

**MBA 296.3: Healthcare Financing**  
Spring 2013, Thursdays 2pm – 4pm, Cheit Hall 320

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Lecturer  
Office Hours: By Appointment

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**Prerequisites**

Data and Decisions or Equivalent, Introduction to Finance or Equivalent and Healthcare in the 21st Century; or instructor permission

**Purpose**

The purpose of this course is to provide a foundational understanding of the financial challenges being faced by executives in the healthcare system and how the application of quantitative methods can inform an executive's strategic response to those challenges.

**Objectives**

This course is designed to provide students with:

- an understanding of the financial structure of the U.S. healthcare system and the interdependencies of the major healthcare sectors
- an understanding of how analytical methods are being applied to healthcare specific situations
- the ability to interpret the outputs from various analytical methods and apply them to decision making within healthcare institutions
- an understanding of selected policy issues which are playing out into today's healthcare industry
- preparation to become effective leaders at healthcare organizations

**Overview**

The course is built around nine cases which illustrate specific challenges and demonstrate how analytical methods can inform a manager's response. We will make use of the tools from finance, economics, statistics and strategy to understand a manager's options and to inform our recommendations about how to best proceed.

We will begin most class sessions by discussing the case to help us frame specific problems. During the course we will explore the following decisions / situations:

*Life Science:*

- Estimate the value of an early stage company
- Analyze the value of a licensing deal structure and alignment with company objectives
- Estimate the value of a publicly traded biotech company
- Evaluate the cost effectiveness of a new medical intervention
- Evaluate optimal drug pricing and packaging under different approaches

*Payer / Provider:*

- Analyze the trade-offs between managing and owning risk in health insurance
- Explore the design implications of a high-performance health plan network
- Determine the performance of an Emergency Room and identify improvement opportunities
- Estimate the impact of lower Medicare hospital reimbursement on commercial insurance rates

## Participation

The course is structured to be highly interactive as we explore different topics related to healthcare financing. Given your unique backgrounds each person will bring a different perspective to the class with varying degrees of experience in the topics we will address. You are not expected to be an expert in any of the topics but you are expected to have read the required materials and come to class with a perspective. Cold calling will be used to enrich our discussion and provide the class with an opportunity to leverage your preparation and past experiences. Students unprepared for class discussions will be docked participation points.

As healthcare may be a new industry for many of you please:

- a) Ask in class for clarification of terms / concepts which may be new
- b) Leverage the collective wisdom of your classmates
- c) Utilize the supplemental readings and optional textbook for additional background

Our discussions will be spirited and fun as we explore potential solutions and pitfalls to the challenges faced.

No laptops, cell phones, ipads etc. are to be used during the class.

## Attendance

Active participation requires active attendance. Students missing more than one class will lose participation points. A sign-in sheet will be used at the start of every class to track attendance. Please make every effort to attend outside speaker dates.

## Materials

All cases and required readings will be posted to study.net. The course can be added by going to your study.net account and using the password "bears". Lecture slide handouts will be provided in class and posted to study.net after each class.

An optional text book titled: Health Economics and Financing 4<sup>th</sup> Edition is available for purchase and one copy can be borrowed from the instructor if needed between class sessions. This text provides a detailed background on how each sector is financed and the processes that connect the sectors and will be useful for those that are not as familiar with how healthcare operates. Chapters 3-6, 8, 11, 12 provide the most relevant background context for our discussion.

In addition your textbook from core finance titled: "Corporate Finance", 2nd edition, by Jonathan Berk and Peter DeMarzo, published by Prentice Hall, 2010 provides a useful refresher on some of the finance methods we will utilize during the course. Chapters 7, 9, 19 and 22 provide background on the quantitative methods that will be applied during the course.

## Course Grade:

Students' grades will be based on the following inputs:

Class Participation	30%
Case Write-Ups	30%
Class Presentation	10%

Final Paper	30%
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Based on Haas School of Business policy, the mean GPA of the class shall not exceed 3.5 for an elective. <http://www.haas.berkeley.edu/MBA/academics/academic/grading-policy.html>

**Case Write-Ups**

Students should assemble in groups of two to form a case team. Each team will be responsible for submitting write-ups for seven of the nine cases that will be explored. The write-ups will be short and limited to two pages in length (not including exhibits) and some analysis will be required. 3 – 4 questions will be posted with each case one week before the case is discussed in class. For some of the cases templates will be provided to facilitate the analysis and standardize your responses. Case write-ups are due at the start of class before the case discussion. Late write-ups will not be accepted. Cases will be graded on 1 – 10 scale based on the completeness of the analysis and the depth of responses to the provided questions.

