BUS 270 (Financial Management), Fall 2015

<table>
<thead>
<tr>
<th>Instructor: Dr. Jang H. Cho</th>
<th>Phone: 408-924-3489</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office: BT 854</td>
<td>Fax: 408-924-3463</td>
</tr>
<tr>
<td>Office Hours: Wed 2:00 PM – 4:00 PM</td>
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</tr>
</tbody>
</table>

First session: Monday, Oct 12th – Last session: Monday, Dec 7th, 2015

Room: BBC 022

Lecture sessions: 10/12, 10/19, 10/26, 10/30*, 11/2, 11/9, 11/16, 11/23, 11/30, 12/7

Regular session: Monday, 6 pm – 10 pm

* Extra session: Friday, 6 pm-10 pm, Room 022

Course Objectives:

Introduces the structure, markets and regulatory factors within the financial system.

- LO1 – Time value of money (Ch.4)

Develops basic skills in preparing

- LO2- financial plans/budgets (Ch.5)

- LO3- valuing capital costs (Required returns on capital), valuing financial assets (stock and bond) (Bonds: Ch.8, Stock: Ch. 9, 11)

- LO4- evaluating cost of capital (Ch. 13)

- LO5- evaluating the firm’s capital structure (Ch. 16, 17)

- LO6- evaluating working capital (Ch. 26)

- LO7- evaluating dividend policies, financing and investment decisions (Ch. 19)

Prerequisite: BUS 220 or BUS 231B and graduate standing;

Required Textbook and Materials:

- Corporate Finance by Ross, Westerfield, Jaffe, 10th ed.

- You must buy the book in the school bookstore and read the scheduled chapters.

- Lecture notes

- Notice: Core topics will be selectively covered from the text due to time limit.
**Financial Calculator**

- Texas Instruments BA II PLUS
  
  If you want to use a different calculator, that is ok. However, this is the only calculator that will be used for instruction on how to use a financial calculator.

- **Notice**: it is mandatory to have at least one calculator that has finance function keys.

**Evaluation:**

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Quizzes</td>
<td>13%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>5%</td>
</tr>
<tr>
<td>Report/presentation</td>
<td>12%</td>
</tr>
<tr>
<td>Report/presentation</td>
<td>12%</td>
</tr>
<tr>
<td>Examinations</td>
<td>35% both</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

* Refer to Case Analysis section
** Refer to Assigned topic section

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Range</th>
<th>Letter Grade</th>
<th>Range</th>
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<td>[95-100%]</td>
<td>B-</td>
<td>[80-84]</td>
<td>D+</td>
<td>[67-70]</td>
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<tr>
<td>A-</td>
<td>[90-95]</td>
<td>C+</td>
<td>[77-80]</td>
<td>D</td>
<td>[64-67]</td>
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<td>[87-90]</td>
<td>C</td>
<td>[74-77]</td>
<td>D-</td>
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<tr>
<td>B</td>
<td>[84-87]</td>
<td>C-</td>
<td>[70-74]</td>
<td>F</td>
<td>[0-60]</td>
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</table>

**Online Quizzes**

- To make sure that everyone keeps up with the pace of the course, online quizzes will be assigned after each chapter.
- Quizzes are given on Canvas. Look at the course schedule at the end of this syllabus.
- Each online quiz via Canvas will be open for five days from the second day following the lecture.
- Each quiz has a time limit. Two attempts are given for each quiz. The quiz with the highest score will be taken.
Examinations

- Each exam will test both the concepts and the calculations studied in this course.
- Both exams are closed-book exams given in class only on the scheduled date and time.
- You can bring your own cheat note-card that is approximately one-fourth size of the letter size paper. The cheat card can be both sided.

Team

- There will be total eight teams.
- Each team has five to members. (Some teams may have more or less members depending on enrollment.)

