Chapter 8
Futures contracts

Computations

1. Assume that a futures contract on Treasury bonds with a face value of $100,000 is purchased at 93-00. If the same contract is later sold at 94-18, what is the gain, ignoring transactions costs?

2. The value of an S&P 500 futures contract is $500 times the index. Assume the futures price on the S&P 500 index is 1612 at the time of purchase. If the index price is $1619 when the position is closed out, the gain is

3. Marcia buys an S&P 500 futures contract with a September settlement date when the index is 1,750. By the settlement date, the S&P 500 index falls to 1,400. The return on Marcia's position in the S&P 500 futures contract is ____ percent.

4. Laura sells an S&P 500 futures contract with a September settlement date when the index is 1,750. By the settlement date, the S&P 500 index falls to 1,400. The return on Laura's position in the S&P 500 futures contract is ____ percent.

5. Bill Baher, a private investor, purchased a futures contract on Treasury bonds at a price of 102-12. Two months later, Baher sells the same futures contract in order to close out the position. At that time, the futures contract specifies 103-15. What is Baher's nominal profit? The par value of the futures contract is $100,000.

6. Clarke plans to satisfy cash needs in nine months by selling its Treasury bond holdings for $4 million. However, Clarke is concerned that interest rates might increase over the next three months. To hedge against this possibility, Clarke plans to sell Treasury bond futures. Thus, Clarke sells ____ futures contract for a price of 99-12. Assuming that the actual price of the futures contract declined to 97-20, Clarke would make a ____ of $____ from closing out the futures position.

True/False Problems

1. Financial futures contracts on stock indexes are referred to as interest rate futures.

2. Purchasers of financial futures contracts usually know who the sellers are, and vice versa.

3. Market participants who expect the stock market to perform poorly before the settlement date may consider selling S&P 500 index futures.

4. The value of a stock index futures contract has little correlation with the value of the underlying stock index.

Multiple Choice Problems

A(n) ____ is a standardized agreement to deliver or receive a specified amount of a specified financial instrument at a specified price and date.

a. option contract
b. brokerage contract
c. financial futures contract
d. margin call

Take positions in futures to reduce their exposure to future movements in interest rates or stock prices.

a. Hedgers
b. Day traders
c. Position traders
d. None of the above

If the prices of Treasury bonds ____, the value of an existing Treasury bond futures contract should ____.

a. increase; be unaffected
b. decrease; be unaffected
c. A and B
d. decrease; decrease
e. decrease; increase

Assume that a T-bill futures contract with a face value of $1 million is purchased at a price of $95.00 per $100 face value. At settlement, the price of T-bills is $95.50. What is the difference between the selling and purchase price of the futures contract?

a. $.50
b. $50
c. $500
d. $5,000
e. none of the above

A financial institution that maintains some Treasury bond holdings sells Treasury bond futures contracts. If interest rates increase, the market value of the bond holdings will ____ and the position in futures contracts will result in a ____.

a. increase; gain
b. increase; loss
c. decrease; gain
d. decrease; loss

If a financial institution expects that the market value of its municipal bonds will decline because of economic conditions, it could hedge its position by ____ futures contracts on ____.

a. purchasing; Treasury bonds

b. purchasing; the S&P 500 Index
c. purchasing; a Municipal Bond Index
d. selling; a Municipal Bond Index

The net gain or loss on a futures contract for a stock index that is not closed out is based on the difference between the futures price when the initial position was created and the futures price at

a. the settlement date.
b. the date at which the futures price reaches its maximum.
c. the date at which the futures price reaches its minimum.
d. the date three months beyond the date when the initial position was taken.

Financial leverage, when used in association with a futures contract, ____ the positive returns and ____ losses.

a. magnifies; reduces
b. reduces; magnifies
c. magnifies; magnifies
d. reduces; reduces

Assume a corporation is receiving a large amount of funds in the near future. The company plans to use the funds to purchase municipal bonds. Also assume that the company is concerned that interest rates decrease before the purchase date, which would make the municipal bonds more expensive. In order to hedge against this possibility, the company should ____ MBI futures contracts. If interest rates decrease, the futures contract will generate a ____.

a. sell; loss
b. purchase; gain
c. purchase; loss
d. sell; gain
e. none of the above