



Marshall
School of Business

DSO-599: Operations Forensics (1.5 units) Spring 2016

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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
- line managers, including those of not-for-profits, such as some hospitals.

Course Learning Goal

You will learn frameworks, analytical tools, industry language, and personalities. Some highlights:

- **Take “inside look”** at the performance assessment (Virginia Mason Medical Center) and value investing (David Berman)
- **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

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 that this is an

operations course, we will not focus on finance or accounting issues such as valuation, except the connection from operations to these topics.

Textbook

Richard Lai, *Operations Forensics: Business Performance Analysis Using Operations Measures and Tools*. MIT Press, 2013. ISBN: 9780262018661.

Also required is the case booklet from the USC bookstore.

Supplementary Reference Books

Gerard Cachon and Christian Terwiesch, *Matching Supply with Demand: An Introduction to Operations Management*. 3rd Edition, McGraw-Hill Education, 2012. ISBN 9780073525204

Jan A. Van Mieghem, *Operations Strategy: Practices and Principles*. 2nd Edition. Dynamic Ideas, 2014. ISBN: 9780989910866.

David Einhorn, *Fooling Some of the People All of the Time, A Long Short (and Now Complete) Story, Updated with New Epilogue*. Wiley, 2010. ISBN: 9780470481547.

Assignments and Grading Detail

The course grade, which will be curved, is based on 10% class contributions, 50% individual case analysis, and 40% team project. All assignments are due by 9 pm day before class through Turnitin on Blackboard (I want you to get some sleep).

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

2) 50% on case analysis; Individual effort expected.

i) 20% on discretionary case (choosing one case among David Berman, ABRY Partners and F+W Publications, and Virginia Mason Medical Center).

Expect to write around 3 to 6 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.

ii) 30% on Pilgrim Bank (A): Customer Profitability

Expect to write around 4 to 8 pages of text (12-point font, 1.5 line spacing, 1-inch margins all round), and 0 to 6 pages of exhibits.

3) 40% on team project.

Each team 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 donut store on Walnut Street

b) Modify the "Altman Z-score" to predict technological disruptions instead of bankruptcy

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).
- 10-minute presentation in class on the 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 team reports available to all students.

MARSHALL GUIDELINES

For Students with Disabilities

Any student requesting academic accommodations based on 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.

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. When 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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Course Schedule

The chapters refer to those in the text, "Operations Forensics." Please read the case and be prepared for the discussion before coming to the class. 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.

<u>Session</u>	<u>Date</u>	<u>Topics</u>	<u>Assignments due 9 pm the night before</u>
1	M 1/11	Introduction to Operations Performance Analysis	
2	W 1/13	What Financial Statements May or May Not Reveal	
M 1/18		Martin Luther King Day	
3	W 1/20	Indicators of Accounting Performance	
4	M 1/25	Case: David Berman	(Optional) Report Due 9 pm 1/24
5	W 1/27	Case: ABRY Partners and F+W Publications	(Optional) Report Due 9 pm 1/26
6	M 2/1	Assessing the Customer Base	
7	W 2/3	Case: Pilgrim Bank (A): Customer Profitability	Required Report Due 9 pm 2/2
8	M 2/8	Guest Speaker	Team Proposal Due 9 pm 2/7
9	W 2/10	Linking Performance and Balanced Scorecard	
M 2/15		Presidents' Day	
10	W 2/17	Various Aspects of Turning Around	
11	M 2/22	Case: Virginia Mason Medical Center	(Optional) Report Due 9 pm 2/21
12	W 2/24	Final Team Presentation	Team Report Due 9 pm 2/23

Lunches with the Professor

I enjoy getting to know students better. Not mandatory. Sign up for (free!) meals with me. Preference to those who have not met with me before.

Course Outline

Session 1 – 1/11 (Monday) Introduction to Operations Forensics

Question: What is Operations Forensics?

Reading: SLG Ratio Master, *Interpreting Financial Statements*, 2000 (Posted on Blackboard)

Module 1: Operational Indicators (chapters 2 - 4)

Session 2 – 1/13 (Wednesday) What Financial Statements May or May Not Reveal

Question: How to infer business models and customer types from the financial statements?

Reading: The Case of Unidentified Industries - 2013 (in Course Reader)

Session 3 – 1/20 (Wednesday) Indicators of Accounting Performance

Question: What are the indicators of current and future performance? What are ROA trees?

Reading: Chapter 6-Link between Operations and Finance, *Matching Supply with Demand*

Session 4 – 1/25 (Monday) Case: David Berman

Question: What is David Berman's business model? What are the strengths and weaknesses?

Reading: Schlosser, King of the Retail Jungle, *Fortune*, 2005

Module 2: Operational Due Diligence (chapters 7 - 9)

Session 5 – 1/27 (Wednesday) Case: ABRY Partners and F+W Publications

Question: Will you advise ABRY to file the lawsuit? Was ABRY defrauded?

Reading: Goodson, Read a Plant – Fast, *Harvard Business Review (HBR)*, 2002

Reading: Cullinan, Le Roux, and Weddigen, When to Walk Away from a Deal, *HBR*, 2004

Session 6 – 2/1 (Monday) Assessing the Customer Base

Question: What should due diligence seek? How to measure customer profitability?

Reading: Kaplan, When to Drop an Unprofitable Customer, *HBR*, 2012

Session 7 – 2/3 (Wednesday) Case: Pilgrim Bank (A): Customer Profitability

Question: How do retail banks make money? How profit varies across customers?

Reading: Mittal, Sarkees, and Murshed, The Right Way to Manage Unprofitable Customers, *HBR*, 2008

Session 8 – 2/8 (Monday) Guest Speaker

Module 3: Operational Turnarounds (chapters 12 - 15)

Session 9 – 2/10 (Wednesday) Linking Performance and Balanced Scorecard

Question: So we've invested. What to consider when forming a new strategic plan?

Reading: Kaplan and Norton, The Balanced Scorecard: Measures That Drive Performance, *HBR*, 1992

Reading: -----, Putting the Balanced Scorecard to Work, *HBR*, 1993

Reading: -----, Using the Balanced Scorecard as a Strategic Management System, *HBR*, 1996

Reading: -----, Having Trouble with Your Strategy? Then Map It, *HBR*, 2000

Reading: -----, Measuring the Strategic Readiness of Intangible Assets, *HBR*, 2004

Reading: Texas Eastman Co. (in Course Reader)

Session 10 – 2/17 (Wednesday) Various Aspects of Turning Around

Question: So we've invested. How to turn around the situation?

Reading: Hammer, The Superefficient Company, *HBR*, 2001

Reading: -----, The Process Audit, *HBR*, 2007

Reading: Areva T&D (in Course Reader)

Session 11 – 2/22 (Monday) Case: Virginia Mason Medical Center (Abridged)

Question: What is Gary trying to achieve at Virginia Mason? How does TPS fit into the strategy?

Reading: Beer and Nohria, Cracking the Code of Change, *HBR*, 2000

Reading: Spear, Fixing Health Care from the Inside, Today, *HBR*, 2005

Session 12 – 2/24 (Wednesday) Final Team Presentation