Discussion of "The Cost of Financial Frictions for Life Insurers" Ralph Koijen Motohiro Yogo

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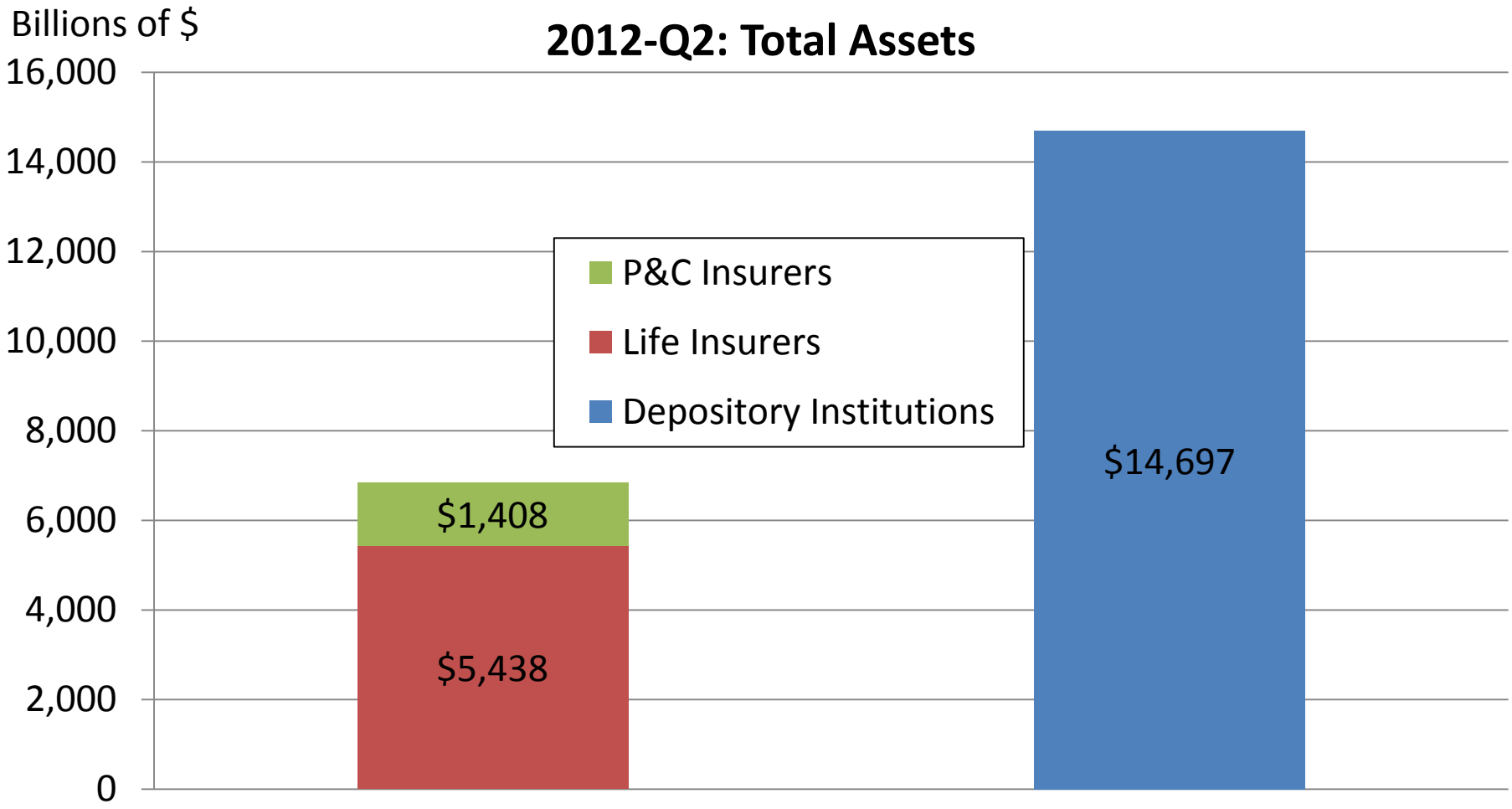
Contributions

- Insurance as a financial intermediary subject to financial frictions
  - higher financial frictions (crisis) in combination with statutory reserving regulation lead to "fire sales" of insurance which reduce accounting leverage.
- Supply side frictions have an important impact on consumer financial markets
- Use a structural model to estimate the shadow cost of financial frictions for life insurers.

Insurance industry $6.8 trillion in assets



Insurance industry: key source of funding for corporations and state and local governments

Share of Assets held by Insurance companies, 2012:Q2	
Commercial paper	3.8%
Treasury securities	2.3%
Agency- and GSE-backed securities	6.3%
Municipal securities and loans	**12.1%**
Corporate and foreign bonds	**20.8%**
Mortgage Loans	2.6%
Corporate equities	7.0%
Mutual fund shares	1.8%
Other loans and advances	8.2%

Risk: Banks v. Life Insurance

	Banks	Life Insurance Companies
Assets	55% loans Hard to liquidate quickly	75% bonds and stocks Easy to liquidate quickly
Liabilities/ Funding	70% customer deposits Very liquid	85% policyholder liabilities Less liquid

Overview

- Fall in value of life insurance assets during the crisis created pressure to recapitalize and lower accounting leverage.
- Paper shows that industry reduced leverage by selling insurance and annuities at a deep discount.
- They could do this because of regulatory idiosyncrasies that meant that that reserves went up by less than a dollar per dollar of insurance liabilities.

