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NEW QUESTION: 1
Which of the following reflects the pricing convention for currency forwards, where one of the currencies is USD?
A. Forward forex prices are always quoted as the number of units of the foreign currency that one US dollar can buy
B. It can be quoted either way, based on whether the contract is for a short maturity or long
C. Forward forex prices are always quoted as the number of US dollars one unit of the foreign currency can buy
D. It depends upon the currency - futures forex prices follow the same convention as for spot prices
Answer: D (LEAVE A REPLY)
Explanation
Price quotes for futures where one of the currencies is the US dollar follow the convention of using the number of US dollars one unit of the foreign currency can buy. (For JPY, 100 Yen is used.) In the forward market, the same convention as is used in the spot market is used.
In the spot market, prices are expressed as the number of units of the foreign currency that 1 USD can buy, except for GBP, EUR, AUD and NZD where it is the other way round (ie, number of USDs that 1 of each of these currencies can buy).

NEW QUESTION: 2
An asset has a volatility of 10% per year. An investment manager chooses to hedge it with another asset that has a volatility of 9% per year and a correlation of 0.9. Calculate the hedge ratio.

A. 0.9
B. 0.81
C. 1.2345
D. 1
Answer: D (LEAVE A REPLY)
Explanation
The minimum variance hedge ratio answers the question of how much of the hedge to buy to hedge a given position. It minimizes the combined volatility of the primary and the hedge position. The minimum variance hedge ratio is given by the expression [(x) / (y)] * (x,y)]. Effectively, this is the same as the beta of the primary position with respect to the hedge. In this case, the hedge ratio is = 10%/9% * 0.9 = 1

NEW QUESTION: 3
The effectiveness of a hedge is determined by which of the following expressions, where x,y is the correlation between the asset being hedged and the hedge position:
A)
$1 - \rho_{x,y}^2$
B)
$\rho_{x,y}^2$
C)
$\sqrt{1 - \rho_{x,y}^2}$
D)
$\sqrt{1 + \rho_{x,y}^2}$
A. Option A
B. Option B
C. Option C
D. Option D
Answer: (SHOW ANSWER)
Explanation
The effectiveness of the hedge is solely determined by the correlation between the position being hedged, and the position being used as the hedge. A hedge can be perfect when correlation is 1, and will be less than perfect when it is anything other than 1.The effectiveness of the optimal hedge is given by the formula (1-2), where is the correlation between the two. Therefore Choice 'c' is the correct answer. Standard deviations affect the hedge ratio, not the effectiveness of the hedge.

NEW QUESTION: 4
Which of the following will have a higher reinvestment risk when compared to a 6% bond issued at par?
Assume all bonds have identical yield to maturity.

I. A coupon bearing bond with a coupon rate of 2%
II. An amortizing bond
III. A coupon bearing bond with a coupon rate of 11%
IV. A zero coupon bond
A. I, II and IV
B. II and III
C. II, III and IV
D. I and III
Answer: B (LEAVE A REPLY)
Explanation
Imagine a bond that provides just two cash flows: $100 in one year and $10 in 10 years. Imagine another bond that pays nothing now but $100 in 10 years. Assume that both have identical yields to maturity. Yet despite the identical YTM, the bonds are quite dissimilar. For the first bond, we face the risk that we would receive the bulk of the present value of the bond in an year's time, and while there is a small amount due in 10 years, the first payment may not find an equally attractive investment opportunity. Reinvestment risk refers to the risk that cash flows from a bond may not be investible at the yield to maturity for the bond. In such cases, bonds that have longer durations are preferable.
A coupon bearing bond with a coupon rate lower than our benchmark bond will carry a lower reinvestment risk as its cash flows are weighted more towards the end. An amortizing bond returns a part of the principle periodically, increasing reinvestment risk. A higher coupon bearing bond will have a higher reinvestment risk, and a zero coupon bond will have the least reinvestment risk.

