Review Test Submission: Module 4 Self Check Quiz

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Course	EN.555.644.81.FA19 Introduction to Financial Derivatives
Test	Module 4 Self Check Quiz
Started	9/23/19 9:55 PM
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Status	Completed
Attempt Score	0 out of 0 points
Time Elapsed	22 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers, Feedback, Incorrectly Answered Questions

Question 1

0 out of 0 points

Determination of Forward and Futures Prices.

Selected Answer: b. The S&P 500 index

Answers:
a. IBM Stock
b. The S&P 500 index
c. Copper
d. The Canadian dollar

Response Feedback: A, B, and D are investment assets (held by at least some investors purely for investment purposes). C is a consumption asset.

Question 2

0 out of 0 points

An investor shorts 100 shares when the share price is $50 and closes out the position six months later when the share price is $43. The shares pay a dividend of $3 per share during the six months. How much does the investor gain?

Selected Answer: b. $400

Answers:
a. $1,000

b. $400

c. $700

d. $300

Response Feedback: The investor gains $7 per share because he or she sells at $50 and buys at $43. However, the investor has to pay the $3 per share dividend. The net profit is therefore 7−3 or $4 per share.
100 shares are involved. The total gain is therefore $400.

Question 3

0 out of 0 points

The spot price of an investment asset that provides no income is $30 and the risk-free rate for all maturities (with continuous compounding) is 10%. What is the three-year forward price?

Selected Answer: a. $40.50

Answers: a. $40.50

b. $33.00

c. $22.22

d. $33.16

Response Feedback: The 3-year forward price is the spot price grossed up for 3 years at the risk-free rate. It is $30e^{0.1x3}$=$40.50.

Question 4

0 out of 0 points

The spot price of an investment asset is $30 and the risk-free rate for all maturities is 10% with continuous compounding. The asset provides an income of $2 at the end of the first year and at the end of the second year. What is the three-year forward price?

Selected Answer: d. $35.84

Answers: a. $45.15

b. $40.50

c. $19.67

d. $35.84

Response Feedback: The present value of the income is $2e^{-0.1x1}+2e^{-0.1x2}$= $3.447. The three year forward price is obtained by subtracting the present value of the income from the current stock price and then grossing up the result for three years at the risk-free rate. It is $(30-3.447)e^{-0.1x3}$ = $35.84.

Question 5

0 out of 0 points

An exchange rate is 0.7000 and the six-month domestic and foreign risk-free interest rates are 5% and 7% (both expressed with continuous compounding). What is the six-month forward rate?

Selected Answer: d. 0.6930

Answers:
a. 0.7249
b. 0.7177
c. 0.7070
d. 0.6930

Response Feedback: The six-month forward rate is $0.7000e^{-(0.05-0.07)x0.5}=0.6930$.

Question 6

0 out of 0 points

Which of the following is true?

Selected Answer: a. The convenience yield is always positive or zero.

Answers:
a. The convenience yield is always positive or zero.
b. The convenience yield is always positive for an investment asset.
c. The convenience yield is always negative for a consumption asset.
d. The convenience yield measures the average return earned by holding futures contracts.

Response Feedback: The convenience yield measures the benefit of owning an asset rather than having a forward/futures contract on an asset. For an investment asset it is always zero. For a consumption asset it is greater than or equal to zero.

Question 7

0 out of 0 points

A short forward contract that was negotiated some time ago will expire in three months and has a delivery price of $40. The current forward price for three-month forward contract is $42. The three month risk-free interest rate (with continuous compounding) is 8%. What is the value of the short forward contract?

Selected Answer: d. −$1.96

Answers:
a. +$2.00
b. −$2.00
c. +$1.96

d. −$1.96

Response Feedback: The contract gives one the obligation to sell for $40 when a forward price negotiated today would give one the obligation to sell for $42. The value of the contract is the present value of −$2 or −2e-0.08×0.25 = −$1.96.

Question 8

0 out of 0 points

The spot price of an asset is positively correlated with the market. Which of the following would you expect to be true?

Selected Answer: c. The forward price is less than the expected future spot price.

