

## Economics 104 Homework Assignment 7

### Calculating Settlement Prices for Select Futures Contracts

This homework must be done in three steps: (1) You set the homework up per instructions within, discovering information about select futures contracts, then (2) go back to the contracts within the same week and calculate settlement and then (3) complete the assignment as part of your take-home final in Economics 104 and turn it in for a grade. Therefore, it is imperative that you do the first half of this assignment by the assignment deadline - you cannot go back and capture the required information weeks later.

The purpose of this homework is to make sure that you understand how settlement works for futures contracts. The homework requires you to look up basic information for four futures contracts on the CMEGroup website: WTI Light Sweet crude oil, the e-mini S&P 500 , No. 11 Sugar, and Copper. In the table below I have provided the month of the contract and the initial and maintenance margin for the date this assignment was modified. [Note: I had intended for you to find the initial and maintenance margins but the CME website is being redesigned and the search option for margins does not work well, so I did it for you]

Cash account: \$30,000						
Contract	Month	Initial Margin	Maint Margin	Contract size	Settlement close	Notional Contract Value
Light Sweet Crude Oil (WTI):	Jan	8,100	6,000	1000 barrels		
e-Mini S&P 500:	Mar	5,000	4,000			
No. 11 Sugar:	Mar	5,775	5,250			
Copper:	Jan	7,763	5,750			

**Step 1:** You should try to complete this step during normal market hours. Go to the CME Group website and search for the futures contracts shown on the spreadsheet. You are to find the contract size for each contract and enter it in the spreadsheet. Then you must record the current futures price of the contract (the **Last**) and calculate the notional value of a single contract. You have been given a cash value of \$30,000 for your imaginary account. You will pretend that you are **long** in each of these four contracts. Keep in mind that you do not have \$30,000 in cash plus 4 contracts. You only have \$30,000 in cash, *which is modified each day by settlement* as the value of these four contracts rises and falls.

Save the spreadsheet. You have completed the first step.

**Step 2:** On the next market day, or within three market days, go back and look up the last value for each of these four contracts. Then calculate settlement (you may want to set up a spreadsheet to do this). Calculate how much cash you now have in the account because of settlement.

*At this step, make sure you know what you are doing. Make sure that you are calculating settlement correctly.* You are allowed to compare your result with a friend's (you will not be allowed to do this for the final step). I will discuss this in class in about a week and you can also ask questions then.

**Step 3:** This step will be completed as part of your take-home final for this class. The instructions will have been provided as part of the final. Generally, however, you are going to be asked to calculate settlement for these four contracts one final time. You will be asked to tell me how much cash you have in the account.