NEW QUESTION: 5
The buyer of a cap can reduce her costs by:
A. selling a cap
B. selling a floor with a lower strike rate
C. increasing the time period to which the cap applies
D. reducing the strike rate for the cap
Answer: B (LEAVE A REPLY)
Explanation
The buyer of a cap who is primarily interested in protecting against a rise in interest rates and does not mind losing some of the gains if interest rates were to fall can reduce her costs by selling a floor with a lower strike rate. Selling a cap would further expose her to the risk of rising rates, exactly what she is trying to protect herself against, and reducing the strike rate for the cap will actually increase the cost of the cap. Similarly, increasing the time period to which the cap applies will also increase the cost of the cap.

NEW QUESTION: 6
Theta for a call option:

A. approaches 1 as the expiration date draws closer
B. approaches as the expiration date draws closer
C. approaches 0 as the expiration date draws closer
D. approaches -1 as the expiration date draws closer
Answer: C (LEAVE A REPLY)
Explanation
Theta measures time decay, ie the change in value of the option with the passage of time. When the option is close to expiry, theta is very low as the value of the option is driven by intrinsic value rather than the time value. Therefore theta approaches zero as the option comes closer to expiry.

NEW QUESTION: 7
Which of the following statements are true:
I. An yield curve plots zero coupon spot rates for different maturities for bonds with different credit ratings II. An yield curve represents the term structure of interest rates for similar instruments across a range of maturities III. The liquidity preference theory explains why the yield curve can be downward sloping IV. The term structure refers to the relationship between bond yields and bond maturities
A. I and II
B. I, II, III and IV
C. II and IV
D. III and IV
Answer: C (LEAVE A REPLY)
Explanation
An yield curve would be meaningless if it combines, for example, the yield on a AAA bond with the yield on a bond near default on the same curve. Therefore statement I is incorrect as any typical yield curve generally refers to similar instruments, and similarity includes similarity of issuer type and credit risk profiles.
Statement II accurately describes an yield curve, and statement IV explains what the term structure is.
Statement III is incorrect as the liquidity preference theory offers an explanation for an upward sloping yield curve and not a downward sloping one.

NEW QUESTION: 8
Using covered interest parity, calculate the 3 month CAD/USD forward rate if the spot CAD/USD rate is
1.1239 and the three month interest rates on CAD and USD are 0.75% and 0.4% annually respectively.
A. 1.1249
B. 1.1229
C. 1.1278

D. 1.1200

Answer: A (LEAVE A REPLY)

Explanation

Forward rates can be calculated from spot rates and interest rates using the formula Spot x (1+domestic interest rate)/(1+foreign interest rate), where the 'Spot' is expressed as a direct rate (ie as the number of domestic currency units one unit of the foreign currency can buy). In this case the forward rate will be 1.1239

* (1 + 0.75%*90/360) / (1 + 0.4%*90/360) = 1.1249.

It can be confusing to determine which interest rate should be considered 'domestic', and which 'foreign' for this formula. For that, look at the spot rate. Think of the spot rate as being x units of one currency equal to 1 unit of the other currency. In this case, think of the spot rate 1.1239 as "CAD 1.1239 = USD 1". The currency that has the "1" in it is the 'foreign' and the other one is 'domestic'.

It is also important to remember how exchange rates are generally quoted. Most exchange rates are quoted in terms of how many foreign currencies does USD 1 buy. Therefore, a rate of 99 for the JPY means that USD 1 is equal to JPY 99. These are called 'direct rates'. However, there are four major world currencies where the rate quote convention is the other way round - these are EUR, GBP, AUD and NZD. For these currencies, the FX quote implies how many US dollars can one unit of these currencies buy. So a quote of "1.1023" for the Euro means EUR 1 is equal to USD 1.1023 and not the other way round.

NEW QUESTION: 9

Which of the following is NOT an assumption underlying the Black Scholes Merton option valuation formula:

A. There are no transaction costs

B. There is no credit risk

C. Volatility of the underlying and the risk free interest rate is constant

D. The option can be exercised at any time up to expiry

Answer: D (LEAVE A REPLY)

Explanation

All the choices listed are valid assumptions underlying the BSM option valuation formula except that the BSM formula is based upon the option being exercisable only at expiry. The assumption is that early exercise is not permitted. In other words, BSM applies to European options and not American options. Therefore Choice 'd' represents the correct answer as it is not an assumption underlying Black Scholes.

