

**Syllabus – Spring 2018**

**Professor Julia Plotts**

**Office: Hoffman Hall 221**

**Office Hours: Tuesday/Thursday by appointment**

**Section 15324 T-Th 2-3:50pm HOH 1**

**Section 15325 T-Th 4-5:50pm HOH 1**

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### **Course Description**

An applications-oriented course to develop the financial and accounting tools required to do financial planning, valuation and assessment of financial performance. The course covers valuation methods from both a conceptual and practical framework. While there is some new finance theory introduced in this course, the emphasis is on the practical application and integration of finance and accounting concepts to valuing companies. The course covers methods for utilizing financial data and applying valuation techniques to make strategic and financial decisions. The course introduces topics such as mergers and acquisitions, financial restructuring, leveraged buyouts, valuation of private companies, distressed companies and the valuation impact of financial leverage.

The course covers the theory and practice of financial analysis and valuation. Our coverage of the material is designed to allow you to become comfortable with the fundamentals so that you may improve your proficiency in participating in future financial and strategic discussions within a company or organization and with external analysts and service providers.

### **Learning Objectives**

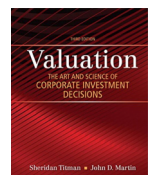
1. Describe the key aspects of financial analysis and valuation to effectively manage different types of enterprises. Gain knowledge of the following areas: accounting, finance, strategy and industry analysis.
2. Demonstrate critical thinking skills in the application of techniques in financial analysis and valuation. Gather, categorize, analyze, interpret, and evaluate relevant qualitative and quantitative information and develop the ability to be creative and innovative through the completion of a final valuation project.
3. Perform valuations for public and private firms for purposes of fundamental research, strategic analysis, transactions such as an IPO or a merger, or a restructuring. Students will learn the discounted cash flows (DCF) technique, market multiples approach, and transaction-based approaches such as an LBO model.
4. Consider special situations such as the challenges of valuing high-growth and private companies, the process of venture capital and early stage financing, and the approach to valuing highly leveraged companies and LBO transactions.
5. Develop skills to effectively communicate a valuation perspective or thesis.
6. Conduct research using a broad range of sources, synthesizing and judging the quality of collected information and support written or oral claims logically and persuasively.
7. Apply valuation in a global context, considering the interplay of international markets, and economic, social and cultural issues.

### **Required Materials**

**Required Textbook:** *Valuation: The Art and Science of Corporate Investment Decisions*, 3rd Edition By Sheridan Titman, John D. Martin. Published by Prentice Hall Copyright © 2016

ISBN-13: 978-0133479522 ISBN-10: 0133479528

FBE 529: <http://www.facultybookshelf.org/course/8692>



**Required Cases:** The course pack with supplemental readings and cases can be purchased online at the following link: <http://cb.hbsp.harvard.edu/cbmp/access/72924955>

### **Course Notes**

Slides, handouts and supplemental readings/articles will be posted on Blackboard. If you have any questions or need assistance with the Blackboard Course Pages, please contact the Marshall HelpDesk at 213-740-3000 or [HelpDesk@marshall.usc.edu](mailto:HelpDesk@marshall.usc.edu). Notes or recordings made by students based on a university class or lecture may only be made for purposes of individual or group study, or for other non-commercial purposes that reasonably arise from the student's membership in the class or attendance at the university. This restriction also applies to any information distributed, disseminated or in any way displayed for use in relationship to the class, whether obtained in class, via email or otherwise on the Internet, or via any other medium. Actions in violation of this policy constitute a violation of the Student Conduct Code, and may subject an individual or entity to university discipline and/or legal proceedings.

### **Optional Resources**

*The Wall Street Journal*, *The Economist*, *Barron's*, *Forbes* (available through <http://mymarshall.usc.edu> or Gaughan & Tiberti Business Library). Wall Street Journal student subscription, 15-week digital-only membership or print + digital membership for only \$1 per week or 1 year for \$49, link to purchase: <http://r.wsj.net/hZrqm>

A financial calculator is recommended for lecture and exams (discounting cash flows, IRR, etc.).

### **Prerequisites and/or Recommended Preparation:**

Prerequisite: BUAD 215 or BUAD 306. This course assumes knowledge of intro corporate finance and accounting. It will be assumed that students are comfortable with the topics of standard corporate finance texts such as Ross, Westerfield and Jaffe or Brealey & Myers. Please review your basic finance and accounting concepts. The pace and schedule of topics covered in this class does not allow for review of these concepts. Students with weak accounting and finance backgrounds will be at a disadvantage in this course. Working knowledge of excel is also important.

