

02/15/16
 BUS 220X, BUS 273
 F. J. Jones

San Jose State University
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BUS 220X Section 01 / BUS 273 Section 04 – Business Valuation and Venture Capital

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Class Days/Hours/Room:

Wed	1800-2200	03/21/16-05/16/16	BBC 022
Sat	0900-1800	03/26/16	
Fri	1800-2200	04/08/16	

Final Exam: TBD
Office Hours: MW 1145 – 1500 (BT 850D)
 And by appointment (BT 850D)

Required Texts:

- The Little Book of Valuation, Aswath Damodoran, John Wiley & Sons, 2011 (“AD”)
- Business Valuation and Venture Capital for San Jose State University, Frank J. Jones, Wiley, ISBN: 9781119918455 “Wiley Book”

Periodicals:

- Wall Street Journal, daily

Extra Reading:

- Equity Valuation and Analysis with eVal, Third Edition, Russell Lundholm and Richard Sloan, McGraw Hill Irwin, 2013
- Learner, Josh, Ann Leamon, Felda Hardymon, Venture Capital Private Equity, and the Financing of Entrepreneurship, John Wiley & Sons, Inc., 2012.
- Investment Valuation, University Edition, Aswath Damodoran, 3rd Edition, John Wiley & Sons, Inc., 2012.
- Venture Deals, 2nd Edition, Brad Feld and Jason Mendelson, Wiley, 2013.

Websites:

- www.aswathdamodoran.blogspot.com/
- www.wiley.com/go/littlebookofvaluation

Course Content

This course focuses on valuing and funding of various maturities, sizes, and structures of businesses. In this regard, the course will be developed in two parts. The first part will be the valuation of public corporations for which public accounting data are available is considered. Both intrinsic and relative methodologies are presented and evaluated. In general, relationships are developed and analyzed which determine how business value is created and enables managers to optimize the value of a firm. This includes identifying the key drivers of value of the firm. The methods of valuing private firms of various ages are also considered. This part of the course is referred to as “Business Valuation”.

The second part of the course focuses on young, start-up, firms for which very little, or no public accounting data are available. Specifically, the methods for valuing and funding start-up firms are examined. The types of funding at various levels of development are emphasized. An analysis of the venture capital process is also provided. This part of the course is referred to as “Venture Capital”. Accounting issues are emphasized in the course, including Sec. 409A Valuations. A major part of the course is a project which values and analyzes an existing corporation.

Professional Background

Dr. Frank J. Jones teaches MBA (273), MSA (220X) and undergraduate courses in Business Valuation and Venture Capital courses at San Jose State University. He also teaches portfolio management (172B).

Dr. Jones was on the Board of Directors of the International Securities Exchange (ISE), an electronic options exchange from 2000 until 2010. In this capacity, he was involved in two major transactions which required business valuations. During March 2005, ISE was involved in an IPO using Morgan Stanley and Bear Stearns as investment bankers. Dr. Jones was the Vice Chairman of the Board and on the IPO Pricing Committee during the closing of this transaction. During May 2007, ISE was acquired by Deutsche Borse, the large Frankfurt, Germany - based securities exchange. ISE used Merrill Lynch and Evercore Partners as investment bankers during this transaction. Dr. Jones was the Chairman of the Board and a member of the Executive Committee during this transaction. Both of these transactions required extensive valuation activities working with external investment bankers, lawyers and accountants.

Currently, while also teaching, Dr. Jones is also the co-Chairman of the Investment Committee and also a principal of Private Ocean Wealth Management, a private, high net worth wealth management firm. Dr. Jones is also on the Business Valuation Committee of Private Ocean. Dr. Jones is also a partner and co-Chairman of the Investment Committee of Boldpointe Partners LLC, a private equity firm which specializes in middle-market companies. Dr. Jones is also a minority owner of two other start-up firms. Dr. Jones’ domain expertise is Fintech.

Course Objectives

- 1) Understand the various stages in the development of a firm from a beginning stage start-up firm to a mature buy-out stage firm.
- 2) Understand the mechanisms for valuing a firm from three perspectives: accounting, finance, and practical shortcuts.
- 3) Understand how the manager/owner optimizes the value of a firm and the key drivers of value.
- 4) Understand how to forecast the requisite inputs – variables and financial ratios – into these models from current, past, and projected I/S and B/S of the firm and comparable firms.
- 5) Understand the sensitivity of the overall firm value to various variables and financial ratios from I/S and B/S.
- 6) Be able to present and defend an overall firm valuation to a critical audience; identify the critical variables in this valuation; specify “upside” and “downside” valuations and their related scenarios; and compare the valuation with publicly available valuations (e.g. Wall Street analysts).
- 7) On a macro basis, understand how alternate business strategies can be appraised by determining their effects on firm value by using the appropriate assumptions in this methodology.
- 8) With respect to start-up firms:
 - understand the valuation methods of start-up firms
 - understand deal structures including the economic and control aspects of a term sheet and also capitalization tables
 - understand the venture capital process
 - understand the funding stages of a start-up firm
- 9) The course experiences continuous tension between understanding:
 - the forest: how value is created and destroyed in a firm; and
 - the trees: detailed inputs to and outputs from valuation models.
 Understanding both extremes is critical.