NEW QUESTION: 10

An investor holds a portfolio of mortage backed securities valued at $100m. Using a Monte Carlo based pricing model, he determines that the value of the portfolio would rise to $102m if interest rates were to fall by

45 basis points, and fall to $97m if interest rates were to rise by 45 basis points. What is the estimated modified duration of the investor's portfolio?

A. 5

B. 5.56

C. 11.12

D. None of the above

Answer: (SHOW ANSWER)

Explanation

For fixed income portfolios where standard cash flow discounting models are not available, duration calculations are based upon estimated price moves in response to a change in rates. Recall that we define duration as the percentage change in price expected for a 1% change in yield. In this case, we have three price points known to us:

Line | Price | Yield

a | $102 | r - 45bps

b | $100 | r

c | $ 97 | r + 45bps

(where r is the current yield)

The change in price from line a to line c is $102m - $97m = $5m. We use the middle point, ie $100m, to calculate the percentage change. Therefore the percentage change in price is $5m/$100m = 5%.

The change in yield between lines a and c is 90 basis points [=(r+45bps) - (r-45bps)]. In other words, the change in price is 5% for a 90 bps change in yield. So the duration can be calculated as 5/(90/100) = 5.56. The other answers are incorrect.

NEW QUESTION: 11

Caps, floors and collars are instruments designed to:

A. Hedge against credit spreads changing

B. Hedge gamma risk in option portfolios

C. Hedge interest rate risks

D. All of the above

Answer: (SHOW ANSWER)

Explanation

Interest rate caps are effectively call options on an underlying interest rate that protect the buyer of the cap against a rise in interest rates over the agreed exercise rate. As with options, the premium on the cap depends upon the volatility of the underlying rates as one of its variables. A floor is the exact opposite of a cap, ie it is effectively a put option on an underlying interest rate that protects the buyer of the floor against a fall in interest rates below the agreed exercise rate.

A cap protects a borrower against a rise in interest rates beyond a point, and a floor protects a lender against a fall in interest rates below a point.

A collar is a combination of a long cap and a short floor, the idea being that the premium due on the cap is offset partly by the premium earned on the short floor position. Therefore a collar is less expensive than a cap or a floor.
Caps, floors and collars provide a hedge against interest rate risks, but do not protect against changes in credit spreads unless the reference rate already includes the spread (eg, by reference to the corporate bond rate), and they certainly do not have anything to do with gamma risk. Therefore Choice 'c' is the correct answer.

NEW QUESTION: 12
A)
$\frac{u''(x)}{u'(x)}$
B)
$\frac{u'(x)}{u''(x)}$
C)
$-\frac{u''(x)}{u'(x)}$
D)
$-\frac{u'(x)}{u''(x)}$
A. Option A
B. Option B
C. Option C
D. Option D
Answer: D (LEAVE A REPLY)
Explanation
https://riskprep.com/images/stories/questions/102.07.a.png is the coefficient of risk aversion at x. Its inverse, ie https://riskprep.com/images/stories/questions/102.07.b.png, is called the coefficient of risk tolerance.
$-\frac{u''(x)}{u'(x)}$
$-\frac{u'(x)}{u''(x)}$
Risk aversion or risk tolerance is indicated in a utility function by its curvature. A concave utility function indicates risk aversion and a convex function indicates risk tolerance. The curvature is measured as a ratio of the second derivative to the first derivative of a function. A negative second derivative implies concavity. The expression - is the coefficient of risk aversion, and its inverse, which is in the same units as wealth, is called the coefficient of risk tolerance.

NEW QUESTION: 13

It is January and an Australian importer needs to pay USD 1,120,000 at the end of August to a US creditor. If a AUD/USD futures contract is trading on the exchange at a futures price of 0.6750 (ie, 1 AUD = 0.6750 USD), and the contract size is USD 100,000, what would represent an appropriate hedge?

