CHAPTER 46
BASICS OF DERIVATIVE PRICING AND VALUATION

1. (A) **Lower convenience yield for a commodity.**

Explanation

Either a decrease in benefits or an increase in costs of holding the underlying asset would increase the no-arbitrage price of a forward contract.

For Further Reference:

(Study Session 15, Module 46.1, LOS 46.e)

CFA® Program Curriculum, Volume 5, page 234

Related Material

SchweserNotes - Book 4

2. (A) **$0 Out-of-the-money**

Explanation

The option has an intrinsic value of $0, because the stock price is above the exercise price. Put value is MAX (0, X-S). Equivalently, the option is out-of-the-money.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

3. (B) **the difference between the stock price and the exercise price.**

Explanation

If the stock price is greater than the strike price at expiration, the payoff to a call option on the stock equals the stock price minus the strike price, while a put option on the stock expires worthless.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

4. (A) **less than the future value of the spot price.**

Explanation

An opportunity for arbitrage exists if the forward price is not equal to the future value of the spot price, compounded at the risk-free rate over the period of the forward contract.

(Study Session 15, Module 46.1, LOS 46.d)

Related Material

SchweserNotes - Book 4

5. (B) He will have the option exercised against him at $94 by the person who is long the put option.

Explanation

Anthony has sold the right to sell the stock at $94. That is, he received a payment upfront for the payer to have the right but not the obligation to sell the stock at $94. Because the option is in-the-money at expiration, MAX (0, X-S), the holder will exercise his right to sell at $94.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

6. (B) 65.8

Explanation

$F_0(T) = [S_0 - \text{net cost of carry}] \times (1 + Rf)^T$

$= [62 - (-3)] \times (1.025)^{6/12} = 65.81$

(Study Session 15, Module 46.1, LOS 46.c)

Related Material

SchweserNotes - Book 4

7. (A) a forward rate agreement.

Explanation

The arbitrageur has created a loan (borrowing not lending) at a fixed rate for two years beginning one year from now. This is referred to as a forward rate agreement.

For Further Reference:

(Study Session 15, Module 46.2, LOS 46.f)

CFA® Program Curriculum, Volume 5, page 239

Related Material

SchweserNotes - Book 4

8. (A) can be used to hedge the interest rate exposure of a floating-rate loan.

Explanation

An FRA settles in cash and carries both default risk and interest rate risk, even when based on an essentially risk-free rate. It can be used to hedge the risk/uncertainty about a future payment on a floating rate loan.

(Study Session 15, Module 46.2, LOS 46.f)

Related Material

SchweserNotes - Book 4

9. (A) storage costs.

Explanation

Costs of holding an asset increase its no-arbitrage forward price. Benefits from holding the asset, such as dividends or convenience yield, decrease its no-arbitrage forward price.

(Study Session 15, Module 46.1, LOS 46.e)

Related Material

SchweserNotes - Book 4

10. (A) the risk of a derivative is based entirely on the risk of its underlying asset.

Explanation

Because the risk of a derivative is based entirely on the risk of its underlying asset, we can construct a perfectly hedged portfolio of a derivative and its underlying asset. The future payoff of a perfectly hedged position is certain and can therefore be discounted at the risk-free rate.

(Study Session 15, Module 46.1, LOS 46.a)

Related Material

SchweserNotes - Book 4

11. (A) Increase Increase

Explanations

Greater volatility in the price of the underlying asset increases the values of both puts and calls because options are "one-sided." Since an option's value can fall no lower than zero (it expires out of the money), increased volatility increases an option's upside potential but does not increase its downside exposure.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4

12. (A) can account for contingent payoffs of options.

Explanation

Binomial models are used to value options because they can account for contingent payoffs (i.e., the exercise value after an up-move or down-move in the underlying asset price). The size of an up-move in a binomial model represents an assumption about the volatility of the underlying asset price. Binomial models can use risk-neutral pseudo-probabilities and thereby use the risk-free rate to discount the expected future payoff.

(Study Session 15, Module 46.4, LOS 46.n)

Related Material

SchweserNotes - Book 4

13. (A) increase the no-arbitrage forward price.