### **Grading Policies:**

Final grades represent how you perform in the class relative to other students. Historically, the average grade target for this class is a 3.3/4 (B+). Three items are considered when assigning final grades: 1) your average weighted score as a percentage of the available points for all assignments (the points you receive divided by the number of points possible) 2) the overall average percentage score within the class 3) your ranking among all students in the class.

<b><u>Assignments</u></b>	<b><u>% of Overall Grade</u></b>
Class Participation	10%
Group Case Analysis	30%
Mid-Term Exam	30%
Final Exam	30%
<b>TOTAL</b>	<b>100%</b>

### **Class Participation**

Class participation is an extremely important part of the learning experience in this course as the richness of the learning experience will be largely dependent upon the degree of preparation by *all* students prior to each class session.

A course that incorporates the frequent use of case analyses to illustrate the practical application of concepts and practices requires the student to diligently and thoroughly prepare cases and actively offer the results of the analyses and conclusions derived as well as recommendations during each class session. My expectation and that of your classmates are that you are prepared for *all* classes and will actively participate in and meaningfully contribute to class discussions.

In-class participation is also a critical part of this course's learning experience. Cold calling may take place to encourage active participation and to gain multiple perspectives and points of view, thus lending itself to the richness of the learning experience. In-class participation grading will be based on students' demonstrated willingness to participate and the quality of the comments expressed, rather than quantity. While some students are far more comfortable than others with class participation, *all* students should make an effort to contribute meaningfully. Students will offer their opinions in group settings many times in their careers; thus, class participation serves to prepare students for this business experience.

The evaluating of in-class participation is based on the following:

- *Relevance* – Does the comment or question meaningfully bear on the subject at hand? Irrelevant or inappropriate comments can detract from the learning experience.
- *Responsiveness* – Does the comment or question connect to what someone else has said?
- *Analysis* – Is the reasoning employed consistent and logical? Has data from course materials, personal experience, or general knowledge been employed to support the assertions/findings?
- *Value* – Does the contribution further the understanding of the issues at hand?
- *Clarity* – Is the comment concise and understandable?

During class sessions, I frequently assume the role of a facilitator to encourage a discussion that includes perspectives from a variety of viewpoints and, secondly, to help pull together prevailing analyses and recommendations. The direction and quality of a discussion is the *collective responsibility of the class*.

#### Excellent Performance

- Initiates information relative to topics discussed
- Accurately exhibits knowledge of assignment content
- Clarifies points that others may not understand
- Shares personal experiences or opinions related to topic
- Offers relevant / succinct input to class
- Actively participates in class exercises
- Demonstrates ability to apply, analyze, evaluate & synthesize course material.
- Demonstrates willingness to attempt to answer unpopular questions
- Builds on other students' contributions
- Very high levels of professionalism manifested in interactions with speakers and classmates.

#### Average Performance

- Participates in group discussions when asked
- Demonstrates knowledge of course material
- Offers clear, concise, "good" information on class assignments
- Offers input, but tends to reiterate the intuitive
- Attends class regularly

#### Unacceptable Performance

- Fails to participate even when directly asked
- Gives no input to discussions
- Does not demonstrate knowledge of the readings
- Distracts group / class
- Irrelevant discussion

Grades for individual student contributions to team projects are assigned by me, based on my observations of the team's working dynamics, my assessment of the team's project quality, and thoughtful consideration of the information provided through your peer evaluations. Final grades represent how you perform in the class relative to other students. Your grade will not be based on a mandated target, but on your performance. Three items are considered when assigning final grades:

1. Your average weighted score as a percentage of the available points for all assignments (the points you receive divided by the number of points possible).
2. The overall average percentage score within the class.
3. Your ranking among all students in the class.

### **Assignments and Group Case Analysis**

We will analyze real companies and work through problems by analyzing different scenarios and courses of action. In your analysis of the group case studies you should place yourself in the role of the decision maker as you read through the situation and identify the problems and issues. The next step is to perform the necessary analysis. To get the most out of cases, you should read and reflect on the case individually, and then meet in study group teams prior to class to "warm up" and discuss your findings with other classmates. In class we will probe underlying issues, compare different alternatives, and finally, suggest courses of action in light of the objectives of the case.