Answers:

a. The forward price equals the expected future spot price.

b. The forward price is greater than the expected future spot price.

c. The forward price is less than the expected future spot price.

d. The forward price is sometimes greater and sometimes less than the expected future spot.

Response Feedback: When the spot price is positively correlated with the market the forward price is less than the expected future spot price. This is because the spot price is expected to provide a return greater than the risk-free rate and the forward price is the spot price grossed up at the risk-free rate.

Question 9

0 out of 0 points

Which of the following describes the way the futures price of a foreign currency is quoted by the CME group?

Selected Answer: a. The number of U.S. dollars per unit of the foreign currency.

Answers:

a. The number of U.S. dollars per unit of the foreign currency.

b. The number of the foreign currency per U.S. dollar.

c. Some futures prices are always quoted as the number of U.S. dollars per unit of the foreign currency and some are always quoted the other way round.

d. There are no quotation conventions for futures prices.

Response Feedback: The futures price is quoted as the number of US dollars per unit of the foreign currency. Spot exchange rates and forward exchange rates are sometimes quoted this way and sometimes quoted the other way round.

Question 10

0 out of 0 points

Which of the following describes the way the forward price of a foreign currency is quoted?

Selected Answer: c. Some futures prices are always quoted as the number of U.S. dollars per unit of the foreign currency and some are always quoted the other way round.

Answers:

a. The number of U.S. dollars per unit of the foreign currency

b. The number of the foreign currency per U.S. dollar.

c. Some futures prices are always quoted as the number of U.S. dollars per unit of the foreign currency and some are always quoted the other way round.

d. There are no quotation conventions for forward prices.

Response Feedback: The futures price is quoted as the number of US dollars per unit of the foreign currency. Spot exchange rates and forward exchange rates are sometimes quoted this way and sometimes quoted the other way round.

Question 11

0 out of 0 points

Which of the following is NOT a reason why a short position in a stock is closed out?

Selected Answer: c. The broker is no longer able to borrow shares from other clients.

Answers:

a. The investor with the short position chooses to close out the position.

b. The lender of the shares issues instructions to close out the position.

c. The broker is no longer able to borrow shares from other clients.

d. The investor does not maintain margins required on his/her margin account.

Response Feedback: A, C, and D are all reasons why the short position might be closed out. B is not. The lender of shares cannot issue instructions to close out the short position.

Question 12

0 out of 0 points

Which of the following is NOT true?

Selected Answer: c. Investment assets are never held for consumption.

Answers: a. Gold and silver are investment assets.

b. Investment assets are held by significant numbers of investors for investment purposes.

c. Investment assets are never held for consumption.

d. The forward price of an investment asset can be obtained from the spot price, interest rates, and the income paid on the asset.

Response Feedback: Investment assets are sometimes held for consumption. Silver is an example. To be an investment asset, an asset has to be held for investment by at least some traders.

Question 13

0 out of 0 points

What should a trader do when the one-year forward price of an asset is too low? Assume that the asset provides no income.

Selected Answer: d. The trader should short the asset, invest the proceeds of the short sale at the risk-free rate, enter into a long forward contract to buy the asset in one year.

Answers: a. The trader should borrow the price of the asset, buy one unit of the asset and enter into a short forward contract to sell the asset in one year.

b. The trader should borrow the price of the asset, buy one unit of the asset and enter into a long forward contract to buy the asset in one year.

c. The trader should short the asset, invest the proceeds of the short sale at the risk-free rate, enter into a short forward contract to sell the asset in one year.

d. The trader should short the asset, invest the proceeds of the short sale at the risk-free rate, enter into a long forward contract to buy the asset in one year.

Response Feedback: If the forward price is too low relative to the spot price the trader should short the asset in the spot market and buy it in the forward market.

Question 14

0 out of 0 points

Which of the following is NOT true about forward and futures contracts?

Selected Answer: a. Forward contracts are more liquid than futures contracts.

Answers: a. Forward contracts are more liquid than futures contracts.

b.
The futures contracts are traded on exchanges while forward contracts are traded in the over-the-counter market.

c.
In theory forward prices and futures prices are equal when there is no uncertainty about future interest rates.

d.
Taxes and transaction costs can lead to forward and futures prices being different.