Course Grade

The final grade will be determined as follows:

Project (comprised of a team component and an individual component):	40%
Mid Semester Exam:	20%
Final Exam:	40%

Class Conduct:

- The course should be very participative and interactive (that is, be “engaged”). Class engagement and involvement are expected.

Course Project

The project for the course is the valuation of an existing technology corporation in the Silicon Valley area. For the project, the class will be divided into teams of three to five students each. Each team will be assigned a corporation. The output for the project will be of two types:

1. A written report providing data and analysis of the valuation. This report will be in the form of power points which will be used in the presentation. No other writing/submissions are required.
2. A presentation to the entire class of a maximum of twenty minutes followed by a participative Q&A with the class, if feasible.

The tone of this presentation is that of senior investment bankers presenting to the CEO and CFO of a corporation interested in conducting a transaction with the company being valued. That is, the tone is serious.

The content of the project is provided below.

The sources of data for the project include:

- (1) The financial information provided by the corporation
- (2) Information on Yahoo, Finance and Morningstar
- (3) Information the team obtains from the public relations department of the corporation.
- (4) Other current information about the corporation (Google, Wall Street Journal, etc.)

Specific components of (1) are as follows:

- Form 10K and Form 10Q
 - Annual and Quarterly Financial Data (I/S, B/S, Cash Flow Statement, Statement of Retained Earnings.)
 - MD&A (Management Discussion and Analysis) from 10k
 - Discussion of results of operations, liquidity, capital resources, off-balance-sheet arrangements, and contractual obligations. Discussion should include trends, significant events and uncertainties, causes of material changes, effects of inflation and changing prices, and critical accounting policies. Although this section contains useful information, investors should be aware that this section is unaudited.
- Schedule 13 D
 - Required for 5% (or more) equity owners within 10 days of the initial acquisition event, and additions to their holding.
- SEC Schedule 13 F (Information Required of Institutional Investment Managers)
 - Quarterly report filed by institutional investors managing over \$100 million. Lists the name and amount of each security held at the end of each quarter within 45 days of the end of a calendar quarter.

- Definition: Accredited Investors (AI)
 - Require \$1 million of net worth (excluding value of primary residence) or \$200,000 per year of annual income (\$300,000 per year for couple).

Comments on Projects:

- The entire presentation is the set of power points. Make sure that I have the set of power points used before the presentation.
- Be prepared for the Q&A with the class and me after the presentation.
- Turn in to me in class before the presentation the following:
 - The complete set of power points used in the presentation
 - The output of the major tables from the valuation program
 - The MD&A section from the latest 10K
- No additional writing other than the power points is required or permitted to be presented or turned in.

- The corporations which will be assigned randomly to the teams will be from among those listed below:
 1. Broadcom (BRCM)
 2. Agilent (A)
 3. Brocade (BRCD)
 4. Intuit (INTU)
 5. National Semiconductor Corporation (NSM)
 6. Juniper (JNPR)
 7. Adobe (ADBE)
 8. Symantec Corp. (SYMC)
 9. Nvidia Corp (NVDA)
 10. TIBCO (TIBX)
 11. VMware (VMW)
 12. Riverbed Technology (RVBD)
 13. Electronic Arts (EA)
 14. Xilinx (XLNX)
 15. SanDisk (SNDX)
 16. Net App (NTAP)
 17. Fairchild (FCS)
 18. PMC Sierra (PMCS)
 19. Echelon (ELON)
 20. LSI (LSI)
 21. Salesforce (CRM)
 22. Zynga (ZNGA)
 23. Yelp (YELP)

Course Outline

- I.** Introduction / Overview
 - a. Valuation Issues by Type / Size of Firm
 - Public firms
 - Private firms

