

University of Pennsylvania - The Wharton School

Venture Capital and Private Equity

FNCE 250-001, MW 1:30, HH 360
Fall 2003

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Office Hours: Tuesdays 3:30 – 5:00 or by appointment. Please email suggested times.

Course Webcafe at <http://webcafe.wharton.upenn.edu/eRoom/fnce/VCPE>

Teaching Assistants:

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SUMMARY

The course surveys the private equity (PE) industry, with an emphasis on the valuation methods useful for leveraged buyout and venture capital investing. The primary audience for this course is finance majors interested in careers at private equity funds. The class meetings are split about equally between cases (usually on Tuesdays) and lectures (usually on Thursdays). There are six case memos, an LBO-modeling exercise, a midterm (10/20), and a take-home final (distributed on 12/11 and due on 12/15).

GOALS OF THE COURSE

After completing this course, students should understand deal structure and valuation for a broad range of private equity transactions. They should also know the current institutional and contractual practices in the private equity industry, and understand how these practices are driven by the particular information and incentive problems faced by the key players.

MATERIALS

There is no textbook for the course. All necessary are available in the coursepack. The cost of additional handouts distributed in class is not included in the cost of this coursepack and will be billed separately at the end of the semester. All spreadsheets and materials handed out in class (except copyright items) will be made available after class at the course's webcafe: <http://webcafe.wharton.upenn.edu/eRoom/fnce/VCPE>

FORMAT

Students will form into self-selected two- or three-person partnerships at the beginning of the semester. For every case, each partnership will designate one person as “managing partner” (MP); the MP will turn in a two-page report (plus up to three pages of supporting calculations) for the partnership. Details about the style and substance of these reports are given in the last part of this syllabus. All students are expected to participate in class discussion; MPs should prepare to be cold-called. If an MP has to miss class for some reason, then another partner must take his or her place in class discussion. Each student must serve as MP at least twice during the semester.

GRADING

There are four components to the grading:

Case Memos (30% of overall grade): two-page memos (plus up to three pages of supporting calculations), handed in by each partnership for each case. All teams that hand in a competent memo and have an MP prepared to speak in class will receive full credit for the case. Teams missing either of these elements will receive half credit. Teams missing both elements will receive no credit. I expect that most teams will receive full credit on all the cases. Some exceptional case memos will receive bonus credit. This will never exceed 5 percent of the teams on any case. There are six case memos which count 5% each.

LBO-Modeling Exercise (10% of overall grade): This assignment is designed to give everyone some practice with the basics of LBO modeling. Students may work in groups but everyone must turn in a separate spreadsheet. Due on September 29.

Midterm (30% of overall grade): October 20, 6:00 PM to 8:00 PM.

This written midterm will test you on material you need to know to succeed in PE job interviews. I will combine the type of questions asked in PE interviews with the course material covered through this point in the course. Typical interview questions asked of past Wharton students will be distributed beforehand. Students who miss this exam for any reason will have a make-up exam consisting of a mock interview with members of the teaching staff.

Take-home final (30% of overall grade): A report no longer than five pages (including supporting calculations), prepared and written individually (i.e., not by teams), containing a detailed case analysis. The exam will be distributed on 12/11 and due on 12/15.

SCHEDULE

I. Introduction

9/3 - Course Overview

9/8 - Lecture: Introduction to Private Equity

Reading: *The Private Equity Industry: An Overview*, Sections I-IV

9/10 – Lecture: The Returns to Private Equity Investing

Reading: *The Private Equity Industry: An Overview*, Sections V-VII

9/15 – Case: Accel VII

Reading: A Note on Private Equity Partnership Agreements
A Glossary of Key Terms and Conditions for Private Equity Investing

Due: Memo #1 and Partnership Agreements

9/17 – Lecture: Valuation I, DCF and Comparables

Reading: A Note on Valuation in Private Equity Settings

9/22 – Case: The Fojtasek Companies and Heritage Partners (Ch. 14)

Due: Memo #2

9/24 – Lecture: Valuation II, “The LBO Method”

