FIN-607

Empirical Asset Pricing

Goyal Amit

Cursus	Sem.	Type
Finance		Obl.

Language of teaching	English
Credits	3
Session	
Exam	Project report
Workload	90h
Hours	**28**
Lecture	28
Number of positions	

Frequency

Every year

Remark

If you would like to attend this course, please send an email to: edfi@epfl.ch to register

Summary

This class is designed to give you an understanding of the basics of empirical asset pricing. This means that we will learn how to test asset pricing models and apply them mostly to stock markets. We will see which theories fare well and which ones do not.

Content

This class is designed to give you an understanding of the basics of empirical asset pricing. This means that we will learn how to test asset pricing models and apply them mostly to stock markets. We will see which theories fare well and which ones do not. We will also learn about the cross-sectional patterns in stock returns. Lately, there is enhanced understanding amongst finance scholars of the dangers of data mining and we will review techniques to guard against too many empirical regularities. The flip side of the coin will be when we apply machine learning to discover even more patterns in the data (the class will not deal with techniques of machine learning; only their applications). Towards, the end we will move away from stocks to look at the cross-section of bonds and options and explore inter-linkages between these markets. Finally, we will explore the performance of various kinds of funds.
Concretely, we will cover the following topics:

1. Asset pricing tests
2. Cross-section of stock returns
3. GMM/SDF based tests
4. Consumption-/production-based models
5. Aggregate predictability/ test of conditional models
6. Multiple hypothesis testing / Machine learning
7. Stocks, bonds, and options
8. Performance of mutual funds, institutional funds, hedge funds

Keywords

Cross-section of returns, Stocks, Bonds, Options

Learning Prerequisites

Required courses

- You should have taken a PhD level class in asset pricing that covers the theory of asset pricing models.
- You should also have taken a course in econometrics at the master level. We will rarely do something

fancier than OLS. Nevertheless, the basics of regressions (all the associated assumptions, problems, solutions, etc.) should be hopefully second nature to you.
- You should also have some familiarity with programming. We will be working with data and, therefore, you should have the capability of downloading (large amounts) of data and analyze those. You can choose any programming language (SAS, Stata, Python, R, Matlab, etc.). In my experience, working with a few languages makes life easier than sticking to just one.

Learning Outcomes

By the end of the course, the student must be able to:

- understand how to test asset pricing theories

Assessment methods

There will be two projects counting for 40% each. The remaining 20% will be based on writing a referee report. Details on projects will be provided later.

Resources

Bibliography

The following books can serve as a background reference (although our class will rely mostly on papers):

1. John Y. Campbell, Andrew W. Lo, and Craig MacKinlay, 1997, The Econometrics of Financial Markets, Princeton University Press.
2. John Cochrane, 2005, Asset Pricing, Princeton University Press.
3. Turan G. Bali, Robert F. Engle, and Scott Murray, 2016, Empirical Asset Pricing: The Cross Section of Stock Returns, Wiley.
4. Wayne Ferson, 2019, Empirical Asset Pricing: Models and Methods, MIT Press.

Ressources en bibliothèque

- The Econometrics of Financial Markets / Campbell
- Empirical Asset Pricing: The Cross Section of Stock Returns / Bali
- Empirical Asset Pricing: Models and Methods / Ferson
- Asset Pricing / Cochrane