- II.** Business Valuation
 - a. See page 8

- III.** Venture Capital
 - a. See page 10

- IV.** Tax Issues
 - a. 83(b)
 - b. 409(A)
 - c. 382
 - d. 1202

II. Business Valuation

1. Present Value Topics
 - General
 - DDM
 - Gordon Model
2. Valuation Overview
 - My Handout
 - A.D. Ch. 3&4
3. Yahoo! Finance: HPQ
 - P/E, PEG and other topics
4. Financial Planning: BBM
5. DuPont Model: ROE, ROA, Turnover and Leverage
6. Growth and Funding: Growth (g), ROE, Plowback
7. Cash Flows
8. Residual Income Valuation Equation:

$$RI_t = (ROE_t - r_e) CE_{t-1},$$

Where r_e is calculated via CAPM; $ROE_t - r_e$ is profitability; and CE_{t-1} is growth

- This equation shows that value depends on Profitability/Growth

9. WACC/CAPM
10. Structured Financing
11. Valuation Models/Examples
12. Example: Kohl
13. Life Cycle of Firm (9/23/12 Handout)
 - General
 - CFO, CFI, CFF
 - AD: Ch. 5: Chs. 5, 6, 7, 8
14. Drivers of Value (My 1-Pager)
15. Types of Financing:
 - Stocks

- Preferred
- Convertibles
- Bonds
- Loans (Non-Bank and Bank)

16. Private Firms

17. Examples:

- ISE: IPO & Mergers
- Private Firms (Mine)

III. Venture Capital

A. Introduction

- a. Life Cycle of a Company
- b. Table of Contents
- c. Glossary
- d. Summary: Venture Capital
- e. Stages of Development/Funding
 - VC as an intermediary
 - PE/MF

B. Valuation

- a. Pre Money / Post Money
- b. 5X Deal
- c. First Round / Second Round
 - Funding New Ventures (HBS: 12/20/06)
- d. My Example: Up Round and Down Round
- e. Deal Structuring: (LLH, Ch.5)
- f. LLH Valuation: Strength & Weaknesses; (LLH, Ch.4)
 - Venture Capital Method

C. Term Sheet

- a. Liquidation Preference and Participation
- b. Other Terms: Vesting / Covenants / Antidilution (LLH, Ch. 5 pp. 139-149)
Pay to Play (FM: pp. 47-49)

D. "The Deal" (F&M)

- a. Term Sheets
 - Economic Terms
 - Control Terms
 - Others Terms
- b. Letters of Intent – The Other Term Sheet
- c. The Capitalization Table

E. Other

- a. Discount / Premium
- b. DD Example

Business Valuation

1. Course Materials
2. Why Business Valuation?
3. Valuation: An Introduction
4. Time Value of Money (Present Value)
5. Yahoo Finance : Data and Calculations
6. Valuation : Typed Version (9/13/14)
7. Valuation, Risk, Stocks and Bonds
8. The Valuation Equations (8/25/14)
9. Long Term Financial Planning (BBM, Ch.18)
10. Financial Ratios and the Dupont Model
11. Leverage, ROA and ROE
12. Growth and Funding
13. Drivers of Value (one-pager)
14. Cash Flows
15. Structured Forecasting : Version III
16. Structured Financing : Example – GOOG
17. Yahoo Finance Data: HPQ
18. Valuation and Funding
19. Inputs into CAPM
20. Valuation Project Steps
21. Overview of eVal/Kohl
22. Valuation Model Calculations: Three Parts
23. Damodaran Blog on Twitter
24. KPMG Valuation Model
25. Crème de la Crème Valuations (Variations on Two Themes)
 - a. 3 stage DCF – MorningStar
 - b. Justified P/E - MorningStar
26. Moats
27. Sales Forecasts (Art & Science) : Moats and RAD
28. Damodaran, Little Book, Value Plays and Conclusions
29. Mergers & Acquisitions
30. Discounts/ Premiums
31. Value Creation/Destruction through Transactions : AOL/TW
32. Asset vs Stock Deal
33. Brad Notes
34. Practice Problems (4/10/15)