A. Buy 17 contracts to the September expiry date which are closed out in August at the end of August.

B. Buy 11 contracts to the September expiry date which are closed out in August at the end of August.

C. Buy 11 contracts to the September expiry date and receive delivery of USDs in September

D. Sell 11 contracts to the September expiry date and make delivery of USDs in September

Answer: B (LEAVE A REPLY)

Explanation

This question touches upon a couple of issues that relate to hedging foreign exchange exposures using futures contracts. Firstly, many futures contracts on exchanges are available only at specific maturity dates, for example, the IMM dates. They may or may not coincide with actual liabilities for a running business. Also, futures contracts are standardized, ie their notional amounts are fixed rounded sums, and they can only be traded in whole numbers. This often means business using futures for hedging end up having a close enough, but not perfect hedge.

For our importer in the question, clearly he has to buy USDs so he can make his payment. Since each contract gives him USD 100k, he should buy 11 contracts that will get him very close to the amount he finally needs.

Also, the contract expires a month later than his liability is due. This means he should offset the contract by closing it out in August soon as he has made his payment. This will allow him to stay hedged till August. If he does not sell out of the contracts, he will become exposed to a long position for one month till the contract settles, a risk which is unnecessary for him.

Therefore Choice 'b' is the best answer.

NEW QUESTION: 14

Which of the following are considered Credit Events under ISDA definitions?

I. Bankruptcy

II. Obligation Acceleration

III. Obligation Default

IV. Restructuring

A. II and IV

B. I, II, III and IV

C. I and IV

D. I, III and IV

Answer: B (LEAVE A REPLY)
Explanation
According to ISDA, a credit event is an event linked to the deteriorating credit worthiness of an underlying reference entity in a credit derivative. The occurrence of a credit event usually triggers full or partial termination of the transaction and a payment from protection seller to protection buyer. Credit events include
- bankruptcy,
- failure to pay,
- restructuring,
- obligation acceleration,
- obligation default and
- repudiation/moratorium.
Therefore all four events listed are credit events and Choice 'b' is the correct answer.

NEW QUESTION: 15
Given identical prices, a bond trader prefers dealing with Bank A over Bank B. Given a choice between Bank B and Bank C, he prefers Bank B. Yet, when given a choice between Bank A and Bank C, he prefers dealing with Bank C. What axiom underlying the utility theory is he violating?
A. Continuity of choice
B. Stochastic dominance
C. Transitivity of choice
D. He is not violating anything
Answer: C (LEAVE A REPLY)
Explanation
Remember the four basic axioms underlying the principal of maximum expected utility:
- Transitivity, ie if A is preferred over B, and B is preferred over C, then A must be preferred over C;
- Continuity, ie if A is preferred over B, and B is preferred over C, then B is on a continuum between A and C such that we can be indifferent between receiving B, or a lottery offering either A or C with probabilities p &
1-p respectively.
- Independence, ie choices are not affected by the way they are presented
- Stochastic dominance, ie a gamble that offers a greater probability of a preferred out come will be preferred.
In this case, the first axiom is being violated. Therefore Choice 'c' is the correct answer.

NEW QUESTION: 16
If the quoted discount rate of a 3 month treasury bill futures contract is 10%, what is the price of a 3-month treasury bill with a principal at maturity of $100?
A. $90

B. $110.00
C. $102.50
D. $97.50
Answer: D (LEAVE A REPLY)
Explanation
T-bill futures 'discount' can be converted to a price for the bill using the formula Price = [1 - discount * number of days/360]. In this case, this works out to (1- 10% *90/360) * 100 = $97.50. Choice 'd' is the correct answer.