Case Analysis / Assigned Topic Presentation

<table>
<thead>
<tr>
<th>Cases</th>
<th>Title of Case</th>
<th>Product number</th>
<th>Related topic and chapters</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sears, Roebuck and Co. Vs. Wal-Mart Stores, Inc.</td>
<td>101011-PDF-ENG</td>
<td>Financial Analysis (Financial ratios), Ch. 3</td>
<td>Assigned</td>
</tr>
<tr>
<td></td>
<td>Butler Lumber Co.</td>
<td>292013-PDF-ENG</td>
<td>Financial Analysis (Pro Forma), Ch. 3</td>
<td>Assigned</td>
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<tr>
<td></td>
<td>Beta Management</td>
<td>292122-PDF-ENG</td>
<td>Risk and Rate of Return, Ch.10, 11</td>
<td>Lectured</td>
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<tr>
<td></td>
<td>Marriot Corp.: The Cost of Capital</td>
<td>289047-PDF-ENG</td>
<td>Cost of capital, Ch.13</td>
<td>Partially assigned/ Partially lectured</td>
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</table>

Assigned Topics

1. Growing annuities
2. TIPS (Treasury Inflation Protected Securities)
3. Relation between economic cycle and yield curve
4. Incremental NPV/IRR analysis
5. Loss aversion
• **Case presentation** – one team (Three cases. Total three teams will present.)

• **Assigned topic presentation** – one team (Five topics, Total five teams will present.)

• **Case report** - Every team has to submit the analyses of **all three assigned cases**. (both online and hard-copy)

• **Assigned topic report** – **Only assigned team** has to report in document (both online and hard-copy)

**For case analysis**

• Presenting teams should **fully explain** the case assuming step-by-step that the non-presenting audience has not read the cases.

• **PowerPoint** is only acceptable presentation method.

• Go to [http://hbr.org/case-studies](http://hbr.org/case-studies) and purchase the cases. Each team should purchase **all of the cases**.

• Each team has to **show instructor the receipts of the purchases of all four cases by 10/26**. The purchases are by team- not by individual.

• **Suggested case questions are available in the end of this syllabus.** Those will help focus your analysis. The questions outlined therein are meant to be suggestive but not exhaustive and, therefore, neither the substance nor the organization of your report write-up should be limited because of the question set.

• Submit their conclusions (and answers to suggested questions) in at most **two-page executive summary with single space**. Supporting computations and tables must be included in an appendix. All of the assumptions and formulas used should be provided in an appendix.

• Use the “**Case cover page**”, available on Canvas, and write the names of all team members who participated on the cover page.

• Case reports should be clearly typed **using the Word processor** with correct spelling and grammar. Wrong spelling and blunt grammatical errors will earn penalties.

**Ethics code**

• Submitted answers for assignments (Case write-ups) must be your own or your team’s original work.

• Any similarities in submitted answers and reports are to be probed.

• Plagiarism will lead to a failing grade.
Participation

- Participation is based on 10 points.
- Starting participation point is 5.
- The following participation during classes will be rewarded by 1 point each time.
  - Answering to questions verbally during lectures
  - Solving questions on the board
  - Asking course topic related questions
- The following behaviors during classes will be penalized by 1 point each time.
  Some of the behaviors will be pointed out; others will be just marked on a grading sheet during the class.
  - Text messaging
  - Eating foods except for beverages
  - Sleeping during classes
  - Unpermitted conversations with classmates
  - Leaving early before the class ends
  - Working on other class materials, reading newspapers, etc.
  - Using laptops in the class

Course Schedule - Tentative

*Grouping is needed in the first class at least for the teams that present in the second session.