Explanation

With a negative cost of carry (costs of holding the underlying are greater than benefits from holding the underlying), the no-arbitrage forward price is higher than it would be in the absence of costs or benefits of holding the underlying.

(Study Session 15, Module 46.1, LOS 46.c)

Related Material

SchweserNotes - Book 4

14. (B) The June $55.00 call is an in-the-money option.

Explanation

The June $55.00 call option is out-of-the money. It gives the purchaser the right to buy Printer, Inc. for $55.00 when they would only have to pay $50.00 in the market.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

15. (B) may be worth less than the put that is nearer to expiration.

Explanation

Normally, options with greater time to expiration are worth more than otherwise identical options that are nearer to expiration. However, in some circumstances, this relationship may not hold for European puts. For example, if the price of the underlying asset goes to zero, the European put with less time to expiration may be worth more because the put holder will receive the exercise price earlier.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.k)

CFA® Program Curriculum, Volume 5, page 248

Related Material

SchweserNotes - Book 4

16. (B) typically zero at initiation.

Explanation

The value of a forward or futures contract is typically zero at initiation, and at expiration is the difference between the spot price and the contract price. The price of a forward or futures contract is defined as the price specified in the contract at which the two parties agree to trade the underlying asset on a future date.

(Study Session 15, Module 46.1, LOS 46.b)

Related Material

SchweserNotes - Book 4

17. (C) above the strike price, a put option is out-of-the-money.

Explanation

When the stock price is above the strike price, a put option is out-of-the-money. When the stock price is below the strike price, a call option is out-of-the-money.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

18. (A) A put with a strike price of $35.00 is in-the-money.

Explanation

A put is in-the-money when its exercise price is higher than the market value of the underlying asset. A put with a $35.00 strike price allows the trader to sell 100 shares of stock for $35.00 per share, which is $5.00 higher than the prevailing market value. This gives the put a value, hence, it is in-the-money. For a call to be in-the-money, its strike price would have to be lower than the market value of the underlying common stock, allowing the trader to purchase 100 shares at a price below the prevailing market value. At-the-money is when the strike price and asset market value are equal. A put with a strike price of $20.00 does not have intrinsic value because it is below the $30 price of the stock. It does have time value meaning it is worth something because there is the possibility the put will come into the money before it expires.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

19. (B) $V_t = 5 - F/(1 + Rf)^{(T - t)}$

Explanation

The value of a long position in a forward contract prior to settlement (expiration) is: $V_t = S - F/(1 + Rf)^{(T - t)}$ when the net cost of carry is zero.

For Further Reference:

(Study Session 15, Module 46.1, LOS 46.d)

CFA® Program Curriculum, Volume 5, page 234

Related Material

SchweserNotes - Book 4

20. (A) writing the call option and buying the put option.

Explanation

The put-call-forward parity relationship may be expressed as: $P_0 - C_0 = [X - F_0 (T)] / (1 + Rf)^T$

That is, at initiation of a forward contract on the underlying asset, buying a put option and writing a call option with exercise price X will have the same cost as a risk-free bond which, at expiration of the forward and options, will pay the difference between X and the forward price.

(Study Session 15, Module 46.3, LOS 46.m)

Related Material

SchweserNotes - Book 4

21. (A) **less than $3.00.**

Explanation

The probability-weighted average is an estimate of the option's expected value after one period. To determine the option's value the analyst must discount this expected value by one period.

(Study Session 15, Module 46.4, LOS 46.n)

Related Material

SchweserNotes - Book 4

22. (B) **equal to the entire premium for an out-of-the-money option.**

Explanation

The price (or premium) of an option is its intrinsic value plus its time value. An out-of-the-money option has an intrinsic value of zero, so its entire premium consists of time value. Time value is zero at an option's expiration date. Time value is the amount by which an option's premium exceeds its intrinsic value.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.k)

CFA® Program Curriculum, Volume 5, page 248

CFA® Program Curriculum, Volume 5, page 248

Related Material

SchweserNotes - Book 4

23. (A) **Its value.**

Explanation

As with other derivatives, the price of an interest rate swap (the fixed rate specified in the contract) is typically set such that the value of the swap is zero at initiation.