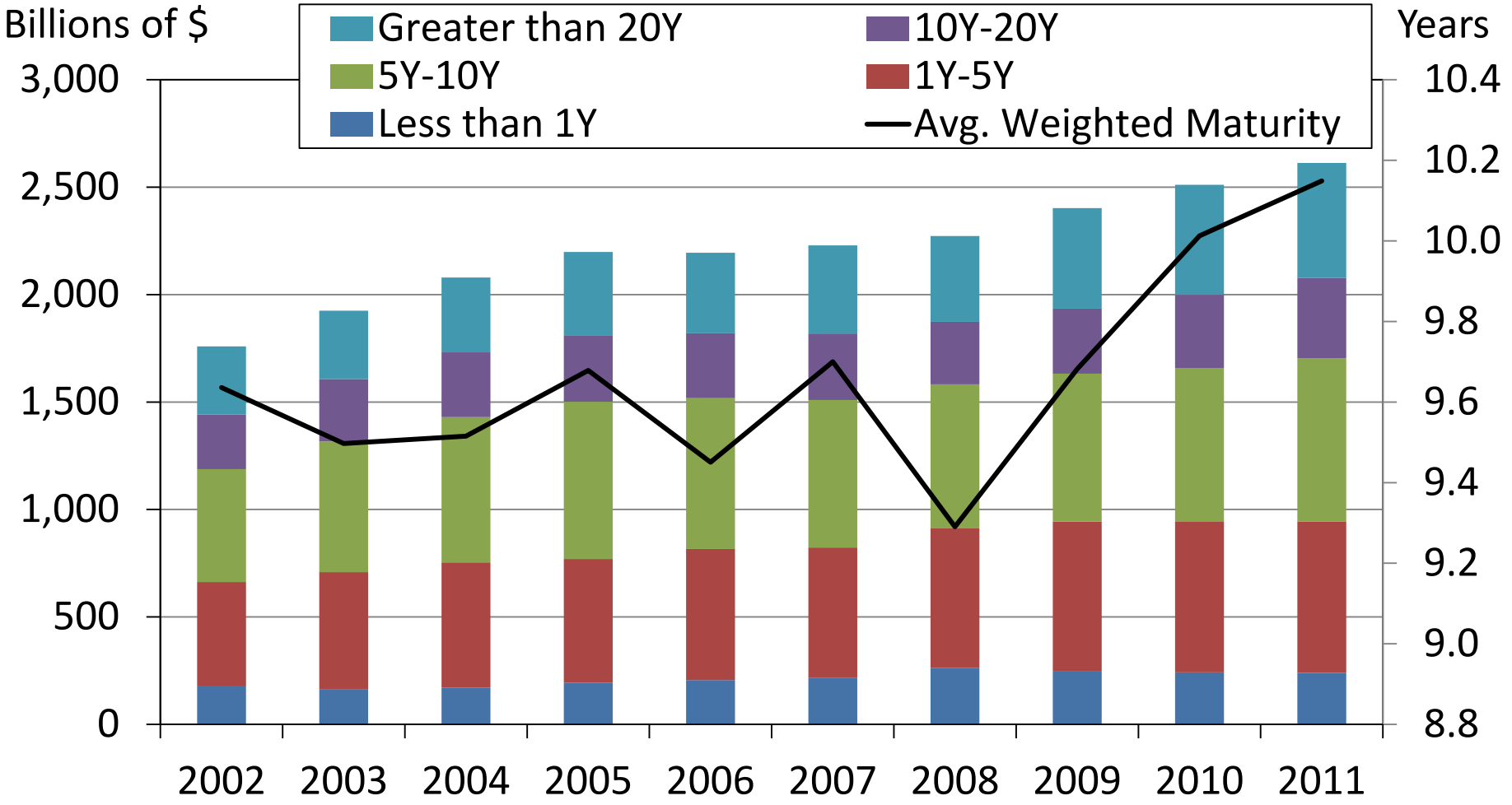
Paper

- Dynamic model of life insurance pricing
  - Set prices to maximize present discounted value of profits subject to a leverage constraint (statutory reserves/assets ≤ target)
- Implication of model
  - When leverage constraint binds optimally price policies below actuarial value if sale has a negative marginal impact on leverage.
- Evaluate predictions of model using data on insurance prices
  - Reduced form.
  - Structural estimation

Reduced Form

- Firms sell insurance below actuarial cost during the crisis when they face pressure to lower accounting leverage.
  - price reductions larger for companies with bigger balance sheet shocks
  - In addition to selling life insurance at a loss, industry is raising capital through other means and decreasing the riskiness of assets by boosting cash and short-term investments.
- Most of the time insurance is sold at a markup but this reverses during the crisis which is consistent with a binding leverage constraint during that period.

General Account Bond Portfolio by Maturity: 2002- 2011



Structural

- Estimate of the shadow cost of financial frictions
  - Crisis: average insurance company willing to loose $4.58 in profits to increase excess reserves by $1.
  - Considerable variation: Metlife $13.38
- Welfare cost of deviations from fair pricing
  - Large welfare cost of statutory reserve regulation during crisis (subsidizing insurance policies).

Questions

- What were the implications of this behavior for financial stability?
- How quickly did firms have to bring reserves back in line?
  - Cash flow testing?
- Can this exogenous shift in the supply of insurance be used to study consumer behavior?