

Syllabus PhD Seminar in Asset Pricing Theory (Preliminary) Fall Semester 2007-2008

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1 Instructor

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2 Class Time

The class meets once per week for 15 weeks.

The class is on Tuesday from 2-5pm, with a 15 minute break around 3pm.

The first class is on Tuesday 09/04. This is a one-hour organizational meeting.

There is no class on Tuesday 11/20. The last class is on Tuesday 12/18.

The venue is KMEC, Conference Room 9-191.

3 Course Content

The class is a rigorous, quantitative, seminar course in asset pricing theory. Each class will familiarize you with the key insights in a current topic of research in asset pricing, and will show you recent work in the area. We have chosen to cover a broad range of active research so as to give you an overview of what people are working on. While you may not like all topics, the hope is that you will like some.

Prerequisites This course is for second and third-year Ph.D. students interested in financial economics. Exceptions are granted on an individual basis. Prior course work in macroeconomics, micro-economics, mathematics, and statistics at the first-year PhD level are assumed. Prior exposure to theoretical or empirical asset pricing (first year finance PhD course work) is a plus, but not a must.

4 Goals and Deliverables

Since this is a seminar class, students will present the papers. Each week there will be 3 papers. Typically, one (or two) of these papers will be *classics* in the literature and the other two (or one) will be more recent papers that push these classic ideas in a new and, in our opinion, exciting direction. Each paper will be presented by one student, and a group discussion will follow, in which all are expected to participate.

The class will help you develop several critical attributes to a successful thesis, and a successful academic career more generally:

- Structured thinking: the ability to summarize the essential ingredients of a paper in a concise way, and to put them in perspective (organize them in your mental library of ideas)
- Critical thinking: the ability to ask tough questions about the papers you read, to think about the desirability choices the authors made, and to isolate key strengths and weaknesses of papers
- Creativity: the ability to take an existing idea and explore how it can be pushed further, the ability to connect seemingly divorced ideas in order to create something truly new
- Presentation skills: the ability to expose a set of ideas in a clear, concise, and well-organized way

In order to help you develop these skills, there will be three deliverables for this class.

1. Assignments Each week, there will be an assignment that needs to be handed in at the *beginning* of class. Each assignment has the same basic structure. The first part of the assignment is a summary of the 3 papers assigned for that week.

- This summary must be a minimum of 1 page and a maximum of 2 pages, 11 pt font, 1.5 point line spacing, 1 inch margins top, bottom and sides.
- We are looking for an intelligent summary that adds value beyond the abstracts of the papers.
- One way to add value is to draw connections in the summary between the three papers (similarities and differences).
- Another way to add value is to formulate in your own words, and in a concise way the key insights of the papers.

The second part of the assignment is a critical assessment and directions for future research.

- This assessment must be a minimum of 1 page and a maximum of 2 pages, 11 pt font, 1.5 point line spacing, 1 inch margins top, bottom and sides.
- We are looking for a critical judgement of one or more of the papers. You can use the similarities and differences from your summary to discuss strengths and weaknesses of 1 or more of the papers.
- Think of yourself as the referee. Just like in a good referee report, try to make a few important points (highlight key strengths or weaknesses), rather than making a large number of small comments.
- In addition, we are looking for your evaluation of how this literature should proceed: If you were to write the next paper in this area, based on the three papers you read (and everything else you have learned), what would it be.
- In the part on future directions, try to be bold without being too vague. If you were to pursue this topic as a dissertation topic, what kind of question would be really worth thinking about?

Thus, the total length of the assignment is between 2 and 4 pages. There are a total of 14 assignments. You have two and only two free-bees that you may use for two emergencies (illness, urgent travel, ...). You will be evaluated on the basis of your best 12 assignments. No late assignments will be accepted. If your assignment is late, it will automatically count against your two free-bees. Obviously, this work is strictly individual (See honor code section below). It completely defeats the purpose to copy ideas from others, or to simply copy from the papers. You will be evaluated only on the value that you add.

2. Presentation Every class, there are 3 paper presentations, which will be assigned to students in the first week of class. The presentation should include both the setup and results of the paper, but also a discussion of these results.

- The presentation is 35 minutes.
- Use beamer, a latex-based slides package.
- Make the introduction short.
- Spend a good amount of time on the model setup and main results.
- Finish with an evaluation of the paper which should take about 15 minutes.
- Practise your talk aloud at home, and time it. Make adjustments!