(Study Session 15, Module 46.2, LOS 46.i)

Related Material

SchweserNotes - Book 4

24. (C) increases as the stock price increases above the strike price, while a put option's intrinsic value increases as the stock price decreases below the strike price.

Explanation

For a call option, as the underlying stock price increases above the strike price, the option moves farther into the money, and the intrinsic value is increasing. For a put option, as the underlying stock price decreases below the strike price, the option moves farther into the money, and the intrinsic value is increasing.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4

25. (B) depends on the price of the underlying asset.

Explanation

The value of a forward contract is zero at initiation, and during its life its value depends on changes in the spot price of the underlying asset. At expiration its value is based on the difference between the spot price of the underlying asset and the price specified in the forward contract.

(Study Session 15, Module 46.1, LOS 46.b)

Related Material

SchweserNotes - Book 4

26. (A) zero or the amount that it is in the money.

Explanation

The intrinsic value of an option is equal to the amount that it is in the money or zero, if it is out of the money. Option value equals speculative (time) value only for out-of-the-money options.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

27. (B) equal to the price of a futures contract.

Explanation

When interest rates and futures prices are uncorrelated the prices of forward and futures on the same asset will be equal. Liquidity is not an issue as no-arbitrage prices are based on riskless hedges that are held until settlement of the derivative security.

(Study Session 15, Module 46.2, LOS 46.g)

Related Material

SchweserNotes - Book 4

28. (A) in the money, and the time value is the market value minus the intrinsic value.

Explanation

Intrinsic value is the amount the option is in the money. In effect it is the value that would be realized if the option were at expiration. Prior to expiration, the option's market value will normally exceed its intrinsic value. The difference between market value and intrinsic value is called time value.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

29. (C) $34.25

Explanation

$F_0(T) = [S_0 - \text{net cost of carry}] \times (1 + Rf)^T$

$= (\$35 - \$1) \times (1.03)^{3/12} = \$34.25$

(Study Session 15, Module 46.1, LOS 46.c)

Related Material

SchweserNotes - Book 4

30. (C) the same value.

Explanation

For call options on an underlying asset that does not pay cash flows, the right to exercise early is not valuable and therefore American and European options that are otherwise identical will have the same value.

(Study Session 15, Module 46.4, LOS 46.o)

Related Material

SchweserNotes - Book 4

31. (C) An increase in volatility.

Explanation

Increased volatility of the underlying asset increases both put values and call values. A higher exercise price or an increase in cash flows on the underlying asset decrease the value of a call option.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4

32. (C) Convenience yield.

Explanation

Convenience yield refers to the nonmonetary benefits of holding an asset. Dividends are a monetary benefit. Storage and insurance are costs of holding an asset.

(Study Session 15, Module 46.1, LOS 46.e)

Related Material

SchweserNotes - Book 4

33. (A) decrease the value of the option.

Explanation

Dividends or interest paid by the underlying asset decrease the value of call options.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4

34. (C) both options are in the money.

Explanation

Both options are in the money. The put option is in the money because the option holder has the right to sell the stock for more than its market price. The call option is in the money because the option holder has the right to buy the stock for less than its market price.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

35. (C) less than the exercise price.

Explanation

A put option gives its owner the right to sell the underlying good at a specified exercise price for a specified time period. When the stock's price is less than the exercise price a put option has value and is said to be in-the-money.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

36. (B) a risk-free bond.

Explanation

A synthetic European call option consists of a long position in the underlying asset, a long position in a European put option, and a short position in a risk-free bond (i.e., borrowing at the risk-free rate).

(Study Session 15, Module 46.3, LOS 46.1)

Related Material

SchweserNotes - Book 4

37. (B) Prior to expiration, an American option may have a higher value than an equivalent European option.

Explanation

American and European options both give the holder the right to exercise the option at expiration. An American option also gives the holder the right of early exercise, so American options will be worth more than European options when the right to early exercise is valuable, and they will have equal value when it is not.

(Study Session 15, Module 46.4, LOS 46.0)

Related Material

SchweserNotes - Book 4

38. (B) an interest rate.

