

Course Outline

Office Hours: Wednesdays 9:00 – 10:30, or by appointment
Office: 235 Alston Hall
Telephone: 348-7858
Website: <http://cba.ua.edu/~hschlesi>

Prerequisites: Economics 610 & past or current enrollment in FI 601. You should also be “up to speed” in mathematics and statistics.

Course Description and Objective: This course covers the basics of the economics of uncertainty with a focus on models of insurance theory. Since insurance studies the transfer and financing of various risks, the models we study are very adaptable to a variety of other settings in economics and finance. The course will mostly examine individual choice and insurance demand. The course uses as a foundation both basic probability theory and decision theory. Topics covered include rational insurance choice, the effects of multiple risks on decision making, how changes in risk affect behavior, optimal contract design, alternatives to insurance, and markets with incomplete information. By taking this course, you will have a better understanding of how risk can be modeled, and how the effects of such risk can be mitigated by individuals or by companies.

How the Course will Work: The course will consist of both lectures by the professor and seminar-style presentations by you. In particular, the professor will present most of the material for the “Main Concept” topics as listed below, as well as a brief overview of the “Additional Topics.” You will be responsible for writing up a short term paper and presenting your results on one of the “Additional Topics.” Although the course lectures will be about insurance theory, the “Additional Topics” can be either theoretical or empirical in their contribution.

Grades There will be one exam worth 50% of your grade. You will also be required to write a short paper on either one of the “additional topics” as listed below, or on an extension of one of the “main concepts.” You will lecture for part of one class to present the ideas discussed in your paper. The paper will be worth 50% of your grade. You are expected to attend class lectures, to be prepared and to be a part of the classroom discussion. This is especially true for the lectures given by your fellow students.

Make-up exams and attendance: Every missed exam or assignment receives a grade of zero unless explicitly exempted by the professor. All requests for an exemption and/or make-up assignment must be requested in writing (e-mail is sufficient) at the earliest feasible time

Special requirements: Students with special needs or with disabilities should contact the Professor prior to any exams or assignments to make arrangements.

Textbooks: There is no required text for this class. All of the reference books below can be found on reserve in the Bruno Library.

Dionne, G., ed., (2000), *Handbook of Insurance*, Kluwer Academic Publishers, ISBN 0-7923-7870-9.

Eeckhoudt, L., C. Gollier and H. Schlesinger, *Economic and Financial Decisions under Risk*, 2005, Princeton University Press. ISBN 0691122156 (paperback edition).

Gollier, C. (2001), *The Economics of Risk and Time*, MIT Press, ISBN 0-262-07215-7.

Rees, R., and A. Wambach (2008), *The Microeconomics of Insurance*, Foundations and Trends in Microeconomics 4, Now Publishers, ISSN 1547-9846

Seog, S. H. (2010), *The Economics of Risk and Insurance*, Wiley-Blackwell, ISBN 978-1-4051-8552-3

Tentative Syllabus

Main Concepts

0. Probability Spaces, Preference Functionals, Stieltjes Integrals
1. Expected Utility, Risk Aversion, Measures of Risk
2. Rational Insurance Purchasing
3. Insurance with Multiple Risks
4. Prudence, Temperance and Non-hedging Types of Risk Management
5. Optimal Risk Sharing
6. First- vs. Second-order Risk Aversion and Non-Expected Utility Theories
7. Asymmetric Information in Insurance Markets
8. Self-Protection and Alternative Risk Transfer

Additional Topics

Natural and/or Man-Made Catastrophes
Ex Post Moral Hazard and Insurance Fraud
Insurance with State-Dependent Preferences
Corporate Demand for Insurance
Insurance Pricing Models
Broker Compensation
D&O Liability Insurance
Organizational Form and Corporate Governance for Insurance Firms
Pensions and Longevity/Health Risk
Econometric Models of Asymmetric Information
Regulation of Insurance
Experiments on Risk Attitudes
Other Topics (if approved by Professor Schlesinger)

Some additional readings (not mandatory)

1. Expected Utility, Risk Aversion, Measures of Risk

Ekern, S. (1980), "Increasing Nth-Degree Risk," *Economics Letters*.

Fishburn, P. (1989), "Retrospective on the Utility Theory of von Neumann and Morgenstern," *Journal of Risk and Uncertainty*.

Pratt, J. (1964), "Risk Aversion in the Small and in the Large," *Econometrica*.

Rabin, M. (2000), "Risk Aversion and Expected-Utility Theory: A Calibration Theorem," *Econometrica*.

Rothschild, M. and J. Stiglitz (1970), "Increasing Risk: I: A Definition," *Journal of Economic Theory*.

Rothschild, M. and J. Stiglitz (1971), "Increasing Risk II: Its Economic Consequences," *Journal of Economic Theory*.

