

Financial Investments: Rationality, Irrationality, and Human Decision Making

Core 148: 9:00-10:20 AM T-TH
208 Persson Hall

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Course overview:

Students today face many challenges in understanding financial markets: complex economic models, rapidly changing institutions, a concern about unethical conduct, and a growing list of anomalies that are unexplained by traditional finance theory. In this course, students will critically assess the strengths and limitations of traditional economic models in understanding the major financial markets: stocks, bonds, and derivatives. Topics considered include how the capital market operates to allocate individual savings to the most efficient use, and how economic theory determines the market price of financial assets. Using historical data from the financial markets, it will be discovered that the traditional model does not explain the empirical world well. Types of human behavior, recognized in the field of psychology, will then be studied to see if they can contribute to our understanding of how financial markets really work. These behavioral models are introduced by conducting experiments using student subjects.

Traditional finance theory is based on the assumption that investors make decisions to maximize their end-of-period wealth, or in an intertemporal setting, to maximize the satisfaction they gain from lifetime consumption. We will refer to this assumption as “rational” behavior. This is not an assumption that *all* investors *always* act this way or never make mistakes, but that on average it is an accurate representation of actual behavior. This is the usual assumption that economists make, and in most cases it results in models that are consistent with factual data (which obviously result from far more complex behavior). We will define “irrational” behavior as behavior that results in sub-optimal investment results; i.e., decisions that do not maximize investors’ wealth or consumption. We will study this irrational behavior in three ways: analysis of market data, ongoing review of the popular press reporting of market events, and analysis of the student experiments.

The objectives of the course are:

1. To demonstrate how the scientific method can be applied to gain understanding of complex economic processes.
2. To teach students how to critically assess both the popular press and academic journals as they try to explain the financial markets.
3. To equip students with the tools to make better investment decisions in the future (at least to the extent that they will be aware of their limitations and human biases).

Text and Readings:

The primary textbook is: Bodie, Kane, and Marcus, *Essentials of Investments*, 4e, McGraw-Hill Irwin, 2001. This covers the material in sections 2-5 below. Shiller, R., (2000) *Irrational Exuberance*, Princeton University Press, (selected chapters) will be assigned in section 6. Selected journal articles will be assigned in sections 6-8.

Evaluation: Exams include a mid-term (20%) and final (25%). Other assignments include write-ups (3-5 pages) of two student-conducted experiments (10% each), write-up (3-5 pages) of the portfolio optimization lab exercise (10%), write-up (3-5 pages) of the alternate strategy back-test lab exercise (15%). Class participation is also considered (10%).

Course Outline and schedule: (numbers refer to chapters in the text; more detailed page assignments and guidance as to importance will be provided)

Week 1: section 1 – Course overview and demonstration of market for a financial asset.

Week 2: section 2 – Basics of financial markets and recent trends (1-5).

Week 3: section 3 – Portfolio optimization theory (6,7)

Weeks 4-5: section 4 – Asset pricing (10,11,13,14,16,17,18).

Weeks 5-6: section 5 – Market price with efficient (rational) markets (8,9).

Weeks 7-8: section 6 – Asset pricing anomalies and the role of market participants (Shiller).

Weeks 9-12: section 7. – Irrational behavior and market prices.

Weeks 13-14: section 8.—Investment strategies with irrational behavior assumption.