9/29 – Case: Bain Capital and Domino’s Pizza

Due: LBO Modeling Exercise (each student must hand in separately)

10/1 – Lecture: Valuation III, Cross-Border Investing and Global Private Equity

Reading: A Note on Private Equity in Developing Countries

10/6 – Case: The Exxel Group

Due: Memo #3

10/8 – Lecture: Valuation IV, “The Venture Capital Method”

10/13 – NO CLASS, fall break

10/15 – Lecture: Term Sheets

Reading: A Note on Private Equity Securities

10/20 – NO CLASS, study for midterm ☹

10/20 – MIDTERM EXAM, 6 – 8PM, rooms to be announced.

10/22 – Lecture: Does VC add value?

10/27 – Guest speaker: Mitchell Hollin, WU’84
Principal, LLR Partners
Topic to be announced

10/29– Lecture: Valuation V, Introduction to Options and Warrants

11/3 – Case: BCI Growth

Due: Memo #4

11/5 – Lecture: Valuation VI, Convertible Preferred Stock

11/10 – Case: Walnut Ventures

Due: Memo #5

11/12 – Lecture: Valuation VII, Participating Convertible Preferred Stock

11/17 – Case: Metapath Software

Additional Reading: Securicor Wireless Systems [This case provides some background for Metapath.]

Due: Memo #6

11/19 – GUEST SPEAKER: Venture Capital, TBA

11/24 – Lecture: Distress Investing

Reading: Regal Cinemas case

11/26 – NO CLASS – Start Thanksgiving break a little early ☺

12/1 – Valuation VIII, IPOs and other Exits

12/3 – Lecture: Summary and Review: What have we learned?

Take-Home Final Exam: Distributed: Thursday, December 11th, 9 A.M.
(to be done individually) Due: Monday, December 15th, NOON

Study questions for class discussion and case memos

This document contains some suggested study questions for the cases covered in *Venture Capital and Private Equity*. These questions will be used as a framework for classroom discussion, but they are not an exhaustive list, and in some class meetings we may deviate far from the framework. Questions marked with a (*) require some quantitative analysis and/or investment recommendation; all memos must include specific answers to these questions. Beyond this requirement, the content of the case memos is left to your discretion, and there is no requirement (or suggestion) that you “answer” the other questions or restrict yourself to them. You should feel free to address any other issues that seem relevant. Your memos should not be longer than two pages (single-spaced), plus up to three pages of supporting calculations (e.g., printouts of spreadsheets and assumptions.) The memos should be well organized and easy to read.

There are a limited number of good cases on Venture Capital and Private Equity, and only a few new ones are produced each year. Thus, many cases remain constant from year to year. In such instances, some instructors will not publish any of their spreadsheets or presentations, lest these materials end up in the hands of future students. I have not chosen this path, because it seems like too large a sacrifice to learning. Instead, I want to stress that any reliance on such materials is a form of plagiarism and will be “prosecuted to the fullest extent of the law”. The vast majority of students are honest and this is the only policy that is fair to them. In order to further reassure the honest students that they will not be penalized in comparison with dishonest students, the grading system is designed so that all “good-faith” efforts on the case memos will result in full credit. Thus, we expect that most groups will be able to achieve full credit on the case portion of the overall grade.

Accel VII

September 15

For their seventh fund, a successful venture-capital firm is raising their “carried interest” to 30 percent from the industry standard of 20 percent. A limited partner in previous funds is thinking about whether they should invest in this new one.

