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*Major: International Business*
*Module: Commodity Market*
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# ***exercises series n°6***

***Part one :*** *Choose the right answer*

1. **Who can buy and sell a future contract in commodity exchange**

a. Speculator
b. Hedger
c. Arbitrageur
d. All of the above

2. **The basic positions on futures contract are:**

a. Long Positions
b. Short Positions
c. All of the above

3. **Which of the following items in futures contract is standardized?**

a. Total number of contracts available for buy / sell.
b. Price of the underlying financial security.
c. Size – the Lot size of the underlying item of the contract.
d. All of the Above.

4. **What is mark to market?**

a. Mark to market (M2M) or Marking to market is a procedure which tells your profit or loss on monthly basis as long you hold the futures contract.
b. Mark to market (M2M) or Marking to market is a procedure which adjusts your profit or loss on the basis of volume traded as long you hold the futures contract.
c. Mark to market (M2M) or Marking to market is a procedure which adjusts your profit or loss on day to day basis as long you hold the futures contract.

5. **If the a trader expect futures price to goes up than he take?**

   a. Short position
   b. Long position
   c. None of the above
   d. Both (a) & (b)

***Part two*** *answer the following questions*

1. Suppose that trader enter into a long futures contract to buy June oil for $90 per barrel. The size of the contract is 2,000 barrel. The initial margin is $9,000, and the maintenance margin

is $7200. What change in the futures price will lead to a margin call? What happens if trader does not meet the margin call?

2. Suppose that in September 2022 a company takes a long position in a contract on May 2023 crude oil futures. It closes out its position in April 2023. The futures price (per barrel) is $78.5 when it enters into the contract, $80.50 when it closes out its position, and $79.10 at the end of December 2012. One contract is for the delivery of 2,000 barrels. What is the company's total profit? When is it realized? Assume that the company has a December 31 year-end.
3. A company enters into a short futures contract to sell 5,000 bushels of wheat for 450 cents per bushel. The initial margin is 8% and the maintenance margin is 75%. What price change would lead to a margin call? Under what circumstances could $1,500 be withdrawn from the margin account?

## ***Part three***

I. A trader expects oil prices to rise over the next few months, through a commodity broker, he buys four (4) December oil futures at $80 per barrels. Assume the initial margin is 8% and the maintenance margin is 75%; and that the size of oil futures contract is 1000 barrels/contract. If the Oil futures contract closing price in each day following the contract are:

| **Day** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **price** | 80.2 | 80.3 | 80.5 | 80.9 | 81.1 | 80.8 | 80.2 | 79.7 | 79.3 | 78.7 | 79.5 | 80.4 | 80.9 |

Calculate the initial margin and maintenance margin? which position the trader should take? Show the mark-to-market for the trader position, and determine the gain and the loss at each day?

II. A trader expects Corn prices to fall over the next few months, through a commodity broker, he sells two (2) October Corn futures at $6.85 per bushel. Assume the initial margin is 6% and the maintenance margin is 80%; and that the size of Corn futures contract is 5000 bushels/contract. If the Corn futures contract closing price in each day following the contract are:

| **Day** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **price** | 6.88 | 6.9 | 6.91 | 6.90 | 6.87 | 6.85 | 6.81 | 6.79 | 6.75 | 6.7 | 6.68 | 6.7 | 6.69 |

Calculate the initial margin and maintenance margin? which position the trader should take? Show the marking to market for the trader position, and determine the gain and the loss at each day?