Yaari, M. (1969), "Some Remarks on Measures of Risk Aversion and Their Uses," *Journal of Economic Theory*.

2. Rational Insurance Purchasing

Eeckhoudt, L. and C. Gollier (1999), "Insurance of Lower Probability Events," *Journal of Risk and Insurance*.

Gollier, C. (1995), "The Comparative Statics of Changes in Risk Revisited," *Journal of Economic Theory*.

Mossin, J. (1968), "Aspects of Rational Insurance Purchasing," *Journal of Political Economy*.

Schlesinger, H. (1981), "The Optimal Level of Deductibility in Insurance Contracts," *Journal of Risk and Insurance*.

3. Insurance with Multiple Risks

Doherty, N. and H. Schlesinger (1983), "Optimal Insurance in Incomplete Markets," *Journal of Political Economy*.

Doherty, N. and H. Schlesinger (1990), "Rational Insurance Purchasing: Consideration of Contract Nonperformance," *Quarterly Journal of Economics*.

Eeckhoudt, L. and M. Kimball (1992), "Background Risk, Prudence and the Demand for Insurance," in G. Dionne (ed.), *Contributions to Insurance Economics*, Kluwer.

Eeckhoudt, L., C. Gollier and H. Schlesinger (1996), "Changes in Background Risk and Risk-Taking Behavior," *Econometrica*.

Gollier, C. and J. Pratt (1996), "Risk Vulnerability and the Tempering Effect of Background Risk," *Econometrica*.

Kihlstrom, R., D. Romer and S. Williams (1981), "Risk Aversion with Random Initial Wealth," *Econometrica*.

Kimball, M. (1993), "Standard Risk Aversion," *Econometrica*.

Nachman, D. (1982), "Preservation of 'More Risk Averse' Under Expectations," *Journal of Economic Theory*.

Ross, S. (1981), "Some Stronger Measures of Risk Aversion in the Small and in the Large with Applications," *Econometrica*.

4. Prudence, Temperance and Non-hedging Types of Risk Management

Caballe, J. and A. Pomansky (1996), "Mixed Risk Aversion," *Journal of Economic Theory*.

Eeckhoudt, L. and H. Schlesinger (2006), "Putting Risk in its Proper Place," *American Economic Review*.

Eeckhoudt, L., B. Rey and H. Schlesinger (2007), "A Good Sign for Multivariate Risk Taking," *Management Science*.

Fei, W. and H. Schlesinger (2008), "Precautionary Insurance Demand with State-Dependent Background Risk," *Journal of Risk and Insurance*.

Gollier, C. (1995), "The Comparative Statics of Changes in Risk Revisited," *Journal of Economic Theory*.

Jindapon, P. and W. Neilson (2007), "Higher-Order Generalizations of Arrow-Pratt and Ross Risk Aversion: A Comparative Statics Approach," *Journal of Economic Theory*.

Kimball, M. (1990), "Precautionary Savings in the Small and in the Large," *Econometrica*.

5. Optimal Risk Sharing

Gollier, C. and H. Schlesinger (1996), "Arrow's Theorem on the Optimality of Deductibles: A Stochastic Dominance Approach," *Economic Theory*.

Karni, E. (1992), "Optimal Insurance: A Nonexpected Utility Analysis," in G. Dionne (ed.), *Contributions to Insurance Economics*, Kluwer.

Mahul, Olivier and Brian D. Wright (2004), "Implications of Incomplete Performance for Optimal Insurance," *Economica*

Raviv, A. (1979), "The Design of an Optimal Insurance Policy," *American Economic Review*.

Zilcha, I. and S. H. Chew (1990), "Invariance of the Efficient Sets when the Expected Utility Hypothesis is Relaxed," *Journal of Economic Behavior and Organization*.

6. First- vs. Second-Order Risk Aversion and Non-Expected Utility Theory

Braun, M. and A. Muermann (2004) "The Impact of Regret on the Demand for Insurance", *Journal of Risk and Insurance*.

Doherty, N. and L. Eeckhoudt (1995), "Optimal Insurance without Expected Utility: The Dual Theory and the Linearity of Insurance Contracts," *Journal of Risk and Uncertainty*.

Gilboa, I., and D. Schmeidler (1989), "Maxmin Expected Utility with a Non-Unique Prior", *Journal of Mathematical Economics*.

Kahneman, D. and A. Tversky (1992), "Advances in Prospect Theory: Cumulative Representation of Uncertainty," *Journal of Risk and Uncertainty*.

Kőszegi, B. and M. Rabin (2006), "A Model of Reference-Dependent Preferences", *Quarterly Journal of Economics*.

Machina, M. (1995), "Non-Expected Utility and the Robustness of the Classical Insurance Paradigm," *Geneva Papers on Risk and Insurance Theory*.