All cases are used as a means to assess class participation assessment. Your team/group case analysis will be turned in as a written deliverable. Do your best to work through the case utilizing readings and other supporting materials. Seeking assistance or "hints" from the instructor, the T.A. or past students is not authorized. A written case analysis should consist of a written (executive summary) using a standard font and font size (such as Times New Roman size 11-12), addressing the case questions with supporting computations and tables in a separate appendix (if relevant).

Assignment and case grading is based on the quality of your analysis, how well you support your assumptions and apply valuation techniques, and the judgment you exercise and on the professionalism of your presentations. The quality of work product should be reflective of what you would be comfortable presenting to a current or prospective employer. Case grades will be determined relative to the analyses of other groups in the class. Groups will be randomly selected to verbally present their findings on *both* the graded and discussion cases during the class session.

I encourage you to work in teams to maximize the learning experience. Please work on your cases in groups of 3-6 people. I will not become involved in any group problems. Teams may change composition during the course of the semester. If a set of teammates decides they can no longer work together, they are free to separate. If any member of the team cannot find another suitable team to join, he or she will have no choice but to hand in the rest of the valuation cases individually. In choosing teammates, consider the skills your team will want to possess: accounting, finance and excel modeling expertise. Also make sure that your teammates' expectations for their performance in this course are consistent with your expectations for yourself. ***If a student is taking the course P/NP then they must work within teams of other P/NP students.***

In addition to the group cases, there will be several individual and group assignments and in-class exercises to help you apply the material. These will be posted on Blackboard and are designed to complement the textbook and lecture material. These will count towards the participation grade.

### **Assignment Submission Policy**

Assignments must be turned in on the due date/time electronically via Blackboard. The cover sheet of each written assignment should contain the first and last names of the students submitting the

assignment arranged alphabetically. All of the names of the members in the group must appear at the top of the memo to receive credit.

### **Retention of Graded Coursework**

Final exams and all other graded work which affected the course grade will be retained for one year after the end of the course.

### **Technology Policy**

Laptop and Internet usage is not permitted during academic or professional sessions unless otherwise stated by the respective professor and/or staff. Use of other personal communication devices, such as cell phones, is considered unprofessional and is not permitted during academic or professional sessions. ANY e-devices (cell phones, iPads, other texting devices, laptops, I-pods) must be completely turned off during class time. Upon request, you must comply and put your device on the table in off mode and FACE DOWN. You might also be asked to deposit your devices in a designated area in the classroom. Videotaping faculty lectures is not permitted due to copyright infringement regulations. Audiotaping may be permitted if approved by the professor. Use of any recorded or distributed material is reserved exclusively for the USC students registered in this class.

### **Academic Integrity and Conduct**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own (plagiarism). Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. All students are expected to understand and abide by the principles discussed in the *SCampus*, the Student Guidebook ([www.usc.edu/scampus](http://www.usc.edu/scampus) or <http://scampus.usc.edu>). A discussion of plagiarism appears in the University Student Conduct Code (section 11.00 and Appendix A).

Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>. Failure to adhere to the academic conduct standards set forth by these guidelines and our programs will not be tolerated by the USC Marshall community and can lead to dismissal.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://dps.usc.edu/contact/report/>. This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report or can initiate the report on behalf of another person. *Relationship and Sexual Violence Prevention and Services* (RSVP) <https://engemannshc.usc.edu/rsvp/> provides 24/7 confidential support, and the sexual assault resource center webpage <https://sarc.usc.edu/reporting-options/> describes reporting options and other resources.

### **Support Systems**

*Student Counseling Services (SCS)* - (213) 740-7711 – 24/7 on call Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

<https://engemannshc.usc.edu/counseling/>

*National Suicide Prevention Lifeline - 1-800-273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

*Relationship & Sexual Violence Prevention Services (213) 740-4900 - 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

*Office of Equity and Diversity (OED)/Title IX compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

*Student Support & Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

*Diversity at USC – <https://diversity.usc.edu/>*

Tab for Events, Programs and Training, Task Force (including representatives for each school), Chronology, Participate, Resources for Students

**Students with Disabilities**

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs ([www.usc.edu/disability](http://www.usc.edu/disability)). DSP provides certification for students with disabilities and helps arrange the relevant accommodations. 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 me (or to your TA) as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: [ability@usc.edu](mailto:ability@usc.edu).