Explanation

A forward rate agreement is a forward contract with an interest rate, such as 30-day LIBOR, as its underlying instrument.

(Study Session 15, Module 46.2, LOS 46.f)

Related Material

SchweserNotes - Book 4

39. (C) decrease call option values and increase put option values.

Explanation

A decrease in the risk-free rate of interest will decrease call option values and increase put option values.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4

40. (A) less than the current option premium if the option is currently in-the-money.

Explanation

The option premium is made up of time value and intrinsic value. Intrinsic value is positive if an option is in-the-money and zero otherwise. Time value is always positive for call options. If the option still has 30 days until expiration and is in-the-money, the option premium will be the positive intrinsic value, plus the positive time value. Hence, the time value will be less than the premium.

If the option is out-of-the-money, the intrinsic value will be zero, and the option premium will be equal to the time value. If the exercise price is greater than the current spot price, the call option is out-of-the-money and hence the intrinsic value again is zero. But as the call option still has time to expiration, the time value will be positive.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.j)

CFA® Program Curriculum, Volume 5, page 248

Related Material

SchweserNotes - Book 4

41. (A) the asset value is significantly lower than the exercise price.

Explanation

Early exercise of an in-the-money American put option is valuable when the asset value is significantly below the exercise price (i.e. they are deep in-the money). The payment of interest or dividends from the underlying asset increases put values, so it does not make early exercise valuable as it does with call options.

(Study Session 15, Module 46.4, LOS 46.o)

Related Material

SchweserNotes - Book 4

42. (B) a call option and a bond that pays the exercise price of the call at option expiration.

Explanation

A fiduciary call combines a call option and a bond that pays the exercise price of the call at option expiration.

(Study Session 15, Module 46.3, LOS 46.1)

Related Material

SchweserNotes - Book 4

43. (B) may be likened to a series of forward contracts.

Explanation

A swap agreement often requires that both parties agree to a series of transactions. Each transaction is similar to a forward contract, where a party is paying a fixed price to offset the risk associated with an unknown future value. Swaps are over-the-counter agreements but are not highly regulated. One of the benefits of swaps is that they can be customized to fit the needs of the counterparties. Thus, they are not standardized.

(Study Session 15, Module 46.2, LOS 46.h)

Related Material

SchweserNotes - Book 4

44. (B) The present value of the forward price of the underlying asset.

Explanation

The put-call-forward parity relationship is: $F_0(T) / (1 + RFR)^T + p = c + X / (1 + RFR)^T$, where $F_0(T)$ is the forward price of the underlying asset.

(Study Session 15, Module 46.3, LOS 46.m)

Related Material

SchweserNotes - Book 4

45. (A) has an exercise price less than the market price of the asset.

Explanation

A call option is in the money when the exercise price is less than the market price of the asset.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

46. (C) Long call option, long risk-free bond.

Explanation

The put-call parity relationship shows that a protective put (long put, long underlying asset) has the same future payoff as a fiduciary call (long call, long risk-free bond).

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.1)

CFA® Program Curriculum, Volume 5, page 258

Related Material

SchweserNotes - Book 4

47. (B) the price of the underlying asset.

Explanation

An increase in the price of the underlying asset would decrease the value of a put option, which would make a long position in the put less valuable and a short position more valuable. An increase in either the volatility of the underlying asset price or time to expiration would increase the put value and decrease the value of a short position.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.k)

CFA® Program Curriculum, Volume 5, page 248

Related Material

Schweser Notes – Book

48. (B) decrease the no-arbitrage forward price at initiation.

Explanation

Compared to an underlying asset with no net holding cost or benefit, a net benefit from holding the underlying asset will decrease the no-arbitrage forward price at initiation and the value of a forward contract during its life. Holding costs and benefits have no effect on the value of a forward contract at expiration.

(Study Session 15, Module 46.1, LOS 46.e)

Related Material

SchweserNotes - Book 4

49. (B) the risk-free rate is higher.

