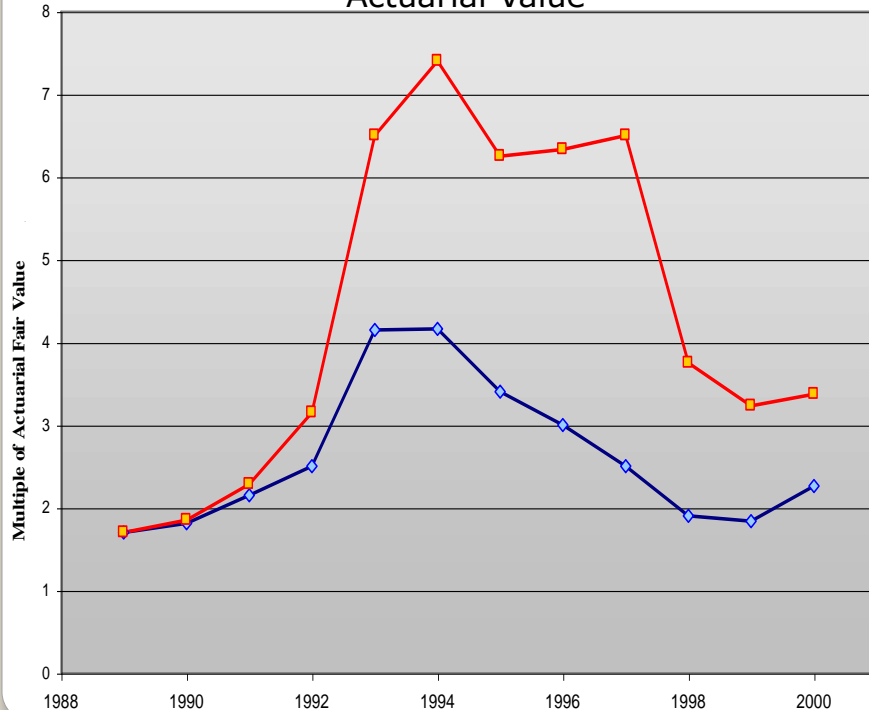
Catastrophe reinsurance shocks

- Observation: A negative shock to intermediary risk capacity, results in an increase in the cost of reinsurance AND a decline in the quantity of reinsurance consumed.
- Over time, capital flows in to arbitrage opportunities

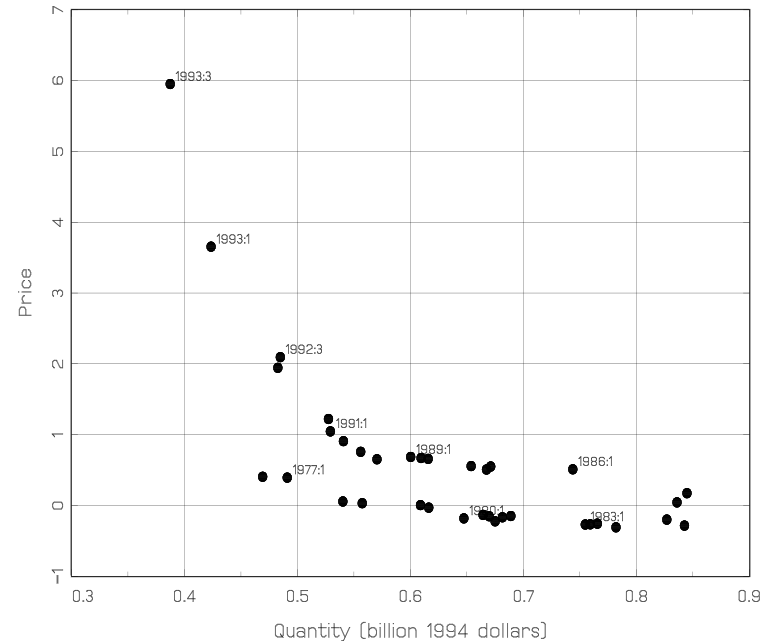
U.S. Cat Property Rate On Line
(Premiums for a call spread for a given limit and retention)



U.S. Cat Property Price of Reinsurance Relative to Actuarial Value



U.S. Cat Property Price and Quantity transacted



Impact of KRW on cat premiums

<u>Region</u>	<u>Strike</u>	<u>Expected Loss</u>	<u>2005</u>	<u>2006</u>
US hurricane	\$50B	2.5%	1.4x	6x*
US hurricane	\$30B	4.9%	1x	5.1x
US hurricane	\$20B	8.1%	1.4x*	4x
US earthquake	\$15B	4.3%	1.7x	3.5x
US earthquake	\$20B	3.2%	1.8x	3.6x
US 2 nd event	\$10B	5.2%	1.4x	4.8x
US 2 nd event	\$20B	1.2%	n/a	10.4x

Pricing shown as a spread to risk-free (typically 3m UST)

Expected losses shown as market standard model output (not NCL estimates)

Efforts at better risk sharing in Cat

- Cat bonds (beginning late 1990s)
 - Securitized version of risk inside of reinsurers
 - Could be purchased by wide range of investors
 - But they weren't
 - First issues: >75% purchased by reinsurers
 - Over 10 years, >50% of issuance purchased by reinsurers
 - More recently better risk sharing, but still surprisingly little risk transfer

Lessons

- Very general: Risk concentrations are to be avoided
- Familiarity bias is potentially large and slow to overcome
- A&C: Regulators have to be careful about the incentives intermediaries have to accumulate risk