<table>
<thead>
<tr>
<th>Session</th>
<th>Date, Time</th>
<th>Chapter</th>
<th>Presentations</th>
</tr>
</thead>
</table>
| 1       | 10/12 (Mon), 6-10 pm | Syllabus  
Syllabus  
Ch 4: Time Value of Money                                                     | Online quiz on Ch 4 |
| 2       | 10/19 (Mon), 6-10 pm | Ch 8: Bond Valuation and Interest Rates                                  | *Growing annuities (15 minutes)  
This is from Chapter 4  
*TIPS (15 minutes)  
Online quiz on Ch 8 |
| 3       | 10/26 (Mon), 6-10 pm | Ch 5: Net Present Value and Other Investment Rules                      | *Relation between economic cycle and yield curve (15 minutes)  
*Incremental NPV/IRR analysis (15 minutes)  
Text, page 151 and 152  
Online quiz on Ch 5 |
| 4       | 10/30 (Fri), 6-10 pm | Ch 10, Ch 11: Return and Risk                                           | *Loss aversion (15 minutes)  
Online quiz on Ch 10 and 11 |
<table>
<thead>
<tr>
<th>Week</th>
<th>Date (Mon), Time</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>11/2</td>
<td>Ch 13: Cost of capital</td>
<td>Online quiz on Ch 13</td>
</tr>
<tr>
<td></td>
<td>11/9</td>
<td>Midterm Exam</td>
<td>*Midterm Exam: Ch. 4, 5, 8, 10, 11 (Ch. 13 is not on Midterm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Exam is given for 2 hrs 10 min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Ch2, 3 (Financial Statement Analysis) starts after exam</td>
</tr>
<tr>
<td>6</td>
<td>11/16</td>
<td>Ch 2, Ch 3 (Continued)</td>
<td>Ch 9: only P/E multiple valuation and Entire firm valuation parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ch 26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>! Firm valuation is covered when time permits.</td>
</tr>
<tr>
<td></td>
<td>11/23</td>
<td>Ch 16, Ch 17: Capital Structure</td>
<td>Online quiz on Ch 16, 17</td>
</tr>
<tr>
<td>7</td>
<td>11/30</td>
<td>Ch 19: Dividends and Other Payouts (Time permitting only)</td>
<td>*Presentations for case analysis (Sears, Butler)– If Ch 19 should not be covered.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Online quiz on Ch 19 (Only if Ch 19 is covered.)</td>
</tr>
<tr>
<td>8</td>
<td>12/7</td>
<td>Final Exam</td>
<td>*Final Exam (non-cumulative): Topics covered after midterm exam</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Exam is given for 2 hrs 10 min.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Presentations for case analysis (Remaining case(s))</td>
</tr>
</tbody>
</table>
Assigned Topics for Presentations

[1] Growing annuities (15 minutes)
   - What is it?
   - Usefulness/ How are they useful in retirement plans?
   - Numerical examples

[2] TIPS (Treasury Inflation Protected Securities)(15 minutes)
   - What is it?
   - Usefulness
   - Numerical examples
   - Answer: why the Yields on 5-year TIPS during most of year 2014 had been negative.

[3] Relation between economic cycle and yield curve (15 minutes)
   This topic is not from the textbook. Use Internet to find information about loss aversion.
   - Compare the historical 6-month (or 1 year) Treasury bill rates and 10-year Treasury bond rates (Show overlaid charts)
   - Recall that if short-term rates are higher than long-term rates, the yield curve is inverted. Find out the pattern between inverted yield curve and the cycle of recession.
   - Why such pattern is expected? What are the main factors that caused such pattern?

[4] Incremental NPV/IRR analysis (15 minutes)
   Text (“Corporate Finance” Ross et al. 10ed), page 151 and 152.
   - Explain this topic only in regard to the IRR method
   - When to use them / usefulness
   - Numerical examples of incremental CF method when dealing with IRR method and Profitability Index method.

[5] Loss aversion (15 minutes)
   This topic is not from the textbook. Use Internet to find information about loss aversion.
   - What is loss aversion?
   - Why is loss aversion useful in explaining the volatility as a measure of risk?
   - Any numerical examples?
   Caution: loss aversion is a human nature. It is nothing to blame.
Questions for Case Analysis

Butler Lumber Company

(1) Determine the sustainable growth rate and actual growth rate of sales.
(2) Why does Mr. Butler have to borrow so much money to support this profitable business?
(3) Do you agree with his estimate of the company's loan requirements? How much will he need to borrow to finance his expected expansion in sales (assume a 1991 sales volume of $3.6 million)?
(4) As Mr. Butler’s financial adviser, would you urge him to go ahead with, or to reconsider, his anticipated expansion and his plans for additional debt financing? As the banker, would you approve Mr. Butler’s loan request, and, if so, what conditions would you put on the loan?

