

**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 Tuesday is taken to be the relevant class date.

Every other Tuesday, a specific trading strategy will be described. The game involves submitting, by the next Tuesday, your "ticket" for the designated trades for that week to **poitras9@sfu.ca**. 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 be 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 Tuesday, the trade you select will be entered in the "clearinghouse" log book under your name. (The log book is actually a folder in my mailbox.) The value of the position will be calculated using the settlement prices for that Tuesday'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 Monday **settlement** 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 Tuesday (it is OK to use settlement prices for other days). 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 are 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.

Note 3: Margin balances may differ from those in the examples as these vary with SPAN.

**TRADE SHEET**  
**WEEK 2 – Trade 1,**

**Name and Trade Date:** Good Student September 21, 2020

**WEEK 2 –Trade 1**

<u><b>Beginning Position</b></u>	<u><b>Delivery Date</b></u>	<u><b>Price</b></u>	<u><b>Contract Position Size</b></u>	<u><b>Starting Balance</b></u>	
				<b>\$0</b>	<b>\$1,000,000</b>
				<b>MarginAcct.</b>	<b>Cash</b>
				Credit	Debit
Long 4 Japanese Yen	Mar 2021	95115	12,500,000 Japanese Yen	<14,400>	<14,400>
					<200>
Margin = \$3600 / contract				\$14,400	\$985,400
				<b>Ending Balance</b>	

**WEEK 2 – Trade 1**

<u><b>Beginning Position</b></u>	<u><b>Delivery Date</b></u>	<u><b>Price</b></u>	<u><b>Position Size</b></u>	<u><b>Starting Balance</b></u>	
				<b>\$14,400</b>	<b>\$985,400</b>
				<b>MarginAcct.</b>	<b>Cash</b>
Short 1 E-mini S&P 500	Mar 2021	3223	\$50 / index pt.	<12,000>	<12,000>
					<50>
Margin = \$12,000 / contract				\$26,400	\$973,350
				<b>Ending Balance</b>	

**WEEK 2 –Trade 1**

<u><b>Beginning Position</b></u>	<u><b>Delivery Date</b></u>	<u><b>Price</b></u>	<u><b>Contract Position Size</b></u>	<u><b>Starting Balance</b></u>	
				<b>\$26,400</b>	<b>\$973,350</b>
				<b>MarginAcct.</b>	<b>Cash</b>
				Credit	Debit
Long 8 WTI Crude Oil	Mar 2021	41.18	1000 barrels	<32,000>	<32,000>
					<400>
Margin = \$4,000 / contract				\$58,400	\$940,950
				<b>Ending Balance</b>	

Japanese Yen Futures Settlements

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QUOTES

SETTLEMENTS

VOLUME

TIME & SALES

CONTRACT SPECS

MARGINS

CALENDAR

FUTURES

OPTIONS

Trade Date: Wednesday, 23 Sep 2020 (Final)

All market data contained within the CME Group website should be considered as a reference only and should not be used as validation against, nor as a complement to, real-time market data feeds. Settlement prices on instruments without open interest or volume are provided for web users only and are not published on Market Data Platform (MDP). These prices are not based on market activity.

MONTH	OPEN	HIGH	LOW	LAST	CHANGE	SETTLE	ESTIMATED VOLUME	PRIOR DAY OPEN INTEREST
OCT 20	95240	95330B	94825A	94945B	-445	94895	93	513
NOV 20	95330	95360B	94850	94975B	-445	94925	128	390
DEC 20	95400	95405	94850	95000	-450	94955	86,186	167,734
JAN 21	-	-	95055A	95055A	-450	95050	0	0
MAR 21	95390	95550B	95035	95165B	-450	95115	108	521
JUN 21	-	-	95220A	95220A	-455	95240	0	80

Available to trade on FX Link >

New FX Swap Rate Monitor > USING FX LINK

2020 Read the full FX Product Guide >

FX

UPDATE DATA

TECHNICAL

Short-term indicators are slightly negative, medium-term are mixed, long-term are positive