Extra:**Mid-Semester Exam Topics**

Venture Capital

1. Venture Capital: Introduction – Lecture 1
2. (No. 23) Life Cycle of a Firm
3. Table of Contents/Glossary (F&M)
4. Phases of Start-up: Innovation et.al
5. “Lists” of VC/PE/Angels
6. Returns: NX, Y years vs. IRR
7. Venture Capital: An Introduction
 - a. One pager on Participants/Securities
8. (No. 28) Funding new Ventures: HBS Publication; Key Example (Cap Tables, etc.)
9. (No. 29) Example 1: Dilution of Different Investors
10. (No. 30) Up Round and Down Round (Examples)
11. (No. 34) Terms and the Term Sheet
12. Antidilution Provisions (LLH)
13. Pooled Liquidation Preferences vs. Senior/Junior Liquidation Preferences (LLH)
14. Advanced Deal Structuring, LLH, Ch. 5 (p. 117-139)
15. Deal Structure: Tables and Figures Only
16. (No. 33) Summary: Net Payout Table (LLH, Ch. 5)
17. (No. 32) Overview of Structures (11/29/14)
18. (No. 35) Comments on Structures (12/02/14)
19. LLH Valuation (Ch. 4): Strengths & Weaknesses; VCM
20. Term Sheets (Feld/Mendelson Chapters)
21. Term Sheets – Abbreviated Version
22. A Tour of a Tour Sheet; Two Term Sheets (LLH)
23. Venture Capital Acquisitions/Deals: Two Examples (D²)
24. Two Deals – Full Presentations (D²)
25. Conclusion: p. 156 LLH
26. What Have We Learned? Summary
27. Review Topics: VC Section
28. Final Class: Applied Valuation

Add-ons:

- Preferred Stock
- Overview: Dilution vs. Growth
- Term Sheet: Document Describing Funding

Project**A. Initial Presentation:**

1. Brief Overview of Company
 - Sector/Industry
 - NI (Net Income) History/Comments
 - Stock Price History/Comments
2. Slide on:
 - Products
 - Competitors (by Product)
 - Suppliers
 - Customers (by Product)
3. Basic Data
 - Market Cap
 - Beta
4. Basic Valuation Metrics (vs. Competitors)
 - Market Cap
 - P/E
 - P/BV
 - P/CF
 - P/Sales
 - PEG, etc.
 - How do these compare to competitors.
5. Summarize the MD&A in the latest 10K.
6. Current events of the Company
7. Compare your firm to its own past and its “Industry” (via eVal and Yahoo! Finance)

B. Final Presentation - General:

1. Baseline Forecast (“Quick and Dirty” Valuation)
 - Brief Sensitivity Analysis (Sales Growth and ROE)
 2. Key Strategic Assumptions (based on MD&A if relevant)
 3. Sales Growth Forecast (the critical forecast)
 - Moat
 4. Ratio Forecasts
 5. Evaluate Market Price
 - Is it now over/under valued?
 - Compare the following metrics
 - P/E
 - P/BV
 - P/Sales
 - P/CF
 - PEG
- Recommendation: Buy/Hold/Sell?
6. EPS
 - vs. Wall Street estimates (Yahoo! Finance)
 7. Cash Flow Analysis
 - Cash From Operations, Cash From Investments, Free Cash Flow
 - Relate to Cash from Financing
 - If your company does not pay a dividend, should it initiate one during the forecast period?
 8. Funding Future Growth
 - gs (sales) vs. gi (internal)
 - gs (sales) vs. gst (sustainable)
 9. What is the future funding policy as the corporation grows or contracts?
 - Issuance or reduction of equity and/or long term debt
 - Provide table of eVal output on funding
 10. Risks of Baseline Forecast
 - Cyclical
 - Structural
 - Management
 - Market Growth
 - Competitors
 - Technology
 - Does MD&A provide any guidance on the risk?
 11. Scenario Analysis- Based on Risks of Baseline Forecast
 - Baseline
 - Optimistic Scenario
 - Why?
 - Pessimistic Scenario
 - Why?

12. Growth
- Organic
 - R&D/NI for your company vs. competitors
 - Acquisitions
 - Past activity and track record for company acquisitions.
 - Ability to fund
 - a. “Consideration”
 - i. Cash – Liquidity; Sources of Financing
 - ii. Stock – do they want stock
 - iii. Consideration used in past transactions
13. Prospective Business Strategy
- What would your recommendation be to the firm’s value increase?
 - Strategy as is.
 - Change strategy? How?
 - a. R&D
 - b. Innovation
 - Internal/Organic Growth
 - Acquisitions/External Growth
 - How funded (considerations)?
 - Be Acquired
14. Comment on the following:
- Management Culture
 - Briefly identify the culture of the firm
 - Key Metrics
 - Re (and Beta)
 - ROE
 - ROA
 - CFO, CFI, CFF
 - g_s (sales)
 - g_i (internal)
 - g_{st} (sustainable)
 - Hurdle Rates
 - ROE vs. r_e (Need β)
 - ROA vs. WACC (Need debt interest rate)
 - ROA vs. Corporate interest rate (for leverage)
 - Financing Sales Growth (vs. $g_s = ROE \times \text{Plowback Ratio}$)
 - Value Creation – Big Picture
 - Growth/Profitability
 - Provide a table on key metrics, hurdle rates and value creation and interpretations
15. Remember to include your eVal output as an Appendix to your submission.