Meyer, J. (1987), "Two-Moment Decision Models and Expected Utility Maximization," *American Economic Review*

Segal, U. and A. Spivak (1990), "First Order vs. Second Order Risk Aversion," *Journal of Economic Theory*.

Starmer, C. (2000), "Development in Non-Expected Utility Theory: The Hunt for a Descriptive Theory of Choice under Risk," *Journal of Economic Literature*.

Yaari, M. (1987), "The Dual Theory of Choice under Risk," *Econometrica*.

7. Asymmetric Information in Insurance Markets

Arnott, R. and J. Stiglitz (1988), "Randomization with Asymmetric Information," *Rand Journal of Economics*.

Chiappori, P.A. and B. Salanié (2000), "Testing for Asymmetric Information in Insurance Markets," *Journal of Political Economy*.

D'Arcy, S. and N. Doherty (1990), "Adverse Selection, Private Information and Lowballing in Insurance Markets," *Journal of Business*.

Dionne, G. and N. Doherty (1994), "Adverse Selection, Commitment and Renegotiation: Extension to and Evidence from Insurance Markets," *Journal of Political Economy*.

Engers, M. and L. Fernandez (1987), "Market Equilibrium with Hidden Knowledge and Self-Selection," *Econometrica*.

Holmström, B. (1979), "Moral Hazard and Observability," *Bell Journal of Economics*.

Ligon, J. and P. Thistle (2005), "The Formation of Mutual Insurers in Markets with Adverse Selection." *Journal of Business*

Miyazaki, H. (1977), "The Rat Race and Internal Labor Markets," *Bell Journal of Economics*.

Pauly, M. (1968), "The Economics of Moral Hazard," *American Economic Review*.

Pauly, M. (1974), "Overinsurance and Public Provision of Insurance," *Quarterly Journal of Economics*.

Puelz, R. and A. Snow (1994), "Evidence on Adverse Selection: Equilibrium Signalling and Cross Subsidization in the Insurance Market," *Journal of Political Economy*.

- Rothschild, M. and J. Stiglitz (1976), "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information," *Quarterly Journal of Economics*.
- Shavell, S. (1979), "On Moral Hazard and Insurance," *Quarterly Journal of Economics*.
- Stiglitz, J. (1977), "Monopoly, Non-Linear Pricing and Imperfect Information: The Insurance Market," *Review of Economic Studies*.
- Stiglitz, J. (1983), "Risk, Incentives and Insurance: The Pure Theory of Moral Hazard," *Geneva Papers on Risk and Insurance*.
- Wilson, C. (1977), "A Model of Insurance Markets with Asymmetric Information," *Journal of Economic Theory*.

8. Self-Protection and Alternative Risk Transfer

- Briys, E. and H. Schlesinger (1990), Risk-Aversion and the Propensities for Self-Insurance and Self-Protection," *Southern Economic Journal*, 5
- Doherty, N. (1997), "Innovations in Managing Catastrophe Risk," *Journal of Risk and Insurance*.
- Doherty, N. and H. Schlesinger (2002), "Insurance Contracts and Securitization," *Journal of Risk and Insurance*.
- Ehrlich, I. and G. Becker (1972), "Market Insurance, Self-Insurance and Self-Protection," *Journal of Political Economy*,
- Eeckhoudt, L. And G. Dionne (1985), "Self-Insurance, Self-Protection and Increased Risk-Aversion," *Economic Letters*
- Froot, K.A. (2001), "The Market for Catastrophe Risk: A Clinical Examination." *Journal of Financial Economics*.
- Froot, K.A., D. Scharfstein and J. Stein (1993), "Risk Management: Coordinating Investment and Financing Problems," *Journal of Finance*.
- Jaffee, D. and T. Russell (1997), "Catastrophe Insurance, Capital Markets and Uninsurable Risks," ,” *Journal of Risk and Insurance*.
- Jullien, B., B. Salanie and F. Salanie (1999), "Should More Risk Averse Agents Exert More Effort?" *Geneva Papers on Risk and Insurance Theory*.
- Menegatti, M. (2009), "Optimal Prevention and Prudence in a Two-period Model," *Mathematical Social Sciences*.

Students with disabilities are encouraged to register with the Office of Disability Services, 348-4285. Thereafter, you are invited to schedule appointments to see me during my office hours to discuss accommodations and other special needs.

The University of Alabama is committed to helping students to uphold the ethical standards of academic integrity in all areas of study. Students agree that their enrollment in this course allows the instructor the right to use electronic devices to help prevent plagiarism. All course materials are subject to submission to Turnitin.com for the purpose of detecting textual similarities. Turnitin.com will be used as a source document to help students avoid plagiarism in written documents.