Note: Students are expected to have read and prepared for each case discussion even if a write-up is not being submitted.

**Final Paper and Class Presentation:**

At the conclusion of the course students will submit a term paper on a financial, strategic or policy related issue faced by one of the health sectors of your choosing. You may pick any topic that is important to you though it should be related to one of the areas discussed in the class. Groups of up to three students may form to co-author the papers.

For the paper you should focus on a single company (e.g. Blue Shield of California), product (e.g. Lipitor), or service (e.g. Hospital Transplant Services). The paper should employ quantitative analysis based on one or more of the analytical methods explored during the course. You may use pre-existing data sets of which potential options will be provided or you can generate your own data for analysis (e.g. develop an epidemiologic forecast based on documented assumptions). During the semester we will utilize multiple data sets during our case analyses which can be repurposed if desired.

On March 21<sup>st</sup>, approximately a month and a half before the paper is due, you will be required to submit an abstract of your proposed paper. The abstract should include your proposed team, the problem you will be addressing, the sources of data you expect to use, and what analyses you will be performing. Feedback on the proposed topic will be provided when you return from spring break and an opportunity to discuss it with the instructor will be available.

The final paper should provide a clear understanding of the problem being faced, an analysis of the problem to identify potential options and your recommended solution. While there is no specific requirement on the length of the paper good papers generally range from 10 – 15 pages. Good papers have been written with fewer words and bad papers with more. Use it as a guide not a rule.

In addition, your team will be asked to present a summary of your paper and engage the class in a discussion of the topic during the last two weeks of the course. You will have 20 – 30 minutes to present your topic and to facilitate a class discussion.

Additional details on the final paper and class presentation including a recommended outline will be provided during the semester.