Response Feedback: Futures contracts are more liquid than forward contracts. To unwind a futures position it is simply necessary to take an offsetting position. The statements in B, C, and D are correct.

Question 15

0 out of 0 points

As the convenience yield increases, which of the following is true?

Selected Answer: b.
The one-year futures price as a percentage of the spot price decreases.

Answers:
a.
The one-year futures price as a percentage of the spot price increases.

b.
The one-year futures price as a percentage of the spot price decreases.

c.
The one-year futures price as a percentage of the spot price stays the same.

d. Any of the above can happen.

Response Feedback: As the convenience yield increases, the futures price declines relative to the spot price. This is because the convenience of owning the asset (as opposed to having a futures contract) becomes more important.

Question 16

0 out of 0 points

As inventories of a commodity decline, which of the following is true?

Selected Answer: d. Any of the above can happen.

Answers:
a.
The one-year futures price as a percentage of the spot price increases.

b.
The one-year futures price as a percentage of the spot price decreases.

c.

The one-year futures price as a percentage of the spot price stays the same.

d. Any of the above can happen.

Response Feedback: When inventories decline, the convenience yield increases and the futures price as a percentage of the spot price declines.

Question 17

0 out of 0 points

Which of the following describes a known dividend yield on a stock?

Selected Answer: b. Dividends per year as a percentage of today's stock price are known.

Answers:

a. The size of the dividend payments each year is known.

b. Dividends per year as a percentage of today's stock price are known.

c.
Dividends per year as a percentage of the stock price at the time when dividends are paid are known.

d. Dividends will yield a certain return to a person buying the stock today.

Response Feedback: The dividend yield is the dividend per year as a percent of the stock price at the time when the dividend is paid.

Question 18

0 out of 0 points

Which of the following is an argument used by Keynes and Hicks?

Selected Answer: a.
If hedgers hold long positions and speculators holds short positions, the futures price will tend to be higher than the expected future spot price.

Answers: a.
If hedgers hold long positions and speculators holds short positions, the futures price will tend to be higher than the expected future spot price.

b.
If hedgers hold long positions and speculators holds short positions, the futures price will tend to be lower than the expected future spot price.

c.
If hedgers hold long positions and speculators holds short positions, the futures price will tend to be lower than today's spot price.

d.
If hedgers hold long positions and speculators holds short positions, the futures price will tend to be higher than today's spot price.

Response

Feedback: Keynes and Hicks argued that hedgers will be prepared to accept negative returns on average because of the benefits of hedging whereas speculators require positive returns on average. This leads to A.

Question 19

0 out of 0 points

Which of the following describes contango?

Selected Answer: d. The futures price is above the expected future spot price.

Answers:
a. The futures price is below the expected future spot price.
b. The futures price is below today's spot price.
c. The futures price is a declining function of the time to maturity.
d. The futures price is above the expected future spot price.

Response Feedback: Contango is defined as the futures price being above the expected future spot price. It is also sometimes used to describe the situation where the futures price is above the spot price.

Question 20

0 out of 0 points

Which of the following is true for a consumption commodity?

Selected Answer: d.
The futures price can be determined with reasonable accuracy from the spot price and interest rates.

Answers:
a.
There is no limit to how high or low the futures price can be, except that the futures price cannot be negative.

b. There is a lower limit to the futures price but no upper limit.

c.
There is an upper limit to the futures price but no lower limit, except that the futures price cannot be negative.

d.
The futures price can be determined with reasonable accuracy from the spot price and interest rates.

Response Feedback: If the futures price of a consumption commodity becomes too high an arbitrageur will buy the commodity and sell futures to lock in a profit. An arbitrageur cannot follow the opposite strategy of buying futures and selling or shorting the asset when the futures price is low. This is because consumption assets cannot be shorted . Furthermore, people who hold the asset in general do so because they need the asset for their business. They are not prepared to swap their position in the asset for a similar position in a futures. Consequently, there is an upper limit but no lower limit to the futures price.

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← **OK**