

Inefficient Markets

Business Institutions 394 – Professional Linkage Seminar

Fall 2020

Tuesday/Thursday 11:20am – 12:40pm

Instructor: Ryan Garino

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Office: Kellogg Global Hub, 4393

Classroom: Zoom

Office Hours: By appointment (available most Tues and Thurs 9-11am and 12:30-4pm), happy to do 1x1 zoom

TA: Ollie Morgan ollie.morgan@kellogg.northwestern.edu cell: 847-262-6090

Prerequisites

This course will be fast-paced and students are expected to have significant background in economics, statistics and finance. Yes, there will be math! But, no, you won't be expected to derive Black-Scholes.

Specific prerequisites are:

- ECON 201, Introductory Macro
- ECON 202, Introductory Micro
- STAT 210, Introductory Statistics (Many other statistics classes can substitute for STAT 210. See complete list on Business Institutions Website)
- BUS INST 304, Introductory Finance (Substitutes include IEMS 326, ECON 360-1 and KELLG_FF 310)

Course Description

This goal of this course is to expose driven, inquisitive students to real-life examples of inefficiency in the public financial markets and build up a framework for thinking about the drivers of these inefficiencies. Students will explore how hedge funds evaluate these opportunities and capitalize on them to drive returns for their investors. The course will help students understand the concept of arbitrage and the limits of arbitrage opportunities.

There will be a particular focus on asking why outsized returns exist in specific cases of market inefficiency. Students will be exposed to a myriad of potential root causes including counterparty risk, liquidity risk and investor segmentation. Through the course, students will learn how to price and evaluate a wide variety of financial instruments including depository receipts, credit default swaps, convertible bonds and distressed debt.

The aim of the course is to give students several examples of bona fide market inefficiency and give them the tools to assess (and potentially capitalize on) future market opportunities in real-time.

Required Textbook/Readings

Required Textbook: Pedersen, Lasse Heje. *Efficiently Inefficient: How Smart Money Invests and Market Prices Are Determined*. Princeton University Press, 2015.

Required Readings: Various academic papers, sell-side research and *Wall Street Journal*/other articles

Optional (But Awesome, Nonetheless) Readings

Swedroe, *The Quest for Alpha: The Holy Grail of Investing*

Lowenstein, *When Genius Failed: The Rise and Fall of Long-Term Capital Management*

Lewis, *The Big Short*

Graham, *The Intelligent Investor*

Duke, *Thinking in Bets*

Thorp, *Man for All Markets*

Hull, *Options, Futures and Other Derivatives*

Poundstone, *Fortune's Formula*

Swensen, *Pioneering Portfolio Management*

Academic Integrity

I am a crazy serious about this.

- You may work in groups and help one another out on your problem sets, but please turn in your own own set of solutions that represents your understanding and contribution
- For quizzes and the final exam, I expect there to be no communication between students and no use of your notes/outside resources
- For your paper, please cite your sources and make it abundantly clear what ideas are your own vs. someone else's

Course Requirements and Grading

1. **Class Participation (10% weighting)**. It is important that you read the background materials before class so that we can cover material in as much depth as possible. I have intentionally made the readings focused so they should be very manageable – it is my expectation that every student will complete the readings before class each week. Classroom comments and questions should demonstrate knowledge of the topic being discussed and facilitate learning for the entire class. High quality comments, questions and contributions will improve everyone's experience. While I encourage everyone to do their best to attend synchronously, if you cannot, please make an effort to set up a 1x1 Zoom with me -- your lack of synchronous attendance will not be counted against you.
2. **Problem Sets/Cases (20%)**. There will be 4 problem sets/cases assigned on course topics. These problem sets will generally be numerical examples of potential hedge fund investments. I have no issue with students working together on these problem sets, but each student will be responsible for understanding the material and will turn in an individual set of answers.

3. **Paper (20%)** Students will research an original paper on a topic relevant to financial market inefficiency. Sample topics include an in depth-look at a specific arbitrage opportunity and the reason it existed, the current opportunity set within financial markets, an exploration of a specific source of market inefficiency over time, or structural trends within the hedge fund industry. Papers are expected to be six to eight pages (double-spaced, additional pages may be added for charts and exhibits).

4. **Quizzes (30%)** There will be 3 quizzes covering material from class notes, discussions, problem sets and readings.

