Chapter 7 Stock Valuation

1) What is the difference between lending to a company and owning a company?

   Lending gets a fixed return

   Lending is more certain

   Owning has an uncertain return

   Owning gets the benefits of good decisions

   Owners share losses with lenders

2) Define the following:

   a. Authorized shares
      Corporation set in incorporation agreement

   b. Issued shares
      Total number from authorized that have been distributed
      Not all currently in hands

   c. Outstanding shares
      Currently owned by investors
      Get the profits; get to vote; receive the dividends

   d. Treasury Stock
      Repurchased shares
      Why do companies buy back stock?
      Will discuss in more detail in later chapters

3) What does dilution of stock ownership mean?

   Profits are divided amongst a greater number of owners
   If you issue shares to buy something, the old shareholders will need to share the profits

4) ADR

   What is an ADR? Play video

   https://www.youtube.com/watch?feature=player_detailpage&v=XdZPNrCpEeQ&list=PLQcenk-Mor85pMNCHKTG2S79A8AL_9Ssw

5) How the Stock Market works!!

   Watch the video

   http://www.youtube.com/watch?feature=player_detailpage&v=GnJCOof2HJk
6) How do you make money with stocks?
   Dividends taxes? 15% max
   Capital appreciation taxes
   Short term marginal rate
   Long term 15% max

7) How are stock prices created?
   Supply and demand
   Discussed in earlier class

8) What does Market Efficiency mean?
   Information is incorporated into the stock price.
   Questions
   Do prices move in the right direction?
   How long does it take to happen?
   What kind of information is there?
   Historic
   Public = historic + current events
   Private
   EMH forms based on these categories
   Weak - historic If you have historic information can you beat
   the stock market on average?
   Semi_strong If you have public info ....?
   Strong If you have private info ......?

9) Behavioral finance may be the new “theory” behind prices.
   People just do not act rational.
   Alan greenspan was on the Daily show. Basically said everyone assumed people were
   logical and rational. Turns out they are “screwy”.

http://www.youtube.com/watch?feature=player_detailpage&v=h5JDftgykcg
10) Stock valuation models

\[ P_0 = \frac{D_0 \times (1 + g)^1}{(1 + r_s)^1} + \frac{D_0 \times (1 + g)^2}{(1 + r_s)^2} + \ldots + \frac{D_0 \times (1 + g)^\infty}{(1 + r_s)^\infty} \]

\[ P_0 = \frac{D_1}{r_s - g} \]

11) You are considering a common stock that has a required return of 14%. This stock has paid a dividend of $1.75 every year in the past. What is this stock worth?

<table>
<thead>
<tr>
<th>Ks</th>
<th>14.00%</th>
<th>Stock Price</th>
<th>#DIV/0!</th>
</tr>
</thead>
<tbody>
<tr>
<td>g</td>
<td>0.00%</td>
<td>Expected return</td>
<td>#DIV/0!</td>
</tr>
<tr>
<td>D1</td>
<td>$1.75</td>
<td>Stock Value</td>
<td>$12.50</td>
</tr>
</tbody>
</table>

To Find Ks

<table>
<thead>
<tr>
<th>RF</th>
<th>Dividends (TV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Km</td>
<td>First</td>
</tr>
<tr>
<td>Beta</td>
<td>Last (D0)</td>
</tr>
<tr>
<td>Ks</td>
<td>g (if not given)</td>
</tr>
</tbody>
</table>

12) What are the basic investment rules?

If value >= price buy
If expected return >= required return buy

13) The most recent dividend paid by the corporation was $3.20. Historically, this company's dividends have been growing at a 6% growth rate. The required return on the stock is 14%. What is the value of the stock?

<table>
<thead>
<tr>
<th>Ks</th>
<th>14.00%</th>
<th>Stock Price</th>
<th>#DIV/0!</th>
</tr>
</thead>
<tbody>
<tr>
<td>g</td>
<td>6.00%</td>
<td>Expected return</td>
<td>#DIV/0!</td>
</tr>
<tr>
<td>D1</td>
<td>$3.39</td>
<td>Stock Value</td>
<td>$42.40</td>
</tr>
</tbody>
</table>

To Find Ks

<table>
<thead>
<tr>
<th>RF</th>
<th>Dividends (TV)</th>
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<tr>
<td>Km</td>
<td>First</td>
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<tr>
<td>Beta</td>
<td>Last (D0)</td>
</tr>
<tr>
<td>Ks</td>
<td>g (if not given)</td>
</tr>
</tbody>
</table>

a. What if the growth rate changed to 3%? 9%?
b. What if the required return decreases to 10%? Increases to 18%?
14) Go to finance.yahoo.com. Enter TAP in the quote box. On the left hand side find historical prices. Click the radio box for dividends only. Change the beginning date to the same date as the ending date but subtract 5 from the years. Download to a spreadsheet and copy paste as a picture here. Circle each four dividends. Number the circles starting with zero. In the stock valuation spreadsheet determine the historical growth of dividends.

15) What is the beta of your company? What yield did we find for a 30 year Treasury? For now use 12% as Km. What is the required return?

16) When would the dividend model not work?
   
   No dividends
   
   Dividend growth greater than required return

17) What variables are needed for the FCF model?
   