**Emergency Preparedness/Course Continuity**

In case of a declared emergency if travel to campus is not feasible, the *USC Emergency Information* web site (<http://emergency.usc.edu/>) will provide safety and other information, including electronic means by which instructors will conduct class using a combination of USC's Blackboard learning management system ([blackboard.usc.edu](http://blackboard.usc.edu)), teleconferencing, and other technologies.

## FBE 421 Course Outline and Schedule

	Topics	Readings and Deliverables
1/9 1/11	Course Overview and Syllabus Value-Based Management (VBM) and Performance Drivers	Syllabus Watch first two segments of online video link and see Appendix for discussion questions: <a href="http://tinyurl.com/qd5hdnf">http://tinyurl.com/qd5hdnf</a>  HBS Course Pack: Fundamental Enterprise Valuation: Return on Invested Capital (ROIC)
1/16 1/18	Forecasting and Valuing CF, DCF Understanding Financial Statements	Titman Martin Chapter 2, <b>Student Biography due</b> Titman Martin Chapter 6 HBS Course Pack: FSA-Identify the Industry
1/23 1/25	Understanding Cash flow Understanding Cash flow	HBS Course Pack: Solving the Puzzle of the CF Statement
1/30 2/1	Financial Analysis, Performance Evaluation and Forecasting No class scheduled*	<b>Whole Foods (HBS Course Pack) due</b>
2/6 2/8	Estimating Cost of Capital Estimating Cost of Capital	Titman Martin Chapter 4-5
2/13 2/15	Relative Valuation/Comps Relative Valuation/Comps	Titman Martin Chapter 8 <b>Ferrari IPO (HBS Course Pack) due</b>
2/20 2/22	Enterprise Valuation Enterprise Valuation	Titman Martin Chapter 9 Optional Practice Problem: 9-13
2/27 3/1	<b>Midterm Exam</b> Enterprise Valuation	Titman Martin Chapter 9
3/6 3/8	Private Company Valuation No class scheduled*	<b>Spyder Case (HBS Course Pack) due</b>
3/13-3/15	Spring Break	
3/20 3/22	Mergers and Acquisitions Mergers and Acquisitions	Titman Martin does not cover M&A. There is an optional/recommended reading in the HBS Course Pack. Chapter 26 in the BUAD 306 text also discusses M&A
3/27 3/29	Valuation in a Private Equity Setting Leveraged Buyouts and APV Method	Chapter 10 Optional Practice Problem: 10-9
4/3 4/5	Leveraged Buyouts Special Topic: Real Estate Valuation	<b>Heinz M&amp;A (HBS Course Pack) due</b> See Blackboard
4/10 4/12	Real Options Analysis/Strategic Options Special Topic TBD	Chapter 13, (Skim 11-12)
4/17 4/19	Valuation in PE - growth equity/VC Valuation in PE - growth equity/VC	<i>See Blackboard for Readings</i>
4/24 4/26	Review Course Wrap Up	
5/3 5/3	2pm section Final Exam – Thursday May 3 <sup>rd</sup> 2-4pm 4pm section Final Exam – Thursday May 3 <sup>rd</sup> 4:30-6:30pm	

\*M-W Classes have two holidays - MLK Birthday and President's Day.

Pages 8-11 provide a description of classroom preparation and group case deliverables.

Supplemental files will be posted on Blackboard.

## Value-Based Management

The goal of the firm is value creation. Return on capital and growth drive value creation. Value creation is fundamentally more important than that of growing revenues, earnings per share, maximizing volume and/or market share. Firms create value by investing capital in positive (NPV) projects.

- Review Online article “Creating value: An interactive tutorial” November 2010 <http://tinyurl.com/qd5hdf> In this video presentation, McKinsey partner Tim Koller explores the four guiding principles of corporate finance that all executives can use to home in on value creation when they make strategic decisions. Watch the first two segments: 1) The core-of-value principle and the 2) conservation of value principle
- Read WSJ article “The Hottest Metric in Finance: ROIC” May 3, 2016

### Group Case Deliverable – Whole Foods Market: The Deutsche Bank Report Financial Analysis and Performance Evaluation

This case examines the decisions of Deutsche Bank research analyst Karen Short in May 2014 while covering the stock of Whole Foods Market, the leading natural and organic food retailer. Having recently issued a “buy” recommendation for the stock backed by a strong financial forecast, Short must reevaluate her decision in the face of a lower-than-expected earnings announcement by Whole Foods management and an associated market price decline. This case asks that you scrutinize the analyst’s financial forecast considering the developing industry dynamics and Whole Foods’ competitive position. The case will also allow an opportunity to do a “quick and dirty” discounted cash flow analysis.

