UNIVERSITY OF CALIFORNIA, DAVIS
GRADUATE SCHOOL OF MANAGEMENT

Venture Capital and the Finance of Innovation

Spring 2012	MGT 265	Professor
1302 Gallagher	Daytime MBA	Ayako Yasuda
T 12:10-3:00pm		3206 Gallagher Hall

Tel: 530-752-0775, Fax: 530-752-2924
Email: asyasuda@ucdavis.edu, Homepage: http://www.ayakoyasuda.com/
Office hours: By appointment. Please email suggested times. Questions can be asked via email as well.

This course will focus on the finance principles related to the risk & return of venture capital, the valuation of high growth companies, the capital structure specific to VC-backed companies, and investment decisions under (technological, business, or regulatory) uncertainty. The ideal audience for the course will be MBA students who are interested in VC/growth equity investments, and/or technology entrepreneurship, either at start-ups or within larger organizations. It is also useful for those pursuing alternative investments, valuation consulting, or corporate law. To avoid overlap with Professor Lowe's New Ventures class and Professor Hargadon's Business Development Clinic class, I will not be covering certain critical aspects of venture capital, such as screening, due diligence, and technology validation. For a good overview of current trends in venture capital and the institutional details related to the funding process, please reference Professor Lowe and Professor Hargadon's materials.

We start by outlining how venture capital funds are organized, how revenues and profits are split between venture capitalists and investors backing the funds, 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. A critical question is: How much of venture risk is beta risk vs. idiosyncratic risk?

The second section of the course will examine enterprise valuation. 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 for revenue growth, margins, and capital productivity when little historical data is available? Questions are also explored for venture capital in the international context. Here, we revisit the question of the risk / return relationship for international VC investments.

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 capitalists has conversion features that resemble a combination of debt and equity. Therefore, option-pricing models must be employed to determine their true economic (versus fully-diluted) value. Tools specifically developed for this segment of the book are used to facilitate learning complex features of VC term sheets and to enable visualization of how exit values are split between entrepreneurs and VCs.

The fourth section of the course will examine broader issues related to funding innovative projects, in which high degrees of uncertainty — technological, business/market-related, and regulatory — are inherent. A focus will be placed on conceptualizing and quantifying the value of delaying decisions when doing so may lead to better decision making, using real options framework.

READINGS

The required text for the course is **Venture Capital & the Finance of Innovation** (John Wiley and Sons), 2nd edition, by Andrew Metrick and Ayako Yasuda. A textpak consisting of cases (to be used in class and in assignments) will be available on study.net. Lecture notes will be made available on the course web page by the evening before the class.

EVALUATION

There will be an in-class midterm counting for 20%, and a final exam counting for 40% of the course grade. The final exam will cover the entire course. There will

also be 5 assignments counting for 30% of the course grade, and class participation will count for 10%.

For students who show an exceptional improvement in performance in the final exam compared to the midterm (either an increase of at least 20 percentiles in rankings or 20% in scores) the weights will be changed to 10% for the midterm and 50% for the final. To determine the final grade distribution, a numerical weighted average of the four components will be computed. If medical problems force you to miss an examination, please contact me *before* the exam.

STUDY TEAMS

The homework assignments are to be done in teams of three to four students. All members of the team will receive the same grade. Students are responsible for printing names of all students on the cover page of assignments.

ASSIGNMENTS

Each homework assignment will be evaluated on a 10-point scale. They will be used as learning tools for vocabulary and for practical working of concepts. **Please use no more than 3 pages of write-ups and 3 pages of attachments (tables, charts) for each assignment.** For questions requiring calculations, please explicitly write out and explain your calculations in your write-ups whenever possible. Doing this, rather than merely copying the final numbers from your spreadsheets, has two benefits. First, it will help you prepare for examinations, when you will need to rely only on calculators. Second, it will help me understand what you did and give you credit accordingly. In completing the assignments, you may not use any materials from previous offerings of the course.

TEACHING ASSISTANT

The teaching assistant for the course is T.J. Johnson (tajohnson@ucdavis.edu).

TENTATIVE COURSE SCHEDULE, READINGS AND DUE DATES
Please note that the schedule is approximate; some topics will take longer than a session and others will take a shorter time. If anybody has a problem meeting a due date because of religious holiday, please let me know as soon as possible. Extensions will be granted in such cases. VCFI refers to the textbook *Venture Capital and the Finance of Innovation*. In addition, handouts will be posted on the course web page as supplemental readings.

	Date	Topics	Reading/due date
1	Apr. 3 (T)	VC Organization Structure and Partnership Agreements with Investors (LPs)	VCFI Ch. 1 & 2
2	Apr. 17 (T)	VC as an Asset Class: Risk and Returns	VCFI Ch. 3, 4 & 7
3	Apr. 22 (Sun) 10am-1pm	The Best VCs / VC in the Global Economy Gallagher 1213 (recorded session)	VCFI Ch. 5 & 6
	Apr. 23 (M)	*TA Office Hours (6:00-7:30pm) @ TA office*	
	Apr. 24 (T)		**HW #1 due**
4	Apr. 24 (T)	Capital structure of VC-backed companies	VCFI Ch. 8 & 9 *Walnut case (read)*
	Apr. 30 (M)	*TA Office Hours (6:00-7:30pm) @ TA office*	
	May 1 (T)		**HW #2 due**
5	**May 1 (T)**	VC Method/ Valuing high-growth companies with DCF and multiples	VCFI Ch. 10-12
	May 7 (M)	*TA Office Hours (6:00-7:30pm) @ TA office*	
6	**May 8 (T)**	**In-class Midterm (12:10-1:25pm) Speaker Session (1:45-3:00pm)**	
	May 14 (M)	*TA Office Hours (6:00-7:30pm) @ TA office*	
	May 15 (T)		**HW #3 due**
7	May 15 (T)	Call option valuation / VC preferred stock valuation using option pricing	VCFI Ch. 13&14
8	May 22 (T)	Multiple VC Rounds / Participating Convertible Preferred Stock in VC	VCFI Ch. 15-17
	May 28 (M)	*TA Office Hours (6:00-7:30pm) @ TA office*	

	May 29 (T)		**HW #4 due**
9	May 29 (T)	R&D finance /Real option valuation in R&D	VCFI Ch. 19&21
10	Jun. 5 (T)	Wrap-up	
	Jun. 6 (W)	*TA Office Hours (3:00-4:30pm) @ TA office*	
	Jun. 7 (Th)		**HW #5 due**
	Jun. 11 (M)	*TA Office Hours (6:00-7:30pm) @ TA office*	
	Jun. 12 (T)	**Final Exam 12:10-3pm**	**1302 Gallagher**