Think of this as the NBER Asset Pricing conference. Time is kept strictly. You only have one chance to get it right. The more you practise the more you can say in the time allotted.

3. Participation Following the 35 minute presentation, there will be a general discussion about the paper. Since you have read the paper beforehand, and have prepared this discussion beforehand, you are expected to voice your opinion.

5 Assessment

Grades Grades will be based on assignments (60%), in-class presentations (20%), and in-class participation (20%).

Honor Code You are responsible for maintaining Stern's Honor Code which mandates zero tolerance for cheating and plagiarism. Violations of the honor code will be prosecuted with a minimum penalty of failure for the course, as required by code of conduct rules. If you become aware of any violations of the honor code you must take whatever steps are necessary to stop the violators. Per request of the dean, you must include a signed statement at the top of each problem set and exam, indicating that you adhere to the honor code. The statement is: *'I pledge my honor that I have not violated the Stern Honor Code in the completion of this exam/problem set.'*

6 Detailed Class Schedule

Below is a detailed schedule for each class. Required readings are indicated as RR, suggested readings as SR. Suggested reading may come in handy in preparation of your assignment, or later during dissertation work. It is important to read the required reading *before* coming to class.

- Sept 4. **Organizational meeting**

This will be a one-hour meeting where we give an overview of the course, explain the course requirements, and assign papers to each student for presentation.

- Sept 11. **Dynamic portfolio choice**

RR (in order of presentation):

1. Campbell and Viceira (1999)
2. Barberis (2000)
3. Xia (2001)

SR: Kandel and Stambaugh (1996), Kim and Omberg (1996), Balduzzi and Lynch (1999), Brandt (1999), Lynch (2001), Campbell and Viceira (2001), Brandt and Santa-Clara (2006), Cocco, Gomes, and Maenhout (2005), Lynch and Tan (2006), Koijen, Nijman, and Werker (2007)

- Sept 18. **Asset pricing methodology: the Campbell and the no-arbitrage frameworks**

RR (in order of presentation):

1. Campbell (1993)
2. Lustig and Van Nieuwerburgh (2007b)
3. Ang and Piazzesi (2003)

SR: Campbell and Shiller (1988a), Campbell (1991), Shiller (1995), Campbell (1996), Jagannathan and Wang (1996), Baxter and Jermann (1997), Campbell and Shiller (2003), Duffee (2005), Ang, Piazzesi, and Wei (2006), Lustig, Van Nieuwerburgh, and Verdelhan (2007), Gabaix (2007)

- **Sept 25. Return predictability and the present-value model**

RR (in order of presentation):

1. Campbell and Shiller (1988a)
2. Cochrane (2006)
3. Binsbergen and Koijen (2007)

SR: Campbell and Shiller (1988b), Fama and French (1988), Stambaugh (1999), Whitelaw (2000), Lettau and Ludvigson (2001), Boudoukh, Michaely, Richardson, and Roberts (2004), Boudoukh, Richardson, and Whitelaw (2005), Amihud, Hurvich, and Wang (2005), Lettau and Ludvigson (2005), Lettau and Van Nieuwerburgh (2007), Koijen and Van Nieuwerburgh (2007)

- **Oct 2. The long-run risk model**

RR (in order of presentation):

1. Bansal and Yaron (2004)
2. Bansal, Dittmar, and Kiku (2007)
3. Colacito and Croce (2005)

SR: Kreps and Porteus (1978), Epstein and Zin (1989), Epstein and Zin (1991), Duffie and Epstein (1992), Hansen, Heaton, and Li (2005), Bansal, Dittmar, and Lundblad (2005), Benzoni, Goldstein, and Collin-Dufresne (2005), Piazzesi and Schneider (2006), Bansal, Kiku, and Yaron (2006), Bansal, Gallant, and Tauchen (2007), Lustig, Van Nieuwerburgh, and Verdelhan (2007),

- **Oct 9. The habit model**

RR (in order of presentation):

1. Campbell and Cochrane (1999)
2. Santos and Veronesi (2004)
3. Polkovnichenko (2006)

SR: Abel (1990), Constantinides (1982), Chapman (1998), Chan and Kogan (2002), Wachter (2005), Wachter (2006), Verdelhan (2007), Lustig, Van Nieuwerburgh, and Verdelhan (2007)

- Oct 16. **Asset pricing in business cycle models**

RR (in order of presentation):

