

Financial Markets 金融市场, Fall 2020

Course Overview

This course provides an in-depth exploration of key financial markets through an empirically driven approach:

- **Goal:** The ultimate goal of the course is to help students develop a love and appreciation for the financial industry in general and the financial markets in particular. In which ways are financial markets important? How do financial practitioners help contribute to the broader society?
- **Coverage:** We will cover equity, fixed-income, currency, commodities and derivatives, focusing on the key risk factors of the respective markets and their relation to the broader macro-economic environment. Institutional knowledge as well as regulatory environment will also be covered in relation to the financial markets, as clear awareness of such issues helps students break the boundary of textbooks, and connect with the real world.
- **Approach:** Our approach is empirical in nature. We integrate finance models with financial data, with the help of statistical and econometric tools. Through this learning process, students are expected to gain strength not only in quantitative and analytical capabilities but also in economic insights and intuitions.

Course Materials

- **Required:** Slides and lecture notes in pdf format will be posted online.
- **Optional:** Bodie, Kane and Marcus, Investments, 11th edition or older, McGraw Hill.

Grading:

- **In Class:** 10% Class Participation and 20% In-Class Presentation.
- **Assignments:** 15% Group Projects, 2 out of 3; 15% Group Assignments, all three.
- **Final Exam:** 40% Scheduled on January 7, 2021.

Course Schedule (*Tentative and Subject to Change*)

Week 1: Markets, Models, and Data

- Monday:
 1. Financial Markets Amidst Covid-19.
 2. Financial Data and Empirical Estimations.
 3. Optimal Risk-Taking in Theory.
- Wednesday:
 1. Student Presentations: *China's Capital Markets for Global Investors*.
 2. **Due:** Group Assignment on *China's Capital Markets for Global Investors*.
 3. Modern Finance and its Impact to the Real World.
 4. Alpha, Beta, and the CAPM.

Week 2: Cross-Sectional Equity

- Monday:
 1. Student Presentations: *Performance Evaluation of China's Mutual Funds*.
 2. **Due:** Group Assignment on *Performance Evaluation of China's Mutual Funds*.
 3. Equity Quant Investing: Approach and Insight.
 4. Financial Models in Quant Investing: CAPM and Beyond.
- Wednesday:
 1. Student Presentations: *Equity Quant Investing in China*.
 2. Equity Quant Investing in Practice.
 3. International Equity Markets and Currency Carry Trade.

Week 3: Time-Series Equity and Option Pricing

- Monday:
 1. Student Presentations: *Quant Investing with Machine Learning*.
 2. **Due:** Group Project 1 on *Empirical Analysis of Returns: Alpha, Beta, and R2*.
 3. Predicting Stock Market Returns and Market Efficiency.
 4. Estimating Market Volatility.
- Wednesday:
 1. Student Presentations: *Velocity of Fear: Understanding the Fear Gauge*.

2. **Due:** Group Assignment on *Velocity of Fear: Understanding the Fear Gauge*.
3. Option Pricing and Stock Market Crashes.
4. Corporate Bonds and Credit Pricing.

Week 4: Fixed Income

- Monday:
 1. Student Presentations: *Option Pricing in China*.
 2. The Bond Math: Yield and Duration.
 3. The US Treasury Market and Its Monetary Policy.
- Wednesday:
 1. Student Presentations: *Monetary Policy in China*.
 2. **Due:** Group Project 2 on *Options*.
 3. Factors Influencing the Yield Curve.
 4. Interest Rate Swaps and OTC Derivatives.

Topic 5: China's Financial System and Institutions

- Monday:
 1. Student Presentations: *China's Bond Market as Safe Haven for Global Investors?*
 2. Risk Management for Financial Institutions.
 3. China's Financial System.
- Wednesday:
 1. Student Presentations: *Estimating the Financial Systemic Risk of Ant Group*
 2. **Due:** Group Project 3 on *Fixed Income*.
 3. China's Bond Market.
 4. China's Credit Market.
 5. China's Currency.

Topic 6: China's FinTech and Asset Management

- Monday:
 1. Student Presentations: *Corporate Defaults and Credit Pricing in China*.
 2. Portfolio Management in Theory.
 3. China's Asset Management Industry.
- Wednesday:

1. Student Presentations: *FinTech Platforms for Household Finance*.
2. Household Finance in Theory.
3. FinTech Platforms in China.