

# Econ 425: Financial Economics

UNC at Chapel Hill, Department of Economics

Fall 2018



## Instructor Information:

Mike Aguilar

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Office Hours: T,R 5-6pm

## Class Schedule:

T,R 11:00am-12:15pm Gardner Hall Rm 008

## Communication:

Assignments, announcements, grades, readings, and other information will be posted on sakai. The sakai site will be the primary method of communication for this course, so please check it frequently.

## Prerequisites:

Econ 420 (Intermediate Theory: Money, Income, and Employment)

Econ 410 (Intermediate Theory: Price and Distribution) with a grade of C or better

Econ 400 (Economic Statistics) with a grade of C or better

## Course Description:

A central theme underlies the course: How does a risk averse individual allocate their funds? Students begin by defining and measuring risk, making connections to their microeconomics training. They then develop and use asset pricing models to explore the interplay between risk and return. These pricing tools are then applied to several assets, including equities, fixed income, and foreign exchange. Finally, students use these tools to develop a mean-variance optimal portfolio allocation. Along the way, students are introduced to basic quantitative tools, and participate in myriad practical applications.

Course Materials:

**Recommended Texts:**

- *Investments* by Bodie, Kane and Marcus; McGraw Hill Publishing.
- *The Economics of Money, Banking, and Financial Markets* - by Mishkin; Pearson Publishing.
- *Modern Investment Theory* by Haugen; Prentice Hall.

**Recommended Periodicals:** Keeping abreast of the financial and macro news is essential for this course. Although not officially required, reading the The Wall Street Journal and/or the Economist is highly recommended.

**Software:** You are not required to purchase additional software for this course. However, many assignments require access to a program that will store and manipulate data. Excel is the usual candidate for such tasks. Other programs such as SAS, Matlab, Stata, etc.. also are acceptable.

**Code of Conduct:** The University Honor Code is in effect. In particular, this implies that all work submitted is your own. Moreover, I expect professional behavior at all times. For example, the non-academic use of personal electronic devices is prohibited.

**Tentative Course Outline:**

Week 1	<i>Introduction to Financial Markets &amp; Trading Platform</i> What are the financial markets? How are trades placed inside of our platform?
Weeks 2 -3	<i>Performance Measurement</i> What are the best practices for computing and describing returns?
Weeks 3-4	<i>Understanding the Risk / Return Tradeoff</i> What is risk? How measure? How do investors allocate in teh face of risk
Weeks 5-6	<i>Asset Allocation</i> Why is diversification useful? How do we construct Markowitz-style optimal portfolios?
Weeks 6-7	<i>Risk Free Asset Pricing</i> What is the price of an asset in the simple case of no risk?
Weeks 8-10	<i>Asset Market Equilibrium</i> How do the CAPM and APT models permit investors to price assets in the face of risk?
Weeks 11-14	<i>Asset Pricing</i> How do investors price Equities, Fixed Income, and Foreign Exchange?
Week 15	<i>Macro &amp; Markets</i> What is the interaction between the financial markets and the macroeconomy?

Grading	% of Course Grade	Date	Details & Policy
Final Exam	(20%)	12/14/17 12pm-3pm	Comprehensive exam. Missing the Final Exam without a valid excuse from the Dean will result in a zero exam score.
Midterm	(20%)	10/17/17	Missing the Midterm without an “excused” absence results in a zero score for this Test. If you miss the Midterm with an “excused” absence, the Final Exam will account for 40% of the course grade.
Homework	(35%)	TBD	There will be several homeworks throughout the semester. No late assignments will be accepted. No “make-ups” will be given. If you miss an assignment due to an “excused” absence, your Homework grade will be reweighted among the remaining homework assignments.
Macro-Strategy Portfolio		Semester-long, group portfolio management exercise.	
Report to CIO	(15%)	As per course calendar	A weekly summary of market, macro, and policy activity. Discuss how these events impacted your portfolio, and how you will position your portfolio in the coming week. Submitted electronically via email.
VC Roadshow	(10%)	TBD	Your goal is to acquire venture capital (VC) funding. Each group must prepare a thorough accounting of their team’s activity during the semester, present their outlook to the class, and turn in a full written report. Submitted electronically via email.