Date	Topics	Readings
<b>Session 1</b> January 24	<ul style="list-style-type: none"> <li>▪ <b>Course overview, requirements and expectations</b></li> <li>▪ <b>The Healthcare finance landscape</b> <ul style="list-style-type: none"> <li>○ How is healthcare financed and how is it changing?</li> <li>○ Investment trends</li> <li>○ Key themes to be explored</li> <li>○ Sector overviews</li> </ul> </li> </ul>	<p><b>Supplemental Readings:</b></p> <p>Healthcare: Products &amp; Supplies. Phillip M. Seligman, August 9, 2012, Standard &amp; Poor's Industry Surveys</p> <p>Healthcare: Pharmaceuticals. Herman Saftlas, May 2012, Standard &amp; Poor's Industry Surveys</p> <p>Healthcare: Managed Care. Phillip M. Seligman, November 1, 2012, Standard &amp; Poor's Industry Surveys</p>
<b>Session 2</b> January 31	<ul style="list-style-type: none"> <li>▪ <b>Valuing health innovation overview</b> <ul style="list-style-type: none"> <li>○ Refresh of core methods               <ul style="list-style-type: none"> <li>▪ Venture Capital Valuation</li> <li>▪ Discounted Cash Flow</li> <li>▪ Real-Options Valuation</li> <li>▪ ENPV &amp; Decision Tree Analysis</li> </ul> </li> <li>○ Application to the healthcare industry</li> </ul> </li> </ul>	<p><b>Required Readings:</b></p> <p>Villiger, R. et al. "The Catch-22 of DCF" Journal of Applied Corporate Finance 2005</p> <p>Villiger, R. et al. "Getting Real About Valuations in Biotech" Nature Biotechnology 2005</p> <p><b>Supplemental Readings:</b></p> <p>Harrington, Scott B. "Cost of Capital for Pharmaceutical, Biotechnology, and Medical Device Firms" Wharton University. 2009  <a href="http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID1513449_code497917.pdf?abstractid=1512938&amp;mirid=1">http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID1513449_code497917.pdf?abstractid=1512938&amp;mirid=1</a></p>
<b>Session 3</b> February 7	<ul style="list-style-type: none"> <li>▪ <b>Valuing early stage companies and assets</b> <ul style="list-style-type: none"> <li>○ Pipeline Analysis</li> <li>○ ENPV of a drug in development</li> <li>○ Real-Options</li> <li>○ Decision-tree analysis</li> </ul> </li> </ul>	<p>Case: Chaplinsky, Susan. "InFusion INC." 2009</p> <p><b>Supplemental Readings:</b></p> <p>Booth, Bruce L et al. "In defense of life sciences venture investing" Nature Biotechnology 2011</p> <p>Trends in Terms of U.S. Life Science Venture Financings, Fenwick &amp; West LLP 2012  <a href="http://fenwick.com/FenwickDocuments/2012_LS_Survey_H1.pdf">http://fenwick.com/FenwickDocuments/2012_LS_Survey_H1.pdf</a></p>
<b>Session 4</b> February 14	<ul style="list-style-type: none"> <li>▪ <b>Valuing revenue producing companies</b> <ul style="list-style-type: none"> <li>○ Pipeline Valuation</li> <li>○ M&amp;A Analysis &amp; Modeling</li> </ul> </li> </ul>	<p>Case: "Did BMS overpay for Amylin?" 2012</p> <p><b>Supplemental Readings:</b></p> <p>Continued Rebound: Trends in Life Science M&amp;A, Silicon Valley Bank Research Brief 2012  <a href="http://www.svb.com/uploadedFiles/Blogs/10079/continued_rebound.pdf">http://www.svb.com/uploadedFiles/Blogs/10079/continued_rebound.pdf</a></p>
<b>Session 5</b> February 28	<ul style="list-style-type: none"> <li>▪ <b>Licensing and partnering for value creation</b> <ul style="list-style-type: none"> <li>○ Deal structures and terms</li> <li>○ Valuing flexibility with real-options</li> </ul> </li> </ul>	<p>Case: "Partnering for Vesitex" 2012</p> <p><b>Supplemental Readings:</b></p> <p>Mason, R. et al. "The Economics of Licensing Contracts" Nature Biotechnology 2008</p>
<b>Session 6</b> March 7	<ul style="list-style-type: none"> <li>▪ <b>Making Value Based Arguments in Healthcare</b> <ul style="list-style-type: none"> <li>○ Tying clinical value to financial outcomes</li> <li>○ Evidence-Based Medicine</li> <li>○ Reimbursement &amp; Coverage Decisions</li> </ul> </li> </ul>	<p>Case: "Sanofi's Case for Earlier Insulin Use in Type II Diabetics" 2012</p> <p><b>Supplemental Readings:</b></p> <p>Bernard, Stan. MD. "The Payer C Change: From Customers to Competitors" Pharmaceutical Executive, 2012</p>