- Describe Whole Foods’ (WF) strategy. Prepare a competitor analysis. How would you define the industry? Who are WF’ competitors? Describe the growth prospects in the industry and identify important trends and opportunities.
- How attractive is WF current market position? Does it have a “moat?” Is it sustainable?
- Evaluate the EBITDA margins in Exhibit 3 and the financial ratios in Exhibit 4. Summarize the historical operating performance of WF. Exhibit 6 provides store growth statistics. Evaluate WF relative to its industry competitors.
- Examine Exhibit 7 in detail. How important are each of the underlying financial assumptions in the Return on Capital forecast? The DB model forecast for 2014-2015 are primarily driven by store growth, sales growth, EBITDA margin and Return on Capital.
- The Deutsche Bank base-case DCF forecast for 2014-2024 has been provided on Blackboard. Perform a basic DCF valuation based on this forecast. Assume a 3.4% perpetual growth rate for terminal value<sup>1</sup> and a WACC of 6.9%. Based on an assumption of no debt in the capital structure, what is the implied price per share of WF based on 372 million shares outstanding?
- Do you agree with these financial assumptions in the Deutsche Bank forecast? Would you adjust the financial forecast for WF in light of recent news? What adjustments would you make to the model? How will that impact your valuation? Be prepared to defend the basis of your forecast for WF’ performance.
- Using Marshall library resources identify the details behind the *recent* Amazon acquisition of Whole Foods. What was the transaction Enterprise Value paid? What was the WF’ EBITDA at the acquisition date? Think about the strategic rationale of the acquisition and be prepared to discuss in class.

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<sup>1</sup> This rate is based on an expectation that Whole Foods begins to grow with the overall macroeconomy. This rate reflects a real growth rate of 2% and a rate of expected long-term inflation of 1.4% based on the prevailing 30-year government bond yield (3.4% yield less a 2% rough estimate for the real rate of interest). The steady-state cash flow is estimated by growing the 2023 NOPAT at the 3.4% growth rate and subtracting the expected investment required to maintain a long-term growth rate in profits of 3.4%. This reinvestment amount is estimated by growing net assets at the steady-state growth rate. This amount of reinvestment ensures that the income statement and balance sheet grow at the same rate in perpetuity.



## **Group Case Deliverable – Ferrari IPO**

### **Reviewing the aspects of an equity issuance transaction and performing IPO valuation**

This case examines the October 2015 initial public offering pricing decision for legendary Italian sports car company Ferrari by Fiat Chrysler management. We will evaluate Ferrari in light of Ferrari CEO Sergio Marchionne's interest in expanding production despite the company's long-standing tradition of severely limiting production strategy to maintain an exclusive brand image. The case provides an opportunity to discuss the IPO and spin-off process and perform a valuation of the company.

- What are the financial implications of Ferrari's current strategy?
- If you were the investment banker/underwriter on the IPO roadshow how would you position Ferrari - as a car manufacturer or a brand? Explain your answer. What other elements about Ferrari's strategy would you highlight to potential investors?
- Do you agree with the financial forecast in Exhibit 8? If so, why? If not, what specific concerns do you have?
- Perform a valuation of Ferrari based on both a current market multiples valuation and a DCF valuation.
- In preparation for Ferrari's listing on the NYSE, at what price in EUR and USD would you recommend that Ferrari shares be sold?

## **Group Case Deliverable - Spyder Active Sports**

### **Valuing a Private, High-Growth Company and Evaluation of Strategic Alternatives**

David Jacobs founded a high-end ski apparel company in 1978. He successfully built and grew the company, establishing a major international brand that appealed to ski racers and other active skiers. In 1995, he sought external financing to support further growth of the company and structured a financial deal with CHB Capital Partners, a private equity firm in Denver. By 2004, Jacobs was ready to consider alternative types of equity transactions that would provide a source of liquidity to him and his family, including sale of Spyder to another apparel company and sale of a large block of stock to a private equity firm.

