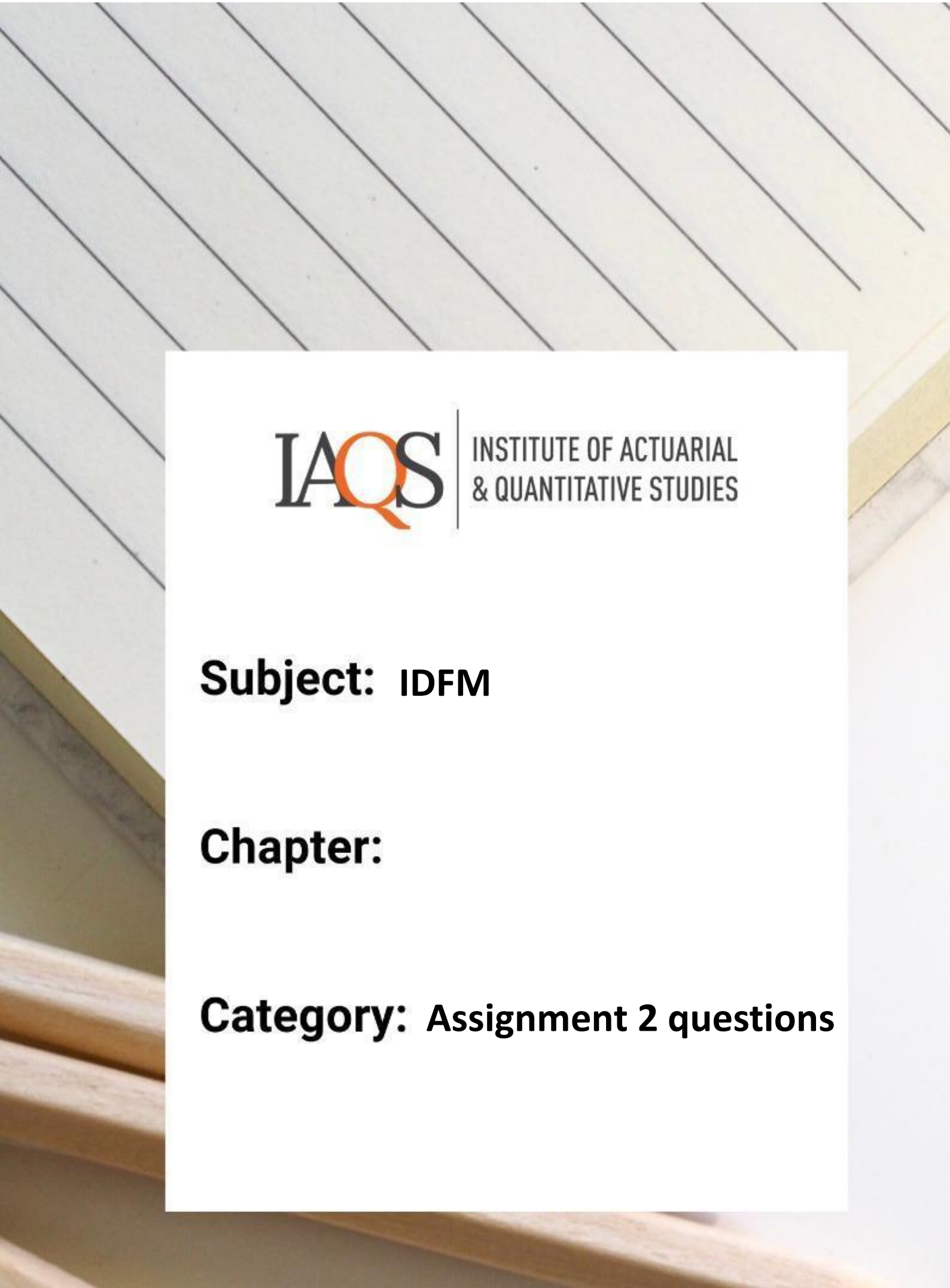

Subject: IDFM

Chapter:

Category: Assignment 2 questions

1. Is there any difference between currency forwards and futures markets?

a) No, both deal with future delivery of foreign exchange
b) No, both markets can be availed of through the internet
c) Yes, only a limited number of currencies are traded in the futures market and that also in standardized amounts.
d) No, if one agrees on the date of delivery and brokerage, it is immaterial which of the markets one is talking of.

2. _____ is the minimum amount which must be remained in a margin account.

a) Maintenance margin
b) Variation margin
c) Initial margin
d) None of the above

3. The basic difference between speculators and hedgers in futures contracts is that speculators:

a) Will profit regardless of the direction of price change.
b) Are not protecting their commodity holdings.
c) Are concerned only with long-term price movements.
d) Take a position in more than one commodity at a time.

4. Hershey's Chocolate must purchase coca to make its products. The company is concerned that prices may rise prior to building inventory for Halloween sales. Analysts project that price per ton could vary from $1250 to $11500. A September futures contract can be obtained with a $1300 purchase price. What is Hershey's risk in this situation?

a) Coca prices will rise above $1300, and Hershey will purchase its coca at a price of $1300.
b) Coca prices will decline below $1300 and Hershey will purchase its coca at a price of $1300.
c) Coca prices will hit $1300 and the contract was a waste of time
d) Hershey has no risk in this situation.