Study questions for class discussion and Memo #1

(see spreadsheet, accel.xls)

- 1) What is the typical incentive structure in Private Equity Partnerships (PEPs)?
- 2) Why do you think we see this structure in PEPs?
- 3) How does Accel compare to other managers? Do you believe that there is an economic rationale for expecting continued success in the future?
- 4) What is Accel’s motivation for raising the carried interest? Do they have any other methods to solve these problems?
- 5) (*) What are the implications of the shift from a 20% carried interest and 2.5% annual management fee to a 30% carried interest and a 2.5% annual fee? In particular, what is the present value of Accel’s compensation and the IRR and present value to the limited partners under the different fee structures as a function of Accel’s gross returns? How much better does Accel have to be than the “typical” VC fund in order to justify the greater carry? See the spreadsheet accel.xls for “Question 5 assumptions”. These assumptions are slightly different than the exact structure described in the case for Accel VII. You should assume that 100% of the capital comes from the LPs – not just 99% as discussed in Exhibit 2.
- 6) (*) Redo the previous question, but now use the “Question 6 assumptions” from the “accel.xls” spreadsheet. The only change here is for assumption 5 (carried interest). Here you should assume as in page 7 of the case: Accel will "receive its carried interest on any distribution as long as the value of the Accel VII investments exceeded 125% of the invested capital." Use your judgment on how to interpret this rule into the calculations -- there are several reasonable approaches.

The Fojtasek Companies and Heritage Partners

September 22

A private-equity fund that specializes in buyouts of family businesses is considering a transaction in a building products company.

Study questions for class discussion and Memo #2

(see spreadsheet, fojtasek.xls)

- 1) What is Heritage's market niche in private equity investing?
- 2) What are the Fojtasek family's main objectives in this situation?
- 3) What are the details of each of the three possibilities that the family is considering – a buyout, a leveraged recapitalization, and a “Private IPO”?
- 4) What are the strengths and weaknesses of each transaction?
- 5) (*) Value Fojtasek under both the base and management projections. Use whatever valuation methods and assumptions that you feel are appropriate.
- 6) (*) Would you recommend that Heritage do the proposed transaction?
- 7) Would you recommend that the Fojtasek family take it?

The Exxel Group

October 6

An Argentine private equity group proposes to invest in a credit card processor. Determining a proper value for the company and structuring the transaction prove to be challenging.

Study questions for class discussion and Memo #3

(see spreadsheet, exxel.xls)

- 1) What is Exxel's market niche? How do they propose to add value?
- 2) How did Exxel identify the Argencard opportunity? How do you interpret the competition (or lack thereof) for this transaction?
- 3) What is the structure of Exxel's proposed transaction of BNL's stake in Argencard? What is the motivation for this structure?
- 4) (*) How reasonable is the proposed valuation? (Use whatever methods you believe are appropriate. Make assumptions (and support them) where necessary.) If you were Exxel, would you make the proposed transaction?
- 5) If you were another private equity investor considering participation in this transaction (through CCH), how would you evaluate the terms (as given in Exhibit 10)? Would you invest in CCH?
- 6) What do you think of MCI's possible involvement as an investor? Is it good for Exxel/CCH? Is it good for MCI?

BCI Growth III

November 3

A mezzanine fund is considering an investment in a waste-hauling company planning an industry consolidation.

Study questions for class discussion and Memo #4

(see spreadsheet, bci.xls)

- 1) What is mezzanine investing? Why isn't it done by banks, capital markets, or VCs?
- 2) What is BCI's market niche? How do they add value?
- 3) What are the typical motivations for an industry consolidation ("roll up")? Do you agree with CWS that the waste hauling industry in northern New England is ripe for a consolidation in the early 1990s?
- 4) What is CWS growth strategy and how do they intend to finance it? What are the details of their private placement offering?
- 5) (*) Use whatever methods you feel are appropriate to evaluate the transaction proposed in the private placement offering. (The pro forma projections in Exhibit 7 apply to this proposed transaction.) Do you agree with Remey that the proposed valuation of \$5.55 per share is "too high"?
- 6) (*) BCI's counterproposal (Exhibit 9) can be viewed as a below-market loan that is subsidized by warrants. Do you believe that the value of the warrants is sufficient to justify the reduced rate on the debt? (Try to get a quantitative answer here, even if it is approximate and requires some simplifying assumptions.) Should BCI do this transaction?

Walnut Venture Associates

November 10

A group of angel investors is considering an investment in a software company. The transaction has less upside than a typical VC deal, so the investors must structure and evaluate it carefully.