5. **Final Exam (20%)**

Guest Lecturers (subject to change)

Brad Couri Founder and Managing Partner, Chicago Fundamental

Andrew das Sarma Core Strategies, Jump Trading

Chris Raub Portfolio Strategist, PPM America

Summary Course Outline (subject to change)

Week 1 September 17

Topics: Course Organization

 Review of CAPM and Efficient Market Theory

 Creating a Framework for Sources of Market Inefficiency

Reading: [“Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk” \(1964\) \(Links to an external site.\)Links to an external site.](#)

[“Common Risk Factors in the Returns of Stocks and Bonds” \(1993\) \(Links to an external site.\)](#)[Links to an external site.](#)

[“Value and Momentum Everywhere” \(2013\) \(Links to an external site.\)](#)[Links to an external site.](#)

Efficiently Inefficient, Chapter 9

Week 2 September 22, September 24

Topics: Hedge Funds and the Quest for Alpha

Hedge Fund Strategy Overview

New Product Overview

Reading: *Efficiently Inefficient*, Chapters 1& 2

[“The ABCs of Hedge Funds: Alphas, Betas and Costs” \(2011\)](#) - click download full text pdf

[“Do Hedge Funds Deliver Alpha? A Bayesian and Bootstrap Analysis” \(2005\) \(Links to an external site.\)](#)[Links to an external site.](#)

[\(Links to an external site.\)](#)[Links to an external site.](#)

Week 3 September 29, October 1

Oct 1 **Answers to Problem Set #1 Due**

Topics: The Time Driver

ADRs and Risk Arbitrage

Closed End Funds

Reading: *Efficiently Inefficient*, Chapter 16

[“Characteristics of Risk and Return in Risk Arbitrage” \(2001\) \(Links to an external site.\)](#)[Links to an external site.](#)

[“Yes, Discounts on Closed End Funds are a Sentiment Index” \(1993\)](#)

Week 4 October 6, October 8

Oct 8 **Quiz #1**

Oct 8 **Guest lecturer: Brad Couri**

Topics: The Liquidity Driver
 Fixed Income Arbitrage
 CDS Index Membership

Reading: *Efficiently Inefficient*, Chapter 3

[“Liquidity as an Investment Style” \(2013\)](#)

[Citi-Credit-Derivatives-Primer.pdf](#)

Week 5 October 13, October 15

Oct 15 **Guest Lecturer: Andrew das Sarma**

Topic: The Technical Pressure and Cross-Holder Risk Drivers
 (Flash) Crashes
 Bond Basis

Reading: *Efficiently Inefficient*, Chapter 9 (focus = p 155-157)

["The Flash Crash: The Impact of High Frequency Trading on an Electronic Market" \(2011\)](#)

["The Basis Monster That Ate Wall Street" \(2009\)](#)

Week 6 October 20, October 22

Oct 20 **Answers to Problem Set #2 Due**

Oct 22 **Paper topic submitted**

Topic: The Human Emotion Driver

A Crash Course in Behavioral Economics

Value Investing

Reading: *Efficiently Inefficient*, Chapters 6 & 7

["Behavioral Economics" \(2000\) \(Links to an external site.\)Links to an external site.](#)

Week 7 October 27, October 29

Oct 27 **Guest Lecturer: Chris Raub**

Oct 29 **Quiz #2**

Topics: The Complexity and Investor Segmentation Drivers

Convertible Securities

Warrants

Reading: *Efficiently Inefficient*, Chapter 15
Case Study: Convertible Bonds of Countrywide Financial Corporation (PLEASE NOTE, YOU WILL HAVE TO PURCHASE THIS FROM STUDY.NET)

<http://new.study.net/remote/view/30147739>

Week 8 November 3, November 5

Nov 5 **Answers to Problem Set #3 Due**

Topics: Be Careful – What Looks Like Inefficiency Might Not Always Be So

 Counterparty Risk

 Borrow Constraints

 Tax/Regulatory Frictions

Reading: [“Limited Arbitrage in Equity Investments” \(2002\)](#)

 [CNBC Article - Negative Futures Prices \(2020\)](#)

Week 9 November 10, November 12

Topics: Activism and Making Your Own Luck

 CDS Shenanigans

 Tying It All Together: A Framework

Reading: [“The Real Effects of Hedge Fund Activism: Productivity, Asset Allocation and Labor Outcomes” \(2013\) \(Links to an external site.\)Links to an external site.](#)

[“Bill Ackman’s Allergan Insider-Trading Suit Doesn’t Look Bad” \(2018\) \(Links to an external site.\)Links to an external site.](#)

[“Blackstone May Do Its Cleverest CDS Trade Again” \(2017\) \(Links to an external site.\)](#)[Links to an external site.](#)

[“The Gross Truth About Hedge Fund Performance and Risk: The Impact of Incentive Fees” \(2007\) \(Links to an external site.\)](#)[Links to an external site.](#)

Week 10 November 17, November 19

Nov 17 **Quiz 3. **NEW DATE****

Nov 19 **Answers to Problem Set #4 Due ***NEW DATE*****

Wrap-Up/Q&A Session

Please read the following - a student from last year's class just sent this to me and it's an awesome summary of successful application of many of the concepts we discussed throughout the class: [Seth Klarman MIT Speech.pdf](#)

No class Thanksgiving week

Nov 23 - Optional Q&A during class time

Paper Due **Tuesday December 8, 11:59pm (I *strongly* encourage you to turn in earlier)**

Final Exam **Thursday December 3 12pm-2pm**