16. Sources of Data

- 10K/10Q SEC Filings (see p.20 of L&S)
 - MD&A
- Yahoo! Finance
- Other sources
 - Use Google
- Contact Investor's Relations Firm of your Corporation
 - Listen to 10Q presentation by CEO/CFO

C. Final Presentation - Calculations

1. Intrinsic Valuation

Sales... (% Growth).....	<u>H</u> (g = 5%)
A	
NI	
CE	
1/ (1+r _e)	
RI.....	Increase by g% per year
GCF.....	
X: $\sum_{i=1}^{\infty} \frac{RI_i}{(1+r_e)^i}$	
Y: $\frac{RI(1+g)}{(1+r_e)^H(r_e-g)}$	<i>Gordon Model:</i> $\frac{RI(1+g)}{r-g}$
V = X + Y + CE ₀ *	
Z: No of Shares Outstanding	
Share Price: P=V/Sh = V/Z (Calculated)	
Market Share Price (Actual)	
Compare/Comment	

*Add CE₀ for RI method only

2. Inputs

- Ratios:

- Turnover (Asset)
- Margin (Profit)
- Leverage
- ROE
- ROA
- Growth:
 - a. Internal
 - b. Sustainable
- Sales Forecast
 - a. h
 - b. g
 - c. S₁...S_H
 - i. Basis for s₁

3. Relative Valuation

- Competitors
 - Identity
- Valuation Measures of Competitors:
 - P/E, P/EBITDA; P/S; (Sales/Revenue) P/CE
 - Average Valuation Measures
- Relative Valuation and Range
 - $P_F = E_1$ (Forecast) x (P/E) Competitor
 - And for other metrics (EBITDA, S, CE)

4. Total Valuation – Weighted

- 60% Intrinsic
- 40% Relative

5. Growth Analysis

- Acquisitions and Organic
- Growth Estimates
 - Past 5 years
 - Analysts (next 5 years)
 - Your calculation
 - Vs g_i (internal) and g_{st} (sustainable)
- History of Acquisitions and Results
- History of Internal growth:
 - R & D (Organic)
 - a. Past
 - b. Prospects
 - Comments from MD&A
- Future Plans

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

The scheduled course contact hours are in compliance with the required course credit hours (<http://info.sjsu.edu/web-dbgen/narr/catalog/rec-13692.14082.html>) and the required course culminating experience (<http://info.sjsu.edu/web-dbgen/narr/catalog/rec-13692.14089.14090.html>)

Mission and Program Learning Goals

LCoB Mission Statement

We are the *institution of opportunity* in *Silicon Valley*, educating future leaders through *experiential learning* and character development in a *global business community* and by conducting *research* that contributes to business theory, practice and education.

BSBA Program Learning Goals

1	Business Knowledge	Understand basic business principles and demonstrate discipline-specific competencies as applied to local and global environments.
2	Communication	Communicate ideas clearly, logically, and persuasively in oral and written format, using technology appropriately.
3	Ethical Awareness	Recognize, analyze, and articulate solutions to ethical issues that arise in business.
4	Leadership Diversity & Teams	Comprehend the challenges and opportunities of leading and working in diverse teams and environments.
5	Critical Thinking	Comprehend, analyze, and critically evaluate complex unstructured qualitative and quantitative problems, using appropriate tools and technology.
6	Innovation	Recognize, analyze, and articulate strategies for promoting creativity and innovation.

Mission and MSA Program Learning Goals

LCoB Mission Statement

We are the *institution of opportunity in Silicon Valley*, educating future leaders through *experiential learning* and character development in a *global business community* and by conducting *research* that contributes to business theory, practice and education.

MSA Program Learning Goals

1	Financial Reporting and Interpretation	Understand and apply accounting processes and principles in the preparation and interpretation of financial reports within the context of a complex business environment.
2	Federal Income Tax Law	Understand and apply basic rules of the federal income tax laws.
3	Technology and Internal Controls	Understand information technology and internal control processes and their role in financial and managerial reporting.
4	Conceptual and Analytical Skills	Develop conceptual and analytical skills with real world examples as applicable to business valuation.
5	Oral and Written Communication	Effective oral and written communication techniques as well as interact effectively with teams as both leader and member.
6	Legal and Ethical Implications of Accounting Practice	Understand the legal and ethical implications of accounting practice perspectives as well as the need to address legal discourse and the particulars of legal requirements, restraints, and uncertainty.