SIMON FRASER UNIVERSITY
Faculty of Business Administration

BUS 419
Advanced Derivative Securities

The Futures and Options Trading Game

The objective of the game is to develop understanding of the practical mechanics of trading derivative securities and various speculative trading strategies which apply to futures and options. The game is set up to be paper-traded without any computer intervention. This description assumes there is one lecture/tutorial per week, in this case Wednesday is taken to be the relevant class date.

Every other Wednesday, a specific trading strategy will be described. The game involves submitting, by the next Wednesday, your "ticket" for the designated trades for that week. Your ticket will provide a record of the prices used for the trade which will be based on that day's closing prices as provided by the exchange, as well as the position size and margin requirements. **Prices used are verified by printing and including with your 'ticket' the appropriate page of prices from the exchange website and circling the prices used.** For the last assignment, all trades will returned for profit to be determined In doing the final profit calculations, you will need to keep track of your margin requirement balance and cash balance.

Evaluation will be based on a combination of participation (number of trades submitted) and execution (accurately specifying the trade and doing accurate accounting). Individuals with the highest and lowest cumulative profit record at the end of the game, who have successfully completed all the listed trades, will be identified.

Rules for the Futures and Options Game

Starting Values: $1,000,000 cash

Procedure: Every Wednesday, the trade you select will be entered in the "clearinghouse" log book under your name. (The log book is actually a folder in my office.) The value of the position will be calculated using the closing prices for that Wednesday's trade. To enter your trade you must identify on the trade sheet: 1) the commodity or commodities involved; 2) the type of trade selected, e.g., long, short, spread; 3) the number of contracts involved; 4) the values of these contracts based on the Wednesday prices; and, the margin requirement. A sample of the desired format is given below. Trades can be placed up any day up to the next Wednesday. Transactions costs are roundtrip, i.e., assessed only upon initiation of the trade.

Parameters for Futures:

Initial Margin: For naked positions and spreads positions, use the margin values as stated in the exchange website. Set the maintenance margin for all trades equal to the initial margin.
Round-trip Transactions costs:

i) Naked positions: $50/contract
ii) Intra-commodity Spreads: $5.00/spread

No interest to be paid on margin balances.

Parameters for Options:

Margins: No margin on purchased options positions. Margins the same as futures for written options positions.

Transactions Costs: $40 commission per option.

Bi-Weekly Trades

Trade #1) **Trading naked futures positions** (Long or Short)
Commodities: 4 currency futures, 1 Stock Index Future, 8 Energy Futures

Trade #2) **One-to-one futures spreads/ Tailed Spreads**
Commodities: 50 currency; 50 Tbond /50 Energy Spreads; 50 Metal Spreads

Trade #3) **Inter-commodity Spreads**
50 currency tandem spreads; 100 Soy Crush Spreads; Metal Turtles

Trade #4) **Naked Position in Options**
Commodities: 25 at-the-money stock index options

Trade #5) **Spread Trade in Options**
Commodities: Either a vertical Spread in 50 foreign stock index futures options;
or, 25 Straddles in an oil complex option

Trade #6 Profit Calculation for submitted trades.

Note 1: All trades are to be executed using prices from US CME exchanges, i.e., CBOT, CME, COMEX, NYMEX

Note 2: Due to time constraints, it is possible that all 5 trades might not be done.

EXAMPLE OF TRADE SHEET
WEEK 4 – Second Trade,
Calendar + Tailed Spreads

Name and Trade Date: Professor ABC, Sept. 19, 2018

				Starting Balance	
			Contract	**$0**	**$1,000,000**
Beginning Position	***Delivery Date***	***Price***	***Position Size***	***MarginAcct.***	***Cash***
Short 50 Aussie $	Dec. 2018	.7268	100,000	2000	<2000>
Long 50 Aussie $	June 2019	.7286	A$		<250>
		.0018			
Margin = $40/Intra spread				$2000	$997,750
				Ending Balance	

NOTE: The Margin information is under the **Intra** link.

WEEK 4 – Second Trade

				Starting Balance	
			Contract	**$2000**	**$997,750**
Beginning Position	***Delivery Date***	***Price***	***Position Size***	***MarginAcct.***	***Cash***
				Credit	Debit
Long 50 Crude Oil	Jan. 2019	70.28	1000 bbls.	85,500	<85,500>
Short 56 Crude Oil	Jan. 2021	63.21			<250>
		-7.07			
Margin = $1710/spread				$87,500	$912,000
				Ending Balance	

NOTE: The Intra Margins for crude oil vary with contract delivery dates.
Tail Hedge ratio = (70.28/63.21) = 1.11 # short (*T*) contracts = 55.59 → 56

WEEK 4 – Third Trade

				Starting Balance	
				$87,500	**$912,000**
Beginning Position	***Delivery Date***	***Price***	***Position Size***	***MarginAcct.***	***Cash***
Short 50 Gold	Dec. 2018	$1211.30	100 oz.	43,200	<43,200>
Long 46 Gold	Dec. 2012	$1322.40			<250>
		111.10			
Margin = $864/contract				$130,700	$868,550
				Ending Balance	

NOTE: Tail Hedge ratio = (1211.30/1322.40) = .916 # long (*T*) contracts = 45.8 → 46