

**Venture Capital & the Finance of Innovation**  
**Wharton East/West ExecMBA Syllabus – March 2010**

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This class will focus on the principles related to the risk & return of venture capital, the valuation of high growth companies, and the capital structure specific to venture backed companies. To avoid overlap with Professor Raffi Amit's class with the same title, I will not be covering certain critical aspects of venture capital, such as management evaluation, due diligence, and portfolio company oversight. For a good overview of current trends in venture capital and the institutional details related to the funding process, please reference Professor Amit's materials.

We start by outlining how venture capital funds are organized, how and from whom they raise capital, and in what type of firms they typically invest. A good portion of this section will examine the risk / return profile of venture capital and whether venture capital "beats the market," whether it lowers risk of the limited partner's portfolio, and how the high uncertainty of growth firms should be priced.

The second section of the course will examine enterprise valuation and value drivers. Given the incredible uncertainty associated with high-growth companies, alternative methods such as key value driver models and comparable transactions must be employed to triangulate results. Special attention will be given to the valuation process for small, illiquid, high-growth companies versus mature companies. For instance, how do you bound reasonable estimates of revenue growth, margins, and capital productivity when little historical data is available?

The third section of the course will examine valuation techniques necessary to value complex securities associated with venture capital and high growth companies. Preferred stock held by venture capitalist has conversion features that resemble a combination of

debt and equity. Therefore, options models must be employed to determine their true economic (versus fully-diluted) value.

### **Textbook & Reader**

This course will use the following text: “Venture Capital and the Finance of Innovation”, by Andrew Metrick, 2006. A set of course notes will be provided on the first day of class. Please bring the course notes and a calculator to every class.

### **Class Sessions**

1. Venture Capital Organization Structure & Fund Performance
  - a. (3/5E, 3/11W) Raising private equity capital: LP Agreements (Note 1, Metrick 2)
  - b. (3/5E, 3/11W) Risk & Return: The LP’s perspective (Note 2, Metrick 3)
  - c. (3/19E, 3/13W) Risk & Return: The founder’s perspective (Note 3)
  - d. (3/19E, 3/13W) Measuring VC performance as an asset class (Note 4, Metrick 4)
  
2. Valuing the High Growth Enterprise
  - a. (4/16E, 4/9W) Screening & Analyzing High-Growth Opportunities (Note 5, Metrick 11)
  - b. (4/16E, 4/9W) Valuing High-Growth Companies using DCF (Note 6, Metrick 12)
  - c. (4/16E, 4/9W) Valuing High-Growth Companies using Multiples (Note 7, Metrick 12)
  
3. Venture Capital Securities & Imbedded Options
  - a. (4/17E, 4/10W) Capital structure of VC-backed companies (Note 8, Metrick 8 & 9)
  - b. (4/17E, 4/10W) Valuing VC preferred stock as a portfolio of options (Note 9, Metrick 14)
  
4. Final Exam (4/30E, 4/23W)

### **Practice Problems & Final Exam**

Based on feedback from previous classes, the course will rely solely on a final exam.

The final exam will be during the very last class. The final exam will be open note, open book.

To help you prepare, a set of practice problems and solutions will be available, but you are not required to turn your work in.

### **Teaching Assistant**

The teaching assistant for the course will be announced at the start of class. Please contact the TA directly if you have questions about the practice problems. If you have questions about the course notes, please reach out to me directly.