Study questions for class discussion and Memo #5

(there is no spreadsheet for this case)

- 1) How are investment “angels” different from venture capitalists?
- 2) Why has RBS approached an angel group for this round of financing?
- 3) What do you think of Walnut’s due diligence strategy and implementation?
- 4) (*) Given the transaction proposed in the term sheet, how would you calculate the “true” pre- and post-money valuation of RBS? How does your computation compare to the pre-money valuation numbers discussed by the principals in the case?
- 5) (*) Suppose that Walnut obtains detailed financials and performs a careful valuation of the entire RBS enterprise. For what valuation should they be willing to do this transaction? (You do not have to do a valuation – just say what valuation would be necessary to do the transaction proposed in the term sheet.)
- 6) If you were Bob O’Conner, what concerns would have with this transaction? Would you do the transaction on these terms?

Metapath Software

November 17

A software company must decide whether to do another round of private financing or to merge with another company. The structure of the financing transaction raises several issues.

Study questions for class discussion and Memo #6

(There is no spreadsheet for this case. For some extra background information on Metapath, see the case “Securicor Wireless Networks” in the coursepack.)

- 1) What is Metapath’s business? How has it been financed until now?
- 2) (*) The term sheet (Exhibit 2) gives the Series E investors participating preferred stock at \$6 per share. Hansen tried to negotiate the conversion feature away by offering “normal” convertible preferred at \$5.50 a share, but RSC declined. Should Hansen offer an even lower price? At what price should RSC accept instead of taking the participation option? (To answer these questions, you will need to make an assumption about the threshold value where Metapath would have an IPO. Pick some price for this or consider a range of prices. You can assume that the volatility of Metapath’s value is 40% per year, the expected time before liquidation is 5 years, the proposed valuation of \$87.75 million is “fair”, and the five-year interest rate is 6.21%.)
- 3) Given the competing offers from RSC (Exhibit 2) and CellTech (Exhibit 3), what should Hansen (and the Series A-D investors) do?

NOTES:

1. The case gives conflicting information about the pre-money valuation and about the size of the financing. The text of the case indicates a “pre-money valuation” of 76M (page 1) and a round size of \$11.75M (raised from \$10.75M). The term sheet (Exhibit 2) gives a pre-money valuation of \$75M (on 12.5M shares outstanding, fully diluted) and a round size of \$10.75M. According to the case author, the term sheet is old and was not updated to reflect some extra warrants paid to management that would raise the shares outstanding by about 160K and raise their pre-money valuation to about 76M. The round size was indeed 11.75M. I will work with 76M pre-money valuation and 11.75M round size in class.
2. For the purposes of your calculations, you should begin by ignoring the Series A and B redeemable preferred (by assuming that \$87.75M is the value above and beyond the RP), and to assume that that Series C and D has already converted. You can also ignore the dividends that might be earned by the preferred. These assumptions greatly simplify things in do not make much of a difference. After solving this simplified case, you should try to be more ambitious and drop some or all of these assumptions.

PARTNERSHIP AGREEMENTS

Due: September 15, 2003

Each student in the class must join one (and only one) partnership. Partnerships must have either two or three members. Partnerships may combine students from both sections of FNCE 750. *There will be no exceptions to these rules, and partnerships will not be allowed to be broken during the semester.* Please hand in one agreement per partnership along with your Case Memo #1. Do not join a partnership unless you are officially enrolled in the course. If you cannot find at least two members for your partnership, then you should fill in the name(s) of your incomplete partnership and still hand in the form along with Case Memo #1. Students who are not members of complete partnerships must stay after class on 9/15 and we will complete the partnerships. It is possible that some two-person partnerships would have to accept a third member from this group. Also, if a student drops the class, then his or her partnership may have to accept a newly enrolled member.

ACADEMIC HONESTY PLEDGE: By signing this document, you agree to abide by the rules of this class. This means that all assignments must reflect the work of your partnership and only your partnership. You may not consult spreadsheets from other classes or from previous versions of FNCE 250. You may not ask for help from anyone other than the teaching staff.

Name (Print)

Signature

Partner #1

Partner #2

Partner #3