*Perform a standalone valuation of Spyder*

#### **Discounted Cash Flow valuation (DCF):**

- Utilizing the forecast in exhibit 5 of the case perform a discounted cash flow valuation of Spyder.
- You will need to take the data from Spyder's projected income statement (2005E-2008E) and calculate free cash flow = EBIT – taxes<sup>2</sup> + depreciation – net working capital - capital expenditures = Spyder Free Cash Flow
- You will need to estimate Spyder's terminal value. This can be done through a Gordon Growth perpetuity. If this method were to be applied for Spyder it would be assumed that at the end of 2008E the company reaches a steady state of growth. The terminal value will need to be discounted back to present along with the FCF forecast. Another approach would be what the Titman Martin text refers to as the hybrid approach for terminal value (exit multiple approach). This involves value the company in 2008E based on its revenue or EBITDA and the multiples provided from exhibit 9 and 11. For example, if Spyder expects to have EBITDA of \$27,895 in 2008, if the entire company were to be purchased for 10x EV/EBITDA then its implied value at the end of 2008 would be 278 million. This "terminal

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<sup>2</sup>Tax rate if determined from the income statement ranges from 16% to 45%. It is acceptable to consider a constant corporate tax rate (i.e. 35%)? Tax rate details were not given or discussed, and since Spyder has international operations and those foreign tax rates weren't mentioned, it is acceptable to assume an average tax rate based on the data provided or a corporate tax rate assumption.

value” would need to be discounted back to present along with the forecast period cash flows. Like so much of what we do in finance, this approach is quite subjective and is highly dependent on assumptions for the company’s ability to achieve the forecast, market conditions, etc.

- Determine the appropriate discount rate for this analysis - You will need to calculate Weighted Average Cost of Capital (WACC) including determining a beta based on the comps (unlevering and relevering). A Discounted Cash Flow (DCF) valuation of Spyder requires assumptions that are not mentioned in the case.<sup>3</sup>
- The present value of the free cash flow forecast and the terminal value is your estimate for implied “Enterprise Value” of the company.

### **Market Approach (Public Comps and M&A Comps):**

- Spyder is not a publicly traded company; but we can still apply the market approach (price multiples) to estimate the company’s implied value. Evaluate the financial data provided for Spyder and also the comparable publicly-traded company price multiples (Exhibit 11) and comparable past merger and acquisition multiples (Exhibit 9) to determine an estimated “implied” value for the company in 2004.
- An example would be if you applied one of the EV/EBITDA multiples from a company or transaction to Spyder’s 2004 EBITDA,  $10 \times \$9,582 =$  implied value of \$95 million in 2004. This approach is very subjective. Applying an appropriate multiple is dependent on the assumption that the asset you are comparing Spyder to is similar in growth, profitability, etc. The case does not provide descriptions of the merger and acquisition comparables. However, I have provided these descriptions in a tab in the excel workbook “Exhibit 9 Comp M&A description.” Descriptions of the public companies are provided in the exhibit 10 of the case. I have also provided some historical financial performance for these companies in the excel worksheet.

**Risks?** What are the risks to the valuation? Perform a basic sensitivity analysis and address the uncertainty in the assumptions and valuation approach.

**Perspectives of Each Stakeholder:** Compare the alternative transactions described on the last page of the case. Which exit option would you choose if you were: 1) David Jacobs; 2) a general partner in CHB Capital; 3) Shimokubo?

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<sup>3</sup>Tax rate if determined from the income statement ranges from 16% to 45%. It is acceptable to consider a constant corporate tax rate (i.e. 35%)? Tax rate details were not given or discussed, and since Spyder has international operations and those foreign tax rates weren't mentioned, it is acceptable to assume an average tax rate based on the data provided or a corporate tax rate assumption.

- Risk-free rate and Market Risk Premium (MRP) for CAPM ( $K_e$ ) is not given in the case. The case didn't give a risk-free rate, but the 10 and 20-yr. treasury rate for the time of the case is available online. The yield on a 20-year Treasury bond was 4.77% on 3/31/2004. The market risk premium assumption of 5-6% per our discussion is fine (this would be assuming a method of analyzing historical and predicted returns).

- Betas for comparable firms is provided in exhibit 11. Refer to lecture material on WACC regarding levering and unlevering beta and perform an analysis for an “implied” Spyder beta. It is up to you what assumptions you would like to make on firms comparable to Spyder.