Explanation

An increase in the risk-free rate will decrease the value of a put option. An increase in the volatility of the stock price or a higher dividend payment during the option's life will increase the value of a put option.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.k)

CFA® Program Curriculum, Volume 5, page 248

Related Material

SchweserNotes - Book 4

50. (B) is established at contract initiation.

Explanation

The price of a swap contract is set such that the contract has a value of zero at initiation. The value of a fixed-for-floating interest rate swap contract may vary over its life as the floating rate changes.

(Study Session 15, Module 46.2, LOS 46.i)

Related Material

SchweserNotes - Book 4

51. (A) the maximum of zero and the stock price minus the exercise price.

Explanation

The payoff on a call option on a stock is Max (0, S - X).

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

52. (C) long the stock, long the put, and short a pure discount bond that pays the exercise price at option expiration.

Explanation

A stock and a put combined with borrowing the present value of the exercise price will replicate the payoffs on a call at option expiration.

(Study Session 15, Module 46.3, LOS 46.1)

Related Material

SchweserNotes - Book 4

53. (C) determined by expected future short-term rates.

Explanation

The price of an interest rate swap refers to the fixed rate specified in the swap. This price is calculated as a function of expected future short-term rates.

(Study Session 15, Module 46.2, LOS 46.i)

Related Material

SchweserNotes - Book 4

54. (B) in-the-money by $7.50.

Explanation

The put allows a trader to sell Basil common stock for $7.50 more than the current market value ($55.00 - $47.50). The trade is normally closed out with a cash settlement, but the trader could buy 100 shares for $47.50 per share and immediately sell them to the option writer for $55.00.

(Study Session 15, Module 46.3, LOS 46.j)

Related Material

SchweserNotes - Book 4

55. (C) an out-of-the-money call or an out-of-the-money put.

Explanation

The time value of an option is zero at expiration. For an out-of-the-money option, the exercise value is zero at expiration.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.j)

CFA® Program Curriculum, Volume 5, page 248

Related Material

SchweserNotes - Book 4

56. (A) short the stock, long the call, and long a pure discount bond that pays the exercise price at option expiration.

Explanation

A short position in the stock combined with a long call and lending the present value of the exercise price will replicate the payoffs on a put at option expiration.

(Study Session 15, Module 46.3, LOS 46.1)

Related Material

SchweserNotes - Book 4

57. (B) the future value of the spot price.

Explanation

At initiation of a forward contract on an underlying asset with no holding costs or benefits, the no-arbitrage forward price is the future value of the spot price, compounded at the risk-free rate to the expiration date of the forward contract: $F_0(T) = S_0(1 + Rf)^T$. The forward contract has a value of zero at initiation if the forward price in the contract is equal to the no-arbitrage forward price.

(Study Session 15, Module 46.1, LOS 46.d)

Related Material

SchweserNotes - Book 4

58. (A) lock in an interest rate for future borrowing or lending.

Explanation

The purpose of a forward rate agreement (FRA) is to lock in an interest rate for future borrowing or lending. An FRA is a forward commitment rather than a contingent claim. An interest rate swap is used to exchange a floating-rate obligation for a fixed-rate obligation.

(Study Session 15, Module 46.2, LOS 46.f)

Related Material

SchweserNotes - Book 4

59. (C) is opposite to the value of the short position.

Explanation

The long and short positions in a forward or futures contract have opposite values. A gain for one is an equal-sized loss for the other.

(Study Session 15, Module 46.1, LOS 46.b)

Related Material

SchweserNotes - Book 4

60. (A) spot price minus the present value of the forward price.

Explanation

During the life of a forward contract on an underlying asset with no holding costs or benefits, the value to the long equals the spot price minus the present value of the forward price:

$Vt(T) = S_t - F_0(T) / (1 + Rf)^{T-t}$.

(Study Session 15, Module 46.1, LOS 46.d)

Related Material

Schweser Notes – Book 4

61. (B) Increase Decrease

Explanation

Decreasing volatility of returns on the underlying stock will decrease option values for both puts and calls. An increase in the risk-free rate increases the values of call options on equities and decreases the values of put options on equities.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.k)

CFA® Program Curriculum, Volume 5, page 248

Related Material

SchweserNotes - Book 4

62. (B) arbitrage opportunities are exploited rapidly.