		<a href="http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=788395">http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=788395</a> John B. Watkins Managing Biotechnology In A Network-Model Health Plan: A U.S. Private Payer Perspective – <i>Health Affairs</i> 2012
<b>Session 7</b> March 14	<ul style="list-style-type: none"> <li>▪ <b>Pricing of pharmaceuticals</b> <ul style="list-style-type: none"> <li>○ Cost-based pricing</li> <li>○ Demand-oriented pricing</li> <li>○ Competitive-oriented pricing</li> <li>○ Target-return pricing</li> </ul> </li> <li>▪ <b>Forecasting</b></li> </ul> <p><b>Guest Speaker – (TENTATIVE)</b></p>	<p><b>Case:</b> “Metabical: Pricing, Packaging, and Demand Forecasting Recommendations for a New Weight Loss Drug”, Harvard Business School Case. 2010</p> <p><b>Supplemental Readings:</b>          Pollack, Andrew. “Sanofi Halves Price of Cancer Drug Zaltrap After Sloan-Kettering Rejection” NY Times 2012  <a href="http://www.nytimes.com/2012/11/09/business/sanofi-halves-price-of-drug-after-sloan-kettering-balks-at-paying-it.html?_r=0">http://www.nytimes.com/2012/11/09/business/sanofi-halves-price-of-drug-after-sloan-kettering-balks-at-paying-it.html?_r=0</a></p>
<b>Session 8</b> March 21	<ul style="list-style-type: none"> <li>▪ <b>Payer / Provider Transaction Flow</b></li> <li>▪ <b>Understanding and managing care delivery risk</b> <ul style="list-style-type: none"> <li>○ Quantifying actuarial risk</li> <li>○ Structuring provider contracts</li> </ul> </li> <li>▪ <b>FINAL PAPER ABSTRACT PROPOSAL DUE</b></li> </ul>	<p>Herzlinger, Regina E. et al. "Note on Managed Care Reimbursement of Healthcare Providers: Case Based, Per diem and Capitated Payments"</p> <p><b>Case:</b> Herzlinger, Regina E. et al. “THG Management Services” Harvard Business School Case, September 2012 Revision</p> <p><b>Supplemental Readings:</b>          J. Michael McWilliams, New Risk-Adjustment System Was Associated With Reduced Favorable Selection In Medicare Advantage, <i>Health Affairs</i></p> <p>Burns, Lawton R. “Accountable Care Organizations May Have Difficulty Avoiding The Failures Of Integrated Delivery Networks Of The 1990s” <i>Health Affairs</i> 2012</p>
<b>Session 9</b> April 4	<ul style="list-style-type: none"> <li>▪ <b>Quantifying the impact of lower government reimbursement</b> <ul style="list-style-type: none"> <li>○ Health Plan – Provider dynamics in California</li> <li>○ Public to private cost shift quantification</li> <li>○ Impacts to commercial insurer</li> </ul> </li> </ul> <p><b>Guest Speaker – (TENTATIVE)</b></p>	<p><b>Case:</b> “Negotiating Reimbursement at UCLA Medical Center” 2010</p> <p><b>Supplemental Readings:</b>          James Robinson, Hospitals Respond To Medicare Payment Shortfalls By Both Shifting Costs And Cutting Them, Based On Market Concentration, <i>Health Affairs</i></p>
<b>Session 10</b> April 11	<ul style="list-style-type: none"> <li>▪ <b>Designing health plan cost containment strategies</b> <ul style="list-style-type: none"> <li>○ Medical management, networks &amp; benefit design</li> <li>○ Narrow network design strategies</li> <li>○ Measurement of cost containment</li> </ul> </li> </ul>	<p><b>Case:</b> "Where's the Line? – High-Performance Network Development at Key Blue Cross Blue Shield" 2011</p> <p><b>Supplemental Readings:</b>          Hoangmai H. Pham, Redesigning Care Delivery In Response To A High-Performance Network: The Virginia Mason Medical Center <i>Health Affairs</i></p> <p>James C. Robinson, Hospital Tiers In Health Insurance: Balancing Consumer Choice With Financial Incentives</p>
<b>Session 11</b>	<ul style="list-style-type: none"> <li>▪ <b>Measuring service line profitability</b></li> </ul>	<p><b>Case:</b> "Emergency Services at Memorial General"</p>

April 18	<ul style="list-style-type: none"> <li>○ Overview of methods</li> <li>○ Matching supply with demand</li> <li>○ The link to financial performance</li> <li>○ <b>Guest Speaker – (TENTATIVE)</b></li> </ul>	<p><b>Supplemental Readings:</b>  “California’s Emergency Departments: Do they Contribute to Profitability?”  California Healthcare Foundation Issue Brief 2003</p> <p>Creswell, Julie. Et. Al. “A Giant Hospital Chain Is Blazing a Profit Trail” NY Times 2012  <a href="http://www.nytimes.com/2012/08/15/business/hca-giant-hospital-chain-creates-a-windfall-for-private-equity.html?pagewanted=all">http://www.nytimes.com/2012/08/15/business/hca-giant-hospital-chain-creates-a-windfall-for-private-equity.html?pagewanted=all</a></p>
<b>Session 12</b> April 25	<ul style="list-style-type: none"> <li>▪ <b>Linking innovation and growth to financial performance</b></li> <li>▪ <b>Guest Speaker – (TENTATIVE)</b></li> </ul>	<p><b>Required Reading:</b>  Nagji, Bansi &amp; Tuff, Geoff. “Managing Your Innovation Portfolio” Harvard Business Review May 2012</p>
<b>Session 13</b> May 2	<ul style="list-style-type: none"> <li>▪ <b>Student Presentations</b></li> </ul>	
<b>Session 14</b> May 9	<ul style="list-style-type: none"> <li>▪ <b>Student Presentations</b></li> </ul>	
May 10	<ul style="list-style-type: none"> <li>▪ <b>FINAL PAPERS DUE BY E-MAIL AT THE END OF THE DAY</b></li> </ul>	