   FCF, growth of FCF,
   
   WACC avg cost of financing

18) What is the PE multiplier model?
   
   Algebraically manipulate the PE ratio
   
   Substitute forecasts of PE and / or EPS for the numbers in the PE ratio

19) Some interesting you tube videos
   
   a. Value investing
      
      http://www.youtube.com/watch?v=dX2L7JhpXI8&feature=player_detailpage
   
   b. How to read stocks
      
      http://www.youtube.com/watch?feature=player_detailpage&v=Lc791is6X0o
   
   c. A formula (untested but interesting concept)
      
      http://www.youtube.com/watch?v=UOWrhGmCsIA&feature=player_detailpage

Go to the [www.zacks.com](http://www.zacks.com)
Enter your company name or ticker symbol.

1) Go to Company Reports and then to estimates.
   a) Estimates (5)
      List 3 of the estimates from this source
      EPS
      PE
      Earnings growth rate
      Compare to estimates in chapter 3 or with the yahoo finance data.
      Are there any discrepancies? Describe them?

2) go to yahoo finance and find the Insiders (10) insider roster
   a) Who are the three largest holders in the past 2 years, as listed in the
      insider roster?
   b) what percentage of the company is held by insiders?
      take the number of shares held by insiders and divide by the total
      number of shares
      can also switch to key statistics section.
3) Calculate the value of your company’s stock. Include the calculations for growth of dividends and the calculation for the required return using the SML.

Complete the following table:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Dividends 5 years ago</td>
<td></td>
</tr>
<tr>
<td>Most recent dividends</td>
<td></td>
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<tr>
<td>Yield on 30 year T-Bond</td>
<td></td>
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<tr>
<td>Average stock market return</td>
<td></td>
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<tr>
<td>PE ratio</td>
<td></td>
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<tr>
<td>EPS estimate for next year</td>
<td></td>
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</tbody>
</table>

Use the Statistics above to calculate:

1) Dividend growth model value
2) PE multiplier model value
5) Go to www.smartmoney.com (50 pts)

Enter your company’s ticker symbol and go to key statistics.

In the table below record the data.

Then repeat the exercise for the other companies listed

ROE and price to book found under key stats

<table>
<thead>
<tr>
<th>Name</th>
<th>Ticker symbol</th>
<th>Dividend</th>
<th>Dividend Yield</th>
<th>ROE</th>
<th>price to book ratio</th>
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</thead>
<tbody>
<tr>
<td>Your company</td>
<td></td>
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<tr>
<td>DIS</td>
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<tr>
<td>AIT</td>
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<td>MRK</td>
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<tr>
<td>LG</td>
<td></td>
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<tr>
<td>LUV</td>
<td></td>
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<tr>
<td>TAP</td>
<td></td>
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<td>GE</td>
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<td>BUD</td>
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<tr>
<td>PFE</td>
<td></td>
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</tr>
</tbody>
</table>

Which companies have the highest dividend yields? Lowest?

Is there any relationship between ROE and dividend yield

What does price to book ratio say? Can you describe what this means for these companies?
1) Four years ago I purchased 100 shares of the XYZ Corp preferred stock. The company pays a $6.75 annual dividend and had a required return of 19%. The most recent required return for the stock is 14%. (3 points) (Stock Valuation worksheet)

a) What was the stock value when purchased?
35.53

b) What was the stock value at the end of the time frame?
48.21

c) What is the gain (loss)?
12.68

2) A small business has decided to seek new investors for expansion. The company has recently paid a $4.75 dividend. The average required return for the industry is 17% Dividends have historically grown at a 6% interest rate. The new expansion of the company will increase dividend growth to 10% for the next 4 years. After that, the managers have decided the growth rate will recover to the industry standard. (6 points) (super-normal growth Valuation)

a. What is the value of the company’s stock today?
52.09

b. What would the value be if the growth rate grew to 8% in the new period?
48.85

c. What would the value of the firm be if the super growth period was 6 years instead of 4 years?
50.05
3) Complete the following PE multiplier model valuation table. (4 points)

<table>
<thead>
<tr>
<th>Firm</th>
<th>PE</th>
<th>EPS</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12.5</td>
<td>3.95</td>
<td>49.38</td>
</tr>
<tr>
<td>B</td>
<td>5.31</td>
<td>5.25</td>
<td>27.89</td>
</tr>
<tr>
<td>C</td>
<td>17.5</td>
<td>2.85</td>
<td>49.78</td>
</tr>
<tr>
<td>D</td>
<td>15.5</td>
<td>1.75</td>
<td>27.13</td>
</tr>
</tbody>
</table>

4) Calculate the following values: (10 points)
   a. In 1992 the company paid a dividend of 2.89. In 2012, the dividend was 4.89. What is the growth rate of dividends? (stock Valuation)
      
      2.66%  

   b. The company has a beta of 1.79. The risk-free rate and return on the stock market are 3.67% and 11.5% respectively. What is the required return for the company?
      
      17.69  

   c. What is the risk premium for the company?
      
      14.02%  

   d. What is the value of the company stock?
      
      33.40  

   e. If the company completes a renovation that reduces the market risk of the company to a beta of 1.35, what is the new value of the stock?
      
      43.35