NEW QUESTION: 17
If the exchange rate for USD/AUD is 0.6831 and the rate for SEK/USD is 8.1329, what is the SEK/AUD cross rate?
A. 7.4498
B. 0.0840
C. 5.5556
D. 11.9059
Answer: (SHOW ANSWER)
Explanation
Since AUD 1 = USD 0.6831, and USD 1 = SEK 8.1329, AUD 1 = SEK 8.1329*0.6831 = 5.5556.
It is important to remember how exchange rates are generally quoted. Most exchange rates are quoted in terms of how many foreign currencies does USD 1 buy. Therefore, a rate of 99 for the JPY means that USD 1 is equal to JPY 99. However, there are four major world currencies where the rate quote convention is the other way round - these are EUR, GBP, AUD and NZD. For these currencies, the FX quote implies how many US dollars can one unit of these currencies buy. So a quote of "1.1023" for the Euro means EUR 1 is equal to USD 1.1023 and not the other way round.
When calculating cross rates, it is important to pay attention to how the rates are quoted. This particular question is quoted in a very straightforward way because it specifies exactly what the rate means, eg by saying USD/AUD it clarifies that the rate is the number of USDs per AUD. If the question is not clear, remember how exchange rates are quoted - all are against 1 USD, except for EUR, GBP, AUD and NZD where it is the other way round.

NEW QUESTION: 18
What would be the expected return on a stock with a beta of 1.2, when the risk free rate is 3% and the broad market index is expected to earn 8%?
A. 7%
B. 7.4%
C. 9%
D. 9.6%
Answer: C (LEAVE A REPLY)
Explanation
The stock has a beta of 1.2, therefore intuitively it can be expected to earn more than the broad market index.
It will earn the risk free rate, ie 3%, and 1.2 times the equity risk premium of 5% (8% - 3%).
The expected returns from the stock therefore are 3% + (8% - 3%)*1.2 = 9%

NEW QUESTION: 19
[According to the PRMIA study guide for Exam 1, Simple Exotics and Convertible Bonds have been excluded from the syllabus. You may choose to ignore this question. It appears here solely because the Handbook continues to have these chapters.] A long call position in an asset-or-nothing option has the same payoff as:
A. two long cash-or-nothing calls combined with a put at the same strike
B. a contingent premium option
C. a short cash-or-nothing call and a short vanilla call
D. a long cash-or-nothing call and a long vanilla call
Answer: (SHOW ANSWER)
Explanation
A cash or nothing call is one that pays a fixed amount if the underlying exceeds a certain threshold, or nothing.
An asset or nothing call is the same as the cash or nothing call except that instead of paying a fixed amount, it
'pays' the asset. Therefore the payoff profile of a long asset or nothing call has the same payoff as a long cash or nothing call and a long vanilla call.
This is best considered by building payoff diagrams which will show how the two positions are economically equivalent. Choice 'd' is the correct answer, and the rest are not.

NEW QUESTION: 20
The zero rates for 1, 2 and 3 years respectively are 2%, 2.5% and 3% compounded annually. What is the value of an FRA to a bank which will pay 4% on a principal of $10m in year 3?
A. $732.90
B. $800.25

C. None of the above
D. $670.70
Answer: D (LEAVE A REPLY)
Explanation
In this case, we need to determine the value today of an FRA where the bank has to pay 4% from year 2 to 3 in exchange for the then prevailing LIBOR. We do this by using the forward rate from year 2 to 3, and comparing it to the fixed rate. The forward rate is determined from the zero rates as =(1.03^3 / 1.025^2) - 1 =
4.0073%. The bank is committed to paying 4%, therefore the value of the FRA at the end of year 3 = (4.0073% - 4%) * $10m = $732.90. But this is the value at the end of year 3, and needs to be discounted to the present using the 3 year zero rate. Therefore the value of the FRA is $732.90/(1.03^3) = $670.70.

NEW QUESTION: 21
A trader finds that a stock index is trading at 1000, and a six month futures contract on the same index is available at 1020. The risk free rate is 2% per annum, and the dividend rate is 1% per annum. What should the trader do?
A. Buy the index spot and sell the futures contract
B. Buy the futures contract and sell the index spot
C. Buy the index spot and buy the futures contract
D. Sell the futures contract
Answer: A (LEAVE A REPLY)
Explanation
The fair price for the futures contract should be [1000 x (1 + (2%-1%)/2)] = 1005. This means the futures contract is 'rich' at 1020. The trader should therefore short the futures contract, and buy the index spot. To buy the spot index, he will incur a borrowing cost of 2%, which will be partly offset by the dividend yield of 1%, and at the end of six months he will owe a net amount of 1005 and hold the index. At the same time the futures contract would expire too, and he would be able to sell at the agreed price of 1020, making a risk free profit of
15.