ASSIGNMENT 2 QUESTIONS

5. An investor sells a futures contract on an asset when the futures price is $1500. Each contract is on 100 units of the asset. The contract is closed out when the futures price is $1540. Which of the following is true:

a) The investor has made a gain of $4000.
b) The investor has made a loss of $4000.
c) The investor has made a gain of $2000.
d) The investor has made a loss of $2000.

6. A short forward contract on an asset plus a long position in a European call option on the asset with a strike price equal to the forward price is equivalent to

a) A short position in a call
b) A short position in a put
c) A long position in a put
d) None of the above

7. A trader has a portfolio worth $5 million that mirrors the performance of a stock index. The stock index is currently 1250. Futures contracts trade on the index with one contract being on 250 times the index. To remove market risk from the portfolio the trader should

a) Buy 16 contracts
b) Sell 16 contracts
c) Buy 20 contracts
d) Sell 20 contracts

8. A company enters into a short futures contract to sell 50000 units of a commodity for 70 cents per unit. The initial margin is $4000 and the maintenance margin is $3000. What is the futures price per unit above which there will be a margin call?

a) 78 cents
b) 76 cents
c) 74 cents
d) 72 cents

9. The standard deviation of monthly changes in the spot price of live cattle is (in cents per pound) 1.2. The standard deviation of monthly changes in the futures price of live cattle for the closest contract is 1.4. The correlation between the futures price changes

and the spot price changes is 0.7. It is now October 15. A beef producer is committed to purchasing 200,000 pounds of live cattle on November 15. The producer wants to use the December live-cattle futures contracts to hedge its risk. Each contract is for the delivery of 40,000 pounds of cattle. What strategy should the beef producer follow?

a) The beef producer should take a long position in 3 December contracts closing out the position on November 15.
b) The beef producer should take a short position in 3 December contracts closing out the position on November 15.
c) The beef producer should take a long position in 5 December contracts closing out the position on November 15.
d) The beef producer should take a short position in 5 December contracts.

10. On July 1, an investor holds 50,000 shares of a certain stock. The market price is $30 per share. The investor is interested in hedging against movements in the market over the next month and decides to use the September Mini S&P 500 futures contract. The index is currently 1,500 and one contract is for delivery of $50 times the index. The beta of the stock is 1.3. What strategy should the investor follow?

a) A long position in 26 contracts
b) A long position in 30 contracts
c) A long position in 50 contracts
d) A short position in 26 contracts.

11. A trader owns 55,000 units of a particular asset and decides to hedge the value of her position with futures contracts on another related asset. Each futures contract is on 5,000 units. The spot price of the asset that is owned is $28 and the standard deviation of the change in this price over the life of the hedge is estimated to be $0.43. The futures price of the related asset is $27 and the standard deviation of the change in this over the life of the hedge is $0.40. The coefficient of correlation between the spot price change and futures price change is 0.95.

(a) What is the minimum variance hedge ratio?

(b) Should the hedger take a long or short futures position?

(c) What is the optimal number of futures contracts when issues associated with daily settlement are not considered?

(d) How can the daily settlement of futures contracts be taken into account?

ASSIGNMENT 2 QUESTIONS

12. An investor is most likely to consider adding alternative investments to a traditional investment portfolio because of their:

a) Low sharp ratio
b) High correlation with traditional investments
c) Diversifying potential

13. Which of the following is least likely to be a characteristic of a hedge fund?

a) It is an aggressively managed portfolio of investments across asset classes.
b) Investors may be required to keep their money in the hedge fund for a minimum period known as lock-up period.
c) It is an investment opportunity available to the public and requires hefty investment.

14. Risks in infrastructure investing are *most likely* greatest when the project involves:

a) Construction of infrastructure assets.
b) Investment in existing infrastructure assets.
c) Investing in assets that will be leased back to a government.

15. Judy decides to take a short position in 20 contracts of S&P 500 futures. Each contract is for the delivery of 250 units of the index at a price of 1500 per unit, exactly one month from now. The initial margin is 5% of the notional value, and the maintenance margin is 90% of the initial margin. Judy earns a continuously compounded risk-free interest rate of 4% on her margin balance. The position is marked-to-market on a daily basis.

On the day of the first marking-to-market, the value of the index drops to 1498. On the day of the second marking-to-market, the value of the index is X and Judy is not required to add anything to the margin account.

Calculate the largest possible value of X.

16. On March 1 the price of oil is $60 and the July futures price is $59. On June 1 the price of oil is $64 and the July futures price is $63.50. A company entered into a July futures contract on March 1 to hedge the purchase of oil on June 1. It closed out its position on June 1.

After taking account of the result of hedging, what is the effective price paid by the company for the oil?

ASSIGNMENT 2 QUESTIONS

17. Suppose that the standard deviation of monthly changes in the price of commodity A is $2. The standard deviation of monthly changes in a futures price for a contract on commodity B (which is similar to commodity A) is $3. The correlation between the futures price and the commodity price is 0.9.
What hedge ratio should be used when hedging a one month exposure to the price of commodity A?

18. A company wishes to hedge its exposure to a new fuel whose price changes have a 0.6 correlation with gasoline futures price changes. The company will lose $1 million for each 1 cent increase in the price per gallon of the new fuel over the next three months. The new fuel's price change has a standard deviation that is 50% greater than price changes in gasoline futures prices. If gasoline futures are used to hedge the exposure what should the hedge ratio be? What is the company's exposure measured in gallons of the new fuel? What position measured in gallons should the company take in gasoline futures? How many gasoline futures contracts should be traded? Each contract is on 42,000 gallons.