Explanation

Derivatives valuation is based on the assumption that any arbitrage opportunities in financial markets are exploited rapidly so that assets with identical cash flows are forced toward the same price. It does not assume arbitrage opportunities do not arise or that investors are risk neutral.

(Study Session 15, Module 46.1, LOS 46.a)

Related Material

SchweserNotes - Book 4

63. (A) time value is equal to its market price minus its exercise value.

Explanation

The time value of an option (either a put or a call) is equal to its market price minus its exercise value. A put's exercise value is the maximum of zero or its exercise price minus the stock price. Intrinsic value is another term for exercise value.

For Further Reference:

(Study Session 15, Module 46.3, LOS 46.j)

CFA® Program Curriculum, Volume 5, page 248

Related Material

SchweserNotes - Book 4

64. (A) the underlying asset.

Explanation

A synthetic European put option consists of a long position in a European call option, a long position in a risk-free bond that pays the exercise price on the expiration date, and a short position in the underlying asset.

(Study Session 15, Module 46.3, LOS 46.1)

Related Material

SchweserNotes - Book 4

65. (B) the futures contract requires daily settlement.

Explanation

The reason there may be a difference in price between a forward contract and an identical futures contract is that a futures position has daily settlement and so makes or requires cash flows during its life.

(Study Session 15, Module 46.2, LOS 46.g)

Related Material

SchweserNotes - Book 4

66. (A) values at swap initiation that sum to zero.

Explanation

When replicating a swap with a series of forward contracts, each forward contract is likely to be off-market (i.e., have a non-zero value at initiation), but they can replicate a swap with a value of zero at initiation if the values of the forward contracts sum to zero at swap initiation.

(Study Session 15, Module 46.2, LOS 46.h)

Related Material

SchweserNotes - Book 4

67. (C) the value of a put option at X plus the present value of the forward contract price.

Explanation

The put-call-forward parity relationship is:

$C_0 + X/(1 + Rf)^T = Po + Fo(T)/(1 + Rf)^T$

The value of a call at X plus the present value of X is equal to the value of a put option at X plus the present value of the forward contract price.

(Study Session 15, Module 46.3, LOS 46.m)

Related Material

SchweserNotes - Book 4

68. (B) increase call option values and decrease put option values.

Explanation

An increase in the risk-free rate of interest will increase call option values and decrease put option values.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4

69. (A) greater than forward prices.

Explanation

Futures prices will be greater than forward prices if interest rates are positively correlated with futures prices, because daily settlement of long futures positions will produce excess margin when interest rates are high and require margin deposits when interest rates are low.

(Study Session 15, Module 46.2, LOS 46.g)

Related Material

SchweserNotes - Book 4

70. (B) can be worth less than the shorter-term option.

Explanation

For European puts, it is possible that the longer term option can be less valuable than a shorter-term option.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4

71. (B) futures prices are negatively correlated with interest rates.

Explanation

Differences may exist between forward and futures prices for otherwise identical contracts if futures prices are correlated with interest rates. If futures prices are negatively correlated with interest rates, daily settlement of long futures contracts will require cash when interest rates are increasing and produce cash when interest rates are decreasing. As a result the futures price will be lower than the forward price. The difference in price does not provide an arbitrage opportunity or suggest that investors should prefer forward or futures contracts.

(Study Session 15, Module 46.2, LOS 46.g)

Related Material

SchweserNotes - Book 4

72. (C) are positively correlated with the stock price and the profits from a long put are negatively correlated with the stock price.

Explanation

For a call, the buyer's (or the long position's) potential gain is unlimited. The call option is in the-money when the stock price (S) exceeds the strike price (X). Thus, the buyer's profits are positively correlated with the stock price. For a put, the buyer's (or the long position's) potential gain is equal to the strike price less the premium. A put option is in-the-money when X > S. Thus, a put buyer wants a high exercise price and a low stock price. Thus, the buyer's profits are negatively correlated with the stock price.

(Study Session 15, Module 46.3, LOS 46.k)

Related Material

SchweserNotes - Book 4