**Assignment Type:** Individual Project   **Deliverable Length:** 1-2 pages   
**Points Possible:** 125   **Due Date:** 9/13/2009 11:59:59 PM  CT 

By walking you through a set of financial data for IBM, this assignment will help you better understand how theoretical stock prices are calculated; and how prices may react to market forces such as risk and interest rates. You will use both the CAPM (Capital Asset Pricing Model) and the Constant Growth Model (CGM) to arrive at IBM's stock price. To get started, complete the following steps.

1. Find an estimate of the risk-free rate of interest, krf. To obtain this value, go to [Bloomberg.com: Market Data](http://www.bloomberg.com/markets/index.html) [http://www.bloomberg.com/markets/index.html] and use the "U.S. 10-year Treasury" bond rate as the risk-free rate. In addition, you also need a value for the market risk premium. Use an assumed market risk premium of 7.5%.
2. Download this [IBM Stock Information document](https://mycampus.aiu-online.com/courses/FIN410/Assignment_Assets/FIN410_u3ips.pdf) (.pdf file). Please note that the following information contained in this document must be used to complete the subsequent questions.
   1. IBM's beta (ß)
   2. IBM's current annual dividend
   3. IBM's 3-year dividend growth rate (g)
   4. Industry P/E
   5. IBM's EPS.
3. With the information you now have, use the CAPM to calculate IBM's required rate of return or ks.
4. Use the CGM to find the current stock price for IBM. We will call this the theoretical price or Po.
5. Now use appropriate Web resources to find IBM's current stock quote, or P. Compare Po and P. Do you see any differences? Can you explain what factors may be at work for such a difference in the two prices? This section is especially important - with more weight in grading - so you may want to do some study before answering such a question. Explain your thoughts clearly.
6. Now assume the market risk premium has increased from 7.5% to 10%; and this increase is due only to the increased risk in the market. In other words, assume krf and stock's beta remains the same for this exercise. What will the new price be? Explain what happened.
7. Recalculate IBM's stock using the P/E ratio model and the needed info found in the IBM pdf file. Explain why the present stock price is different from the price arrived at using CGM (Constant Growth Model).

To receive full credit on this assignment, please show all work, including formulae and calculations used to arrive at financial values.