NEW QUESTION: 22
A bond pays semi-annual coupons at an annual rate of 10%, and will mature in a year. What is its modified duration? Assume the yield curve is flat for the next 12 months at 5%.
A. 1.000
B. 1.500
C. 0.953
D. 0.700
Answer: C (LEAVE A REPLY)
Explanation

We can calculate the duration of the bond as follows:
PV of 1st coupon payment: $5/(1 + 5%/2) = $4.878
PV of final payment: $105/(1 + 5%) = $100
Weighted average of the two = (0.5*$4.878 + 1*$100)/($4.878 + $100) = 0.9767, ie this is the Macaulay duration.
Thus the modified duration is 0.9767/(1 + 5%/2) = 0.9529
(Note that Modified Duration = Macaulay Duration/(1 + y/n), where n is the compounding frequency) In addition to this calculation, in this particular question we can intuitively arrive at the correct answer by eliminating the incorrect choices. Since the bond matures in a year, its modified duration will be less than a year. Therefore Choice 'a' and Choice 'b' cannot be correct. Similarly, 0.700 appears too low as the coupons are not so heavily weighted towards earlier in the year. Therefore only Choice 'c' can be the correct answer.

NEW QUESTION: 23
When comparing compound interest rates to equivalent continuously compounded rates of return, the latter will always be:
A. lower
B. higher
C. the same
D. cannot say with available information
Answer: A (LEAVE A REPLY)
Explanation
As the compounding frequency increases, the nominal rate needs to decrease to produce the same amount of dollars at the end of a given time period. A continuously compounded rate of return has an infinite number of discrete compounding periods, and therefore the nominal rate expressed as a continuously compounded rate will always be nominally lower than any other rate.
Refer to the tutorial on interest rates for more details on continuously compounded rates work.

NEW QUESTION: 24
A borrower who fears a rise in interest rates and wishes to hedge against that risk should:
A. Go short an FRA
B. Go long an FRA
C. Buy fed futures
D. Sell T-bill futures
Answer: B (LEAVE A REPLY)
Explanation
T-bill futures and fed futures are very short term futures contracts, and unlikely to provide much of a hedge against a rise in interest rates. FRAs however are customized and would be the right instrument for the borrower to hedge his interest rate risk. A long FRA position

gives him the right to borrow at an agreed rate in the future. This rate will not change regardless of the changes in interest rates, and therefore Choice 'b' is the correct answer.

NEW QUESTION: 25
[According to the PRMIA study guide for Exam 1, Simple Exotics and Convertible Bonds have been excluded from the syllabus. You may choose to ignore this question. It appears here solely because the Handbook continues to have these chapters.] Which of the following is not an approach to attempt to value to a convertible security:
A. DCF analysis
B. Bootstrapping
C. Lower of bond value and value of converted shares
D. Bond value plus equity option value
Answer: B (LEAVE A REPLY)
Explanation
Bootstrapping is not one of the various approaches to try to value a convertible security. The rest of them are, and therefore Choice 'b' is the correct answer.

NEW QUESTION: 26
Two portfolios with identical Sharpe ratios will have
A. identical expected risk
B. identical expected risk and returns
C. returns identically proportionate to risk
D. identical expected returns
Answer: C (LEAVE A REPLY)
Explanation
The Sharpe ratio is the ratio of excess returns to risk. Excess returns are measured as the returns over the risk-free rate, and risk is measured in terms of volatility, ie standard deviation. Two portfolios with identical Sharpe ratios will certainly have the same ratio of risk and return, though the absolute levels of the return and the risk may vary. Therefore Choice 'c' is the correct answer.

NEW QUESTION: 27
LIBOR is determined by the:
A. LIFFE
B. EUREX
C. FSA
D. BBA
Answer: (SHOW ANSWER)
Explanation
The London Interbank Offered Rate (LIBOR) is published by the British Bankers' Association (BBA). The BBA polls the rates offered by at least eight banks drops the top

and bottom quartile, and averages the middle two quartiles of the rates to arrive at the LIBOR.

NEW QUESTION: 28
What is the day count convention used for US