# FN211 Quiz 2

**Provide precise and concise responses to the following questions referring to theories, concepts, and frameworks as discussed in the class materials and the main textbook. For quantitative problems, demonstrate the process of calculation and clearly highlight your answers as appropriate. Write down your answers clearly so that the lecturer can read them easily.**

1. (12 points) Answer the following questions.
   1.1 (3 points) What are the role of equity analysts working in a securities firm?
   1.2 (3 points) When using the CAPM, how would the required rate of return on a stock be affected if…
      a) the risk-free rate were lower?
      b) the market return were lower?
      c) the beta were higher?
   1.3 (3 points) Explain **three differences** between futures and forward contracts.
   1.4 (3 points) Explain how can Lindt, a Swiss chocolatier, smoothens its earnings using forward contracts?

1.1 Analysts are assigned to monitor a set of publicly listed firms. They analyze financial data and public records of companies to provide target price and recommend buy/sell/hold positions of such company to investors. In this sense, they help monitor performance of many companies. If analysts from different securities firms reduces target price or recommend "sell" of the same stocks at the same time, this could signal the poor performance of such companies to both investors, board of directors, and management team of the company.

1.2 If the risk-free rate were lower, the required rate of return would be lower, because it should reflect a premium above the risk-free rate (which is now lower). If the market return were lower, the required rate of return would be lower, because the premium that is added to the risk-free rate would now be lower. If the beta were higher, the required rate of return would be higher, because a given premium above the risk-free rate would now be higher.

1.3 See the handout.

1.4 This is the same as our Southwest airline example. You just change oil price to cocoa price.

2. (16 points) Answer the following questions
   2.1 (2 points) Over the last year, Calzone Corporation paid a quarterly dividend of $0.10 in each of the four quarters. The current stock price of Calzone Corporation is $39.78. What is the dividend yield for Calzone stock?
   2.2 (2 points) Assume Mess stock has a beta of 1.2. If the risk-free rate is 7% and the market return is 10%, what is the expected return of Mess stock?
   2.3 (2 points) You found that Verto Stock is expected to generate earnings of $4.38 per share this year, and that the mean PE ratio for its industry is 27.195. Use the PE valuation method to determine the value of Verto shares.

2.4 (2 points) Micro, Inc. will pay a dividend of $2.30 per share next year. If the company plans to increase its dividend by 9% per year indefinitely, and you require a 12% return on your investment, what should you pay for the company's stock?

2.5 (8 points) A company is expected to grow at a rate of 30% for the next five years. After that, competition is expected to lower the company's growth to a constant 7% indefinitely. The market risk premium is 6%, and the risk-free rate is 5%, the company's beta is 1.2, and the company just paid a dividend of $2.50. **How much is the current stock value?**

2.1 Dividend yield = $\frac{4 \times \$0.10}{\$39.78} = 1.01\%$

2.2 Expected return = 7% + 1.2(10% – 7%) = 10.6%

2.3 Value = (Expected earnings of IBM per share) × (Mean industry P/E ratio)

Value = $4.38 × 27.195

Value = $119.114

2.4 $PV_{\text{of stock}} = D_1/(k - g)$

$PV_{\text{of stock}}$ = 2.3/(0.12 – 0.09)

= $76.67 per share

2.5 Make sure you write down the whole equations for calculation too.

| Year | 0 | 1 | 2 | 3 | 4 | 5 | | required return | 12.20% |
|---|---|---|---|---|---|---|---|---|---|
| Dividends | 2.50 | 3.25 | 4.23 | 5.49 | 7.14 | 9.28 | | high growth | 30% |
| Terminal value | | | | | | 191.00 | | LT growth | 7% |
| PV | | 2.90 | 3.36 | 3.89 | 4.51 | 112.64 | | | |
| **Value of equity** | **127.28** | | | | | | | | |

3. (3 points) Explain 3 differences between futures and forward contracts.
See the handout.