

Take-home Practice Opportunity 6

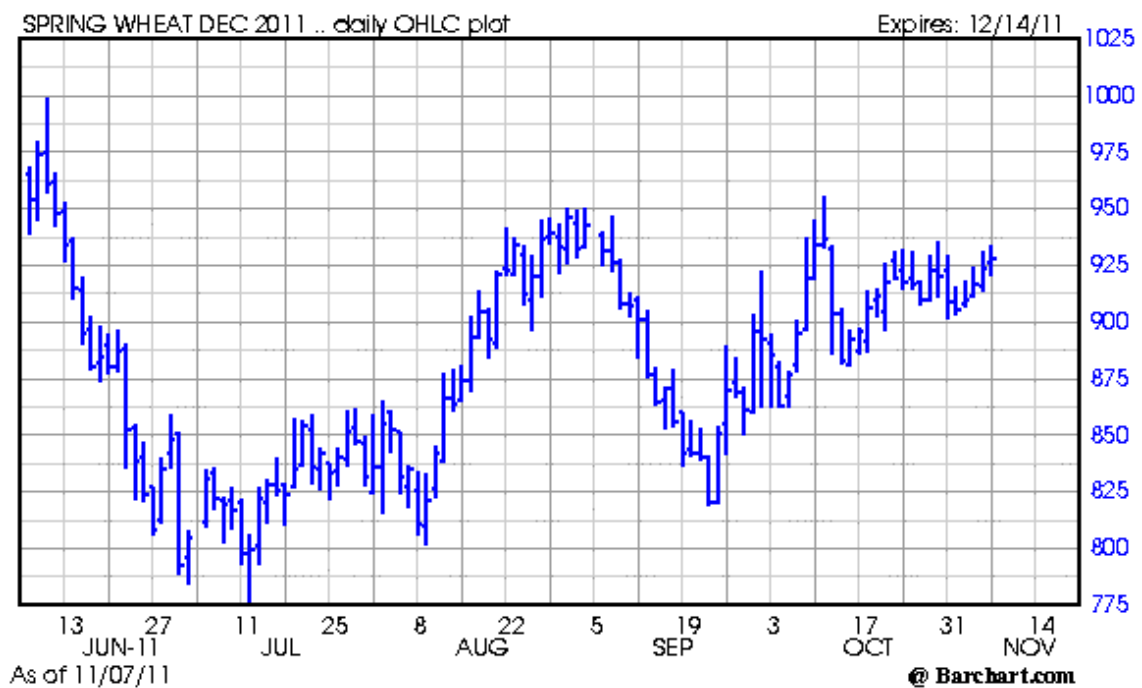
Due date: November 17, 5:00 p.m.

Basics and Intuition

1. In your own words (i.e., in a manner that you would explain it to someone who has not taken this course) explain the concept of offsetting futures contracts. When/why would you offset a futures contract? How would you offset a particular futures market position?
2. What is the difference between a futures contract price and a local cash price? What is the relationship among these two prices? Which price would a Montana farmer/rancher care most about? Why?

Speculator Market Participation

Consider the following futures price chart for the December spring wheat contract traded on the Minneapolis Grain Exchange:



Source: Minneapolis Grain Exchange

1. Provide economic intuition for the price movements observed in the price of spring wheat. Think about the supply and demand variability that drive prices. That is, why did prices fall and rise when they did?
2. If you were going to take a futures position on the December spring wheat contract, would you take a long or short position? Why?
3. Suppose that you were going to acquire five (5) futures contracts at the position you chose in (2). The associated margin requirement is 15%. If the futures price of spring wheat is \$9.25/bu, what would be the margin requirement? That is, how much money would you be required to deposit into your margin account?
4. In your own words (i.e., in a manner that you would explain it to someone who has not taken this course) explain why margin accounts are necessary.
5. Currently, you have \$10,000 in liquid assets. Reproduce (i.e., do not simply fill the table in on this sheet; you will lose points if you do) the following table to describe the following:
  - (a) How much money will be added (+) or subtracted (-) from your margin account when the futures contract is marked-to-market (margin call).
  - (b) How much is in the margin account after the margin call.
  - (c) How much money you will have to add from your liquid assets into the margin account to maintain the original margin requirement.
  - (d) What the new price of the futures contract when it is marked-to-market.
  - (e) At which point, if any, will you be placed out of the futures market, and why

Make sure to show your work when determining each of the values in the table.

Day	Price when market opens	Price change	Margin call	Margin account	Liquid assets used to replenish margin account	Liquid assets remaining	Price after marking-to-market
1	\$9.25	+ \$0.10					
2		- \$0.25					
3		- \$0.10					
4		+ \$0.30					
5		+ \$0.15					
6		+ \$0.25					
7		- \$0.10					

Now suppose that you take the *opposite* position than the one you took in the preceding problem.

1. Suppose that you were going to acquire ten (10) futures contracts at the position you chose in (2). The associated margin requirement is 10%. If the futures price of spring wheat is \$9.25/bu, what would be the margin requirement? That is, how much money would you be required to deposit into your margin account?
2. Currently, you have \$25,000 in liquid assets. Reproduce (i.e., do not simply fill the table in on this sheet; you will lose points if you do) the following table to describe the following:
  - (a) How much money will be added (+) or subtracted (–) from your margin account when the futures contract is marked-to-market (margin call).
  - (b) How much is in the margin account after the margin call.
  - (c) How much money you will have to add from your liquid assets into the margin account to maintain the original margin requirement.
  - (d) What the new price of the futures contract when it is marked-to-market.
  - (e) At which point, if any, will you be placed out of the futures market, and why

Make sure to show your work when determining each of the values in the table.

Day	Price when market opens	Price change	Margin call	Margin account	Liquid assets used to replenish margin account	Liquid assets remaining	Price after marking-to-market
1	\$9.25	+ \$0.20					
2		+ \$0.40					
3		– \$0.35					
4		+ \$0.25					
5		+ \$0.40					
6		– \$0.25					
7		+ \$0.35					

3. The price volatility (i.e., movement in prices) is much higher in this scenario than in the preceding problem. Discuss the impacts of high price volatility on market participants. Who might be worse off and who might be better off?