Instructors: Leon Zhu
Class Meetings: Monday and Wednesday, 8:00-9:20am
Classroom: JKP 104
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Course Description
How does one go underneath financial statements to get a better handle on firm valuation?
Specifically:
• Which operational indicators best suggest future financial performance?
• How does one do operational due diligence?
• What are best practices in operational turnarounds?

These questions constitute key issues in what might be called “operations forensics.”
This course helps students confront questions like these in their future careers as:
• private equity investors
• analysts and analyst-facing CEOs and entrepreneurs
• management consultants

You will learn frameworks, analytical tools, industry language, and personalities. Some highlights:
• Take “inside-look” at the turnarounds (VM Hospital) and value investing (Berkshire Hathaway)
• Take a broad look—e.g., ABRY feels deceived into investing in F+B. Ethical, legal issues, etc.
• Advance valuation skills based on examining operations (was Amazon on brink of bankruptcy?)
• Sharpen ability to justify investment recommendations, using fast-paced case discussions

Pre-requisites
No formal requirement, but if you are not a second-year MBA, please read chapters 5 (Link between Operations and Finance) and 10 (Lean Operations and the Toyota Production System) in http://cachon-terwiesch.net/2e and financial concepts in http://www.stocklogic.com/samples/IFS.pdf
Relationship with other courses
Most courses in finance and accounting focus on information in financial statements, but we will focus on operational levers. There is a small overlap with the “analysis of operation” section of GSBA 518 Accounting Control Systems. Given this is an operations course, so we will not focus on finance or accounting issues such as valuation, except the connection from operations to these topics.

Textbook
The required textbook for this course is: Richard Kum-yew Lai, *MIT Press 2011: Operations Forensics: How to Examine a Company’s Operations to ‘Kick its Tires and Tune Up its Engine’*. Also required is the case booklet from the USC bookstore.

Format
40% lecture, 40% case studies, with 20% outside speaker and student presentations. We will meet twice a week with 1.5 hour class.

Grading
The course grade, which will be curved, is based on 10% class contributions, 30% individual case analysis, 20% midterm, and 40% group project.

1) 10% on class contributions; I count mainly your examples and elaborations of the lecture material.

2) 30% on analysis of two cases; Individual effort expected.

Case analysis is due by 9 pm day before class before the class discussion through Turnitin on Blackboard (I want you to get some sleep). Case questions are suggested only as starting points. Premium is on analytical soundness and where appropriate, estimates and quantification. You are encouraged to submit up to 3 cases, but I take only the best two. Late assignments, for any reason, will be read but will score zero points. This mechanism is designed to accommodate valid reasons that might clash with class requirements (illness, job interviews, events concerning loved ones, etc.). Expect to write around 3 to 8 pages of text (12 point font, 1.5 line spacing, 1 inch margins all round), and 0 to 4 pages of exhibits. Entire submission must be in only one file.

3) 20% on midterm.

4) 40% on group project.

Group project is due by 9pm April 20 through Turnitin on Blackboard. Each group ideally has 4 to 5 members. Expect to write 20-30 pages double-spaced, excluding exhibits. Topic fairly open; examples:

a) Undertake due diligence on a doughnut store on Walnut Street

b) Modify the “Altman Z score” to predict not financial bankruptcy, but technological disruptions
c) Beer and Nohria wrote an HBS paper distinguishing “E” and “O” turnarounds. Use their criteria to codify turnarounds based on newspaper reports, and run a regression to see which types are more likely to succeed.

Grading criteria:

- Well-motivated question
- Data-driven analysis.
- Principle-driven analysis. Since this is an operations management course, by “principle,” I mean your favorites like linear programming, Little’s Law, the queuing formula, the customer throughput loss formula, and the newsvendor formula, etc.
- Creativity—e.g., dig into trash bins for data (might need permission; don’t do anything illegal).
- 15-minute presentation in class on last day.

Proposal due mid-quarter, not graded. One page to include: (1) question and its motivation, (2) data to be gathered, (3) analyses to be undertaken. I will provide assistance—e.g., what you could read to refine the project.

To facilitate learning, we will make the group reports available to all students.

**Notice on Academic Integrity**
The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student’s work as unacceptable and assign a failing mark on the paper. There may be additional penalties, including failing the course, in accordance to the university policies, as listed in the SCampus.

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**For Students with Disabilities**

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your instructor as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.- 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Course Schedule**

This schedule may be modified to accommodate outside speakers. The chapters refer to those in the text, “Operations Forensics.” This syllabus is an invitation to students to engage in an exciting and interactive study of operations performance analysis. The learning environment will be collaborative and supportive; we will learn from one another both in and out of the classroom. To that end, modifications to this syllabus might be warranted as determined by the instructors as we assess the learning needs of this particular class of students.

**Introduction** (chapters 1, 2)

Week 1: Introduction

**Indicators of (Mis)valuation** (chapter 3, 4)

Week 2: Case: The Case of Unidentified Industries.
Week 3: Case: David Berman.

**Indicators of disruption and distress** (chapter 5, 6)

Week 4: Case: Encyclopedia Britannica.
Week 5: Case: Amazon-the Brink of Bankruptcy.

**Valuing processes and capacities** (chapter 7)

Week 6: Case: Virginia Mason Hospital.
Week 7: Case: Valhalla Partners Due Diligence.

Week 8: Midterm

**Valuing product mix and customer base** (chapter 8, 9)

Week 9: Case: Pilgrim Bank (A).
Week 10: Case: **Pilgrim Bank (B)**.

*Valuing intangibles: growth, supply chain partners, options, risks* (chapter 10,11)

Week 11: Case: **Warren Buffet 2005**.
Week 12: Case: **Discovering the Future (Merck)**.

*Turning around purchasing and production* (chapter 12,13)

Week 13: Case: **Solo Cup in 2007**
Week 14: Case: **ABRY Partners**.
Week 15: **FINAL - Group Project Presentation**