Sears, Roebuck and Co. Vs. Wal-Mart Stores, Inc

(1) How do the retailing strategies of Sears and Wal-Mart differ?
(2) Calculate cash cycle of both firms.
(3) Wal-Mart’s average return on equity for the 1997 fiscal year was 19.7% \[\frac{\$3,525}{($18,503+17,143)/2}\] while Sears’ average return on equity over roughly the same period was 22.0% \[\frac{\$1,188}{($5,862+$4,945)/2}\]. Don Edwards was puzzled by these numbers because of Wal-Mart’s reputation as a premier retailer and Sears’ financial difficulties not long ago. What is driving the performance of these two companies during fiscal 1997?
(4) What ratios are most important in assessing current and predicting future value creation for Sears? For Wal-Mart?
(5) How useful are financial ratios in comparing the relative performance of these two companies?

Marriott Corp.: The Cost of Capital

*Assigned questions are only 1, 2 and 3. ← Answers for these questions should be in your report.
*Question 4 is not assigned.

1. What is the weighted average cost of capital for Marriott Corporation?
   a) What risk-free rate and risk premium did you use to calculate the cost of
b) How did you measure Marriott’s cost of debt?

2. If Marriott used a single corporate hurdle rate for evaluating investment opportunities in each of its lines of business, what would happen to the company over time?

3. What is the cost of capital for the lodging and restaurant divisions of Marriott?
   a) What risk-free rate and risk premium did you use in calculating the cost of equity for each division? Why did you choose these numbers?
   b) How did you measure the cost of debt for each division? Should the debt cost differ across divisions? Why?
   c) How did you measure the beta of each division?

4. What is the cost of capital for Marriott’s contract services division? How can you estimate its equity costs without publicly traded comparable companies?

**Hints and Directions for Marriott Inc. Case**

**You must follow this direction and hints.**

A. Risk free rate to compute the cost of debt
   
   Cost of debt → \( r_D = r_f + \text{spread} \)
   
   *Entire Marriott firm’s \( r_D \) and Lodging division → Long-term (30yr) risk-free rate
   *Restaurant and Contract services divisions → Short-term (1yr) risk-free rate

   The values are given in Table B on page 4.

B. The after-tax cost of debt = \((1 - t) \times r_D\)

   Use \( t = 34\% \). During 1986 – 1992 The Highest average corporate tax rate was 34%.

   •

C. The weights in the WACC equation

   The weights to compute the WACC should be the “target” weights shown in Table A.

D. CAPM

   To compute the cost of equity, you need the value of \( r_M - r_f \) (market risk premium). Use the spread using 1926 – 1987 period as the market risk premium in Exhibit 5.

   Caution: which spread to use for each divisional cost of equity (CAPM)? You determine based on the match of whether the division is short-term or long-term. If you make any mistakes in this step, then the ultimate values of WACC will be misleading.

E. Unlevering / Re-levering beta

   • Background:

     If an equity beta is unlevered, then the result is an asset beta.
     If and asset bta is levered (or, re-levered), then the result is an equity beta.

   • Caution:

     Unlevered beta = levered beta * \((1/(1 + (D/E)*(1 - t)))\)
Levered (or, relevered) beta = unlevered beta*(1 + (D/E)*(1 – t))

**Use t = 0 for the Unlevering/re-levering process for this case.** The reason is that when you apply this to get unlevered beta for the divisions of Marriott, there is no information of tax rates for other firms. Hence, consistently t = 0 for this process.

