For the multiple choice questions, give the correct choice and very briefly explain your answer.

1. Kellog Co. uses corn–it claims–to make Corn Flakes. It currently doesn't have a huge inventory and must continually purchase corn on the spot market. Assume that it sells a box of Corn Flakes for the same amount regardless of the cost of the corn.
   (a) Is Kellog Co. long or short corn?
   (b) What can Kellog do to hedge this risk?
   (c) What are the downside and upside to fully hedging its corn exposure?
2. The spot price of the Euro is \$1.581 = 1 Euro. The one-year riskless U.S. interest rate is 1.50%, and the one-year riskless Euro rate is 2.66%.
   (a) What is the one-year forward rate?
   (b) If a U.S. company is going to receive 1 million Euros in one year and wants to assure itself of a particular dollar value for the Euros, what could it do?
   (c) By undertaking the action in (b) above, is it always better off?
3. The price of Dell stock today is \$50 per share. Dell is expected to a pay a dividend of \$5 in exactly one year (one second before the forward contract terminates). Assume that the risk-free rate is 1.50%.
   (a) What is the one-year forward rate on a share of Dell stock?
   (b) If you are quoted a forward rate of \$60, how can you make a riskless profit?
   (c) If you are quoted a forward rate of \$45, how can you make a riskless profit?
4. How can you create a synthetic non-dividend paying share of stock (i.e., replicate the same returns you would earn if you owned the share of stock outright) from just a forward contract and debt?
5. How can you create a short synthetic forward contract (i.e., replicate the same returns you would earn if you had a short position in an actual forward contract) with respect to a share of non-dividend paying stock, e.g., Google?
6. USCO, a U.S. corporation, has only dollar-denominated debt on its balance sheet but earns approximately 80% of its revenues from EU countries. Because of tax benefits and capital requirements, it is advantageous to have U.S. debt on its balance sheet.
   (a) What is one financial risk that USCO faces?
   (b) What USCO can do to reduce or eliminate the financial risk identified above and briefly describe how your suggestions will change USCO's financial risk. Note,

there is more than one correct answer.

7. You purchase a stock for \$53 and simultaneously buy a put option on the stock with a strike price of \$60 for \$8.50. Just prior to expiration, the stock is selling for \$62.50. What is your gain or loss on your position?

   (a) \$9.50 gain

   (b) \$18.00 gain

   (c) \$1.00 gain

   (d) \$1.50 loss

8. A European call option on a stock has an exercise price of \$100 and expires in 5 months. The option is currently selling for \$3.80 per optioned share. A European put option on the same stock with the same exercise price and time to expiration is selling for \$22.20. The stock itself is selling for \$80.81. The annualized risk-free rate is 2.25%. According to the put-call parity model,

   (a) the put option is overpriced relative to the call option by \$0.13.

   (b) the call option is overpriced relative to the put option by \$0.13.

   (c) the put option is overpriced relative to the call option by \$0.59.

   (d) the put and the call are correctly priced relative to one another, but we do not know whether either is fairly priced.

9. An investor can duplicate the payoffs generated by taking a long position in a stock by

   (a) buying a put option on the stock and simultaneously selling a call option on the stock and investing the proceeds in Treasury securities.

   (b) buying a put and a call on the same stock with the same expiration date, but different strike prices.

   (c) buying a call option on the stock and simultaneously selling a call option on the stock with the same expiration date, but a different strike price.

   (d) buying a call option on the stock, simultaneously selling a put option on the stock, and investing the present value of the strike price in Treasury securities.

10. The price of a call option will be higher,

    (a) the higher the strike price is.

    (b) the less time to expiration it has.

(c) the lower the interest rates.

(d) the greater the volatility of the stock returns.

11. Being a corporate bondholder is, in effect,

(a) like owning a risk-free bond and selling a put option on the firm to the stockholders.

(b) like selling a risk-free bond and buying a call option on the firm from the stockholders.

(c) like owning a risk-free bond and selling a call option on the firm to the stockholders.

(d) like owning a risk-free bond and buying a put option on the firm.