1. Jermann (1998)
2. Boldrin, Christiano, and Fisher (2001)
3. Papanikolaou (2007)

SR: Campbell (1999), Lettau and Uhlig (2000), Fisher (2006), Croce (2007)

- Oct 23. **Incomplete markets models and un-diversifiable labor income risk**

RR (in order of presentation):

1. Mankiw (1986)
2. Constantinides and Duffie (1996)
3. Krueger and Lustig (2005)

SR: Brav, Constantinides, and Geczy (2002), Heaton and Lucas (1996), Grossman and Shiller (1982), Cogley (2002), Storesletten, Telmer, and Yaron (2004b), Storesletten, Telmer, and Yaron (2004a)

- Oct 30. **Limited participation**

1. Basak and Cuoco (1998)
2. Guvenen (2003)
3. Chien, Cole, and Lustig (2007)

SR: Vissing-Jorgensen (2002), Allen and Gale (1994), Cuoco and Kaniel (2006), Shapiro (2002)

- Nov 6. **Limited commitment**

1. Kehoe and Levine (1993)
2. Alvarez and Jermann (2000)
3. Lustig and Van Nieuwerburgh (2007a)

SR: Krueger (1999), Kocherlakota (1996), Alvarez and Jermann (2001), Kehoe and Perri (2002), Lustig (2007), Lustig and Van Nieuwerburgh (2005), Lustig and Van Nieuwerburgh (2006b), Lustig and Van Nieuwerburgh (2006a)

- Nov 13. **Transaction costs and liquidity risk**

1. Vayanos (1998)
2. Acharya and Pedersen (2005)
3. Lynch and Tan (2007)

SR: Amihud (2002), Amihud and Medelson (1986), Chordia, Roll, and Subrahmanyam (2000), Constantinides (1986), Hasbrouck and Seppi (2001), He and Modest (1995), Pastor and Stambaugh (2003)

- Nov 27. **Solving heterogeneous-agent models**

1. Krusell and Smith (1997)
2. Gomes and Michaelides (2007)
3. Favilukis (2007)

SR: Lustig (2007), Lustig and Van Nieuwerburgh (2007a), Chien, Cole, and Lustig (2007)

- Dec 4. **Limits to arbitrage**

1. Shleifer and Vishny (1997)
2. Garleanu and Pedersen (2007)
3. Vayanos and Vila (2007)

SR: Long, Shleifer, Summers, and Waldman (1990), Long, Shleifer, Summers, and Waldman (1991), Gromb and Vayanos (2002), Kogan, Ross, Wang, and Westerfield (2006), Mitchell, Pulvino, and Stafford (2002), Coval and Stafford (2005), Gabaix, Krishnamurthy, and Vigneron (2006), Coval, Jurek, and Stafford (2007)

- Dec 11. **Bubbles and differences of opinion**

1. Scheinkman and Xiong (2003)
2. Abreu and Brunnermeier (2003)
3. Banerjee, Kaniel, and Kremer (2007)

SR: Harrison and Kreps (1979), Harris and Raviv (1993a), Brunnermeier (2001), Banerjee (2007), Hong and Stein (2003), Allen and Gorton (1993), Allen, Morris, and Postlewaite (1993), Harris and Raviv (1993b), Harrison and Kreps (1978), Miller (1977), Morris (1996)

- Dec 18. **Information and asset pricing**

1. Admati (1985)
2. Peng (2004)
3. Van Nieuwerburgh and Veldkamp (2007)

SR: Grossman and Stiglitz (1980), Verrecchia (1982), Admati and Pfleiderer (1986), Merton (1987), Admati and Pfleiderer (1990), Wang (1992), Sims (2003), Peress (2004), Luo (2005), Van Nieuwerburgh and Veldkamp (2006), Peress (2006)

7 Textbooks

There are no textbooks for this class, but the following are good general background textbooks for this class and for any asset pricing library:

- “Recursive Macroeconomic Theory” by L. Ljungqvist and T. Sargent, 2nd edition.
- “Asset Pricing” by J. Cochrane, 2nd edition.
- “Dynamic Asset Pricing Theory” by D. Duffie, 3rd edition.
- “Empirical Dynamic Asset Pricing” by K. Singleton, 1st edition.
- “The Econometrics of Financial Markets” by J. Campbell, A. Lo, and C. MacKinlay.
- “Numerical Methods in Economics” by K. Judd.

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