**Caution:**
- The leverage given in the case is named “market leverage” in Exhibit 3 is Debt/(Debt + Equity) as specified in its Footnote C. You have to covert this value into D/E for the leveraging and unlevering procedures.
- Also, the footnote in Exhibit 3 states that “market value leverage is the book value of debt divided by the sum of the book value of debt and the market value of equity.” The Unlevering-/levering- procedure uses the market value of D/E ratio. The reason why the debt is just book value while the equity is market value is that the relevant data to find out their market value of debts were not available. Let a = D/(D+E). Then, 1-a = E/(D+E). Hence, D/E = a/(1-a).

- **In the case:**
  If the equity beta (each of lodging, restaurant, contract services and entire Marriott) is not directly available, then you have to go though this un-/re-levering steps.

For the entire Marriott, you cannot use the equity beta shown in Exhibit 3. You have to unlever it, and get the asset beta, using the then-current leverage (41%) and re-lever the asset beta using the target leverage shown in Table A.

For the lodging and restaurant divisions, there is no information on their own equity betas or asset betas as of 1987. You have to compute the asset beta of each of these two divisions using other firms’ equity betas given in Exhibit 3. Unlever each of the equity beta of other firms in the same division. When unlevering, use the leverage as of 1987. Recall the unlevered betas are asset betas. Simple average the asset betas and use it as the asset beta and re-lever the averaged asset beta to get the re-levered (equity) betas. When you re-lever, use the target leverage shown in Table A.

*(This part is not assigned.)* For the contract services division, there is even no information on the equity betas of other firms. Therefore, you have infer the asset beta first and re-lever it using:

\[
 Asset \text{ beta of the entire Marriott} = W_L \times Asset \beta_L + W_R \times Asset \beta_R + W_{CS} \times Asset \beta_{CS} 
\]

\[
 (*) \hspace{1cm} (*) \hspace{1cm} (*) \hspace{1cm} (*) \hspace{1cm} (*) \hspace{1cm} (Solution)
\]

The asset betas of the entire Marriott, lodging division, restaurant division are calculated in the previous steps (by you). The weights need to be calculated using their assets as of 1987 shown in Exhibit 2 for each division (for example, 2,777.4 for Lodging division, and so on) Consequently, the parts in (*) are calculated in the previous steps by you with the
only unknown asset beta of contract services division. You can now solve for it and then re-lever to get the equity beta for this division using the target leverage shown in Table A.

F. Hints
If you follow the directions described above, then you will get the values as follows. Caution that there can be rounding errors in the values. Hence, your solutions would not be exactly the same as those shown below.

<table>
<thead>
<tr>
<th></th>
<th>WACC</th>
<th>Asset beta</th>
<th>Equity beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marriott</td>
<td>12.50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lodging</td>
<td></td>
<td>1.624</td>
<td></td>
</tr>
<tr>
<td>Restaurant</td>
<td></td>
<td></td>
<td>1.038</td>
</tr>
<tr>
<td>Contract services</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Beta Management

The followings questions are not assigned. They are just for your study.

1. Calculate the variability (standard deviation) of the stock returns of California REIT and Brown Group during the past 2 years. How variable are they compared with Vanguard Index 500 Trust? Which stock appears to be riskiest?

2. Suppose Beta's position had been 99% of equity funds invested in the index fund, and 1% in the individual stock. Calculate the variability (by standard deviation) of this portfolio using each stock. How does each stock affect the variability of the equity investment, and which stock is riskiest? Explain how this makes sense in view of your answer to Question #1 above.

3. Perform a regression of each stock’s monthly returns on the Index returns to compute the “beta” for each stock. How does this relate to the situation described in Question #2 above?

4. If Ms. Wolfe’s sole purpose is to minimize the portfolio risk, then which stock is her choice?

Caution
- Vanguard index fund is the same as market portfolio.
- When executing regression procedure do not use the excess returns (raw return – riskfree rate) but use the raw returns only due to the lack of risk-free return data in the case.