- Capital Structure: Spyder is not publicly traded; can we use book value for V, E, and D in this case? If the #1 step in a WACC is capital structure weights for the firm being analyzed you should make a determination that ties with your recommendation, for example if you think Jacobs should buy out his partner he would most likely need to take on debt to do so. If you feel they should sell to a strategic or financial buyer then this has different capital structure implications. If you feel they should remain 100% equity financed due to their life cycle stage then that is also a fair assumption. Make an assumption based on book values or using industry figures to calculate the target capital structure is also a reasonable assumption. WACC can be determined using the industry figures and making assumption on cost of debt. For example, if Spyder is an implied AA it would have a pre-tax cost of debt of around 5-6% (according to the 20-year Treasury Bond rate and the Reuter Corporate Spread for 2004 (in basis points)).

## Group Case Deliverable – H. J. Heinz M&A<sup>4</sup>

During December 2012, Jorge Paulo Lemann, a co-founder and partner at 3G, proposed to Warren Buffett that 3G and Berkshire Hathaway acquire H. J. Heinz Company. Lemann and Buffett, who had known each other for years, jointly decided that the Heinz turnaround had been successful and that there was significant potential for continued global growth. 3G informed Heinz that it and Berkshire Hathaway were interested in jointly acquiring his company for \$70.00 per share of outstanding common stock. After much discussion, the Heinz board and its advisors informed 3G that without better financial terms they would not continue to discuss the possibility of an acquisition. Two days later, 3G and Berkshire Hathaway returned with a revised proposal of \$72.50 per share, for a total transaction value of \$28 billion (including Heinz's outstanding debt). Following a forty-day “go-shop” period, Heinz, 3G, and Berkshire Hathaway agreed to sign the deal. But was it a fair deal? And what about the future consequences for shareholders, management, employees, and citizens of Pittsburgh, the location of the company's headquarters?

- What is the EV/EBITDA multiple implied by the 3G/Berkshire offer to acquire Heinz?
- Complete a valuation of Heinz based on the financial information provided. Based on your analysis is the acquisition offer fair (is the \$72.50 price low/high)?
- Is the company a good candidate for an LBO. *Optional: Prepare an LBO Model*
- Using Marshall library resources, identify recent food/consumer M&A transactions (it has been a very acquisitive space - Nestlé announced at least 3 deals in 2017) and comment on the trends in the industry.

### DCF Scenario 1:

*Financial Forecast FCF and TV:* Revenue, EBITDA and EBIT for 2014E-2018E are provided in Exhibit 2. You will need to make assumptions for NWC, CapEx, Terminal Value, etc.

*WACC Assumptions:* Exhibit 2 provides information for  $K_e$  including beta,  $R_f$  and MRP assumptions. I used Heinz beta of .651. It also provides the corporate tax rates and the pre-tax cost of debt. For capital structure weights: for the value of “E” assume the pre-announcement stock price of \$60 and the fully diluted shares outstanding from 4/28/13 of 323 million. For “D” add short and long term interest bearing debt from 4/28/13 and subtract the cash and equivalents.

**DCF Scenario 2 (ALT):** Complete a separate valuation based on the Heinz alternative financial assumptions found in the Heinz Exhibits Spreadsheet, under the HNZ Alt tab. Revenue to grow at 1.3% per year; EBITDA margin to remain constant at 17.6% per year; CapEx to increase to \$450M in 2013, then decline by 10% per year until 2018; Depreciation expense to grow from 75% of Capex in 2013 to 100% of Capex in 2018; Amortization to remain at \$47M per year; Net working capital needed to fund growth will be \$50M in 2013, then \$30M per year until 2018; Tax rates remain constant at 35%, Discount rate to be 6.5% for every forecast year

### COMPS

For the implied value of Heinz based on the “market approach” evaluate the precedent M&A transactions and public comps provided in the case to determine whether the offer price was “fair.”

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<sup>4</sup> Supplement Information: <http://www.sec.gov/Archives/edgar/data/46640/000119312513089866/d491866dprem14a.htm>  
[https://www.bcgperspectives.com/content/articles/mergers\\_acquisitions\\_postmerger\\_integration\\_divide\\_conquer\\_deals\\_split\\_synergies/](https://www.bcgperspectives.com/content/articles/mergers_acquisitions_postmerger_integration_divide_conquer_deals_split_synergies/)