September 24 FX Commentary: Larry Shover

Now Playing

2:06

September 23 FX Commentary: Bob Iaccino

September 22 FX

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Revert Done

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CONTRACT SPECS

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BUY HISTORICAL DATA

BUY REAL TIME QUOTES

Trade Date: Wednesday, 23 Sep 2020 (Final)

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MONTH	OPEN	HIGH	LOW	LAST	CHANGE	SETTLE	ESTIMATED VOLUME	PRIOR DAY OPEN INTEREST
DEC 20	3303.75	3319.75	3221.00	3231.00	-68.00	3231.25	1,940,379	2,467,130
MAR 21	3293.50	3311.75	3213.00	3223.25A	-68.00	3223.00	1,737	5,782
JUN 21	3299.50	3299.50	3206.50A	3211.00A	-68.75	3211.50	2	38
SEP 21	-	-	3223.25A	3223.25A	-68.00	3201.00	0	1

Welcome to E-mini S&P 500 Futures

Whether you are a new trader looking to get started in futures, or an experienced trader looking to expand your exposure to the U.S. stock market, E-mini S&P 500 futures provide you with the opportunity you need.

DISCOVER E-MINI S&P 500 FUTURES

EQUITY MARKETS

FASTLY FADES

VOLUME

BTC

CME volume picked up dramatically - almost 15x

September 24 Equities Commentary: Scott Bauer

Now Playing

2:23

September 23 Equities Commentary: Bob Iaccino

Revert Done

## Crude Oil Futures Settlements

View Another Product

Trade NYMEX WTI Crude Oil futures (CL), the world's most liquid crude oil contract. When traders need the current oil price, they check the WTI Crude Oil price. WTI (West Texas Intermediate, a US light sweet crude oil blend) futures provide direct crude oil exposure and are the most efficient way to trade oil after a sharp rise in US crude oil production.

Use WTI Crude Oil futures to hedge against adverse oil price moves or speculate on whether WTI oil prices will rise or fall. Our diverse WTI futures and options suite provides more flexibility to trade oil with WTI Crude Oil price discovery. View delayed WTI Oil prices and WTI Oil price charts below.

QUOTES SETTLEMENTS VOLUME TIME & SALES CONTRACT SPECS MARGINS CALENDAR

FUTURES OPTIONS

BUY HISTORICAL DATA

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MONTH	OPEN	HIGH	LOW	LAST	CHANGE	SETTLE	ESTIMATED VOLUME	PRIOR DAY OPEN INTEREST
NOV 20	39.76	40.75	39.26	39.59	+ .13	39.93	334,442	369,448
DEC 20	40.03	41.04	39.56	39.87	+ .13	40.22	91,737	298,314
JAN 21	40.30	41.33	39.88A	40.188	+ .13	40.53	49,797	148,787
FEB 21	40.55	41.62B	40.23	40.53	+ .13	40.86	47,386	91,211
MAR 21	40.97	41.94	40.56	40.82	+ .12	41.18	23,926	137,837
APR 21	41.14	42.19B	41.04	41.09	+ .11	41.46	5,872	56,134
MAY 21	41.48	42.45B	41.18	41.36A	+ .11	41.73	2,953	51,353

### Welcome to WTI Crude Oil Futures

Whether you are a new trader looking to get started in futures, or an experienced trader looking for a better way to hedge crude oil, NYMEX WTI Light Sweet Crude Oil futures are the most efficient way to trade today's global oil markets.

DISCOVER WTI CRUDE OIL FUTURES

### WTI & the Changing Dynamics of Oil

ENERGY

UP TO 35% EIA WEATHER

Short-term national weather demand should be moderate to low

Now Playing

September 24 Energy Commentary: Bob Iacino

2:36

September 23 Energy Commentary: Dan Deming

1:46

September 22 Energy Commentary: Bob Iacino

### Quick Links