All team based exercises, including extra credit, are subject to a peer review process.

Students associated with Disability Services must contact me one week prior to each Test.

Excused Absences: Illness or participation in University sanctioned activities. Documentation from coach or doctor must be provided. You must fill out the “Excused Absence” form found on the course site, and turn it in to me as soon as possible.

Extra Credit Opportunities:

1. VC Roadshow: The team attracting the largest amount of funds will get 1.0pts added to the course grade for each team member. Other teams' extra credit will be pro-rated accordingly.
2. In-class exercises: There will be 4 in-class team exercises during the semester, consisting of 2 debates in the first half of the semester and 2 lightning rounds in the second half of the semester. Successful performance in the debates can earn up to 2pts of extra credit for each team member toward the Midterm Exam grade. In addition, successful performance in the lightning rounds can earn up to 2pts of extra credit for each team member toward the Final Exam grade.

Letter grades are computed from the total points earned during the semester and assigned based on the scale nearby. There is no maximum number of A's nor B's awarded. However, in previous courses 15% – 20% of my students have earned in the A range, 30% – 50% have earned in the B range, and 20% – 30% have earned in the C range. Although the grade distribution may change this semester, the past scores should give you a sense of my grading standards.

A	$x \geq 95\%$
A-	$90 \leq x < 95$
B+	$85 \leq x < 90$
B	$80 \leq x < 85$
B-	$75 \leq x < 80$
C+	$70 \leq x < 75$
C	$65 \leq x < 70$
C-	$60 \leq x < 65$
D+	$50 \leq x < 60$
D	$40 \leq x < 50$
F	$x < 40$

### **Macro-Strategy Portfolio Exercise:**

Welcome to Aguilar Macro-Strategy (AMS), a global macro hedge fund located here in Chapel Hill, NC. We are a “top-down” shop, meaning that we look to the macro-economy and policy environment to inform our trading decisions. You are the newest member of our fund family. Along with a few of your classmates, you will form a portfolio management team. Each team roughly will consist of 8-15 students.

Since our focus is “top-down”, the investable universe for each team is a sampling of macro-based ETF’s. I will make the list available to students during class. Each team’s mandate is to outperform the S&P500. Each team is seeded with \$1,000,000 at the opening bell TBD EST, and all positions must be cashed out by the close of trading TBD. All other information regarding trading platform, rules, and regulations will be made available in class and posted on sakai.

Report to CIO: Each team must submit a weekly report to me (the CIO of AMS), which contains four key elements: i) Week in Review: An overview of the markets, economy, and policy environment in the previous week. ii) Performance Summary and Holdings: Detail the performance of your portfolio during the previous week and since inception. Include simple metrics such as mean return and standard deviation relative to your benchmark. Also include a detailed accounting of the weights for each of your holdings. iii) Summary of Activity: justify each of your (non)trading decisions from a macro-perspective. Note: the decision to hold an asset requires as much justification as does a buy or sell action. iv) Outlook: Describe how you plan to position the portfolio for the coming week. [I expect weekly reports to be 5-10 pages in length]. Each week a group will present their report(s) to the class.

VC Roadshow: You are seeking to acquire funding from venture capital investors. Each team must give a 20-30 minute presentation on why you are deserving of their money. The presentation will be given on the last day of classes. At the culmination of the last day, “investors” will allocate their VC dollars to the fund(s) they feel most deserving. The teams will be awarded extra credit points in proportion to the funds they raise (maximum of 1.5 extra credit points to course grade). The presentations must be supplemented with a detailed report of the fund’s attributes, a semester in review, performance, a summary of activity, and outlook, as per the instructions detailed for the “Report to CIO” above. [I expect this VC Roadshow report to be 15 - 20 pages in length.]

The scores for the Macro-Strategy Portfolio Exercise will be subjected to a peer review process, wherein each student has the opportunity to evaluate their team members’ contributions during the semester. The professor will take these evaluations into consideration when compiling grades for the associated assignments.