

Workshop on the Financial Economics of Insurance Discussion of Research Topics¹

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¹Based upon work supported by NSF grant 1727049.

Topic 1. Aggregate mortality risk mismatch

- ▶ The current COVID-19 crisis highlights the importance of aggregate mortality shocks.
 - ▶ However, the same applies to medical innovations.
- ▶ The value of annuities increases with life expectancy, while the value of life insurance declines.
- ▶ This implies that insurance companies can manage their “mortality risk mismatch” by balancing their portfolios of annuities and life insurance.
- ▶ Industry experts say that insurance companies try to adjust pricing or contract characteristics to have a balanced portfolio of annuities and life insurance.
- ▶ There is also a small market on mortality swaps.
- ▶ How important is this channel for explaining relative size and pricing of insurance markets?

Topic 2. Role of insurance brokers and advisors

- ▶ Most insurance products are sold by agents and brokers.
- ▶ Recent literature shows that financial advice is suboptimal.
 - ▶ Mullainathan, Noeth, and Schoar (2012), Linnainmaa, Melzer, and Previtero (2017, 2018).
- ▶ Egan, Matvos, and Seru (2018) show that financial misconduct is prominent:

Product	Disclosure Type	
	Misconduct	Other Type
Insurance	13.8%	15.2%
Annuity	8.6%	18.6%
Stocks	6.0%	6.3%
Mutual Funds	4.6%	5.9%
Bonds	1.9%	4.5%
Options	1.2%	1.2%
Other/Not Listed	69.9%	55.0%

- ▶ There is little we know the role of insurance advisors.
 - ▶ How are they compensated?
 - ▶ How does it affect the products they recommend?
- ▶ Recent example: [Bhattacharya, Illanes, and Padi \(2020\)](#).

Topic 3. Taxation of insurance products

- ▶ Insurance products often receive a favorable tax treatment.
 - ▶ Life insurance benefits are not taxed (avoiding estate taxes).
 - ▶ Tax deferral on variable annuities.
- ▶ Open questions:
 1. How does the tax treatment of various products affect product design and the size of institutions (insurance vs. mutual funds)?
 2. What fraction of tax subsidies benefits consumers vs. insurance companies?
- ▶ Tax management by insurance companies (e.g., via offshore subsidiaries or across state lines).

Topic 4. Insurtech and cyber risk

- ▶ Improvements in data and technologies has a large impact on different insurance markets (“insurtech”).
 - ▶ Improved underwriting models may change the importance of asymmetric information.
 - ▶ Improved technologies may affect the distribution of risk (e.g., self-driving cars).
- ▶ However, with the increased reliance on technology, cyber risk becomes more important.
 - ▶ Lots of uncertainty about loss distribution (Kamiya, Kang, Kim, Milidonis, and Stulz 2018).
 - ▶ Consequently, insurers may be unwilling to underwrite large risks, which changes the ability of different firms (e.g., by size) to adopt innovations.

Topic 5. Supply-side frictions in health insurance markets

- ▶ Much of the supply-side literature studying the impact of regulation, financial frictions, and imperfect competition focuses on life insurance.
- ▶ Regulation also has a large impact on health insurance (e.g., medical loss ratio regulation and minimal standards for coverage).
- ▶ Recent work suggests that this regulation may in fact increase medical claims as insurers have no incentive to manage costs over the threshold (Cicala, Lieber, and Marone 2017).
- ▶ Use the canonical insurance model (regulatory frictions and market power) to explain various health insurance markets.
- ▶ Also, there exists a health reinsurance market that has not been studied.
- ▶ **Recent example:** Einav, Finkelstein, and Tebaldi (2019).

Topic 6. Credit migration and the impact on asset prices

- ▶ In the context of systemic risk, fire sales of assets is the most obvious externality.
- ▶ Insurers may need to sell assets if RBC constraints bind.
- ▶ In the case of widespread credit migration, insurance companies may amplify the shock as risk constraints bind.
- ▶ It may be possible to use a demand system approach, see Kojien and Yogo (2019, *JPE*), to estimate the impact on bond yields.

Topic 7. The price of long-run volatility risk

- ▶ In a large class of asset pricing models, long-term volatility risk is important to explain risk premia.
- ▶ Direct estimates suggest, however, that short-term (instead of long-term) volatility risk has a high price of risk.
 - ▶ Dew-Becker, Giglio, Le, and Rodriguez (2017) and Binsbergen and Koijen (2017).
- ▶ Variable annuities complete the market by allowing households to hedge long-term volatility risk.
- ▶ Judging by the size of the market, such products are attractive to consumers.
- ▶ How can we reconcile the demand by households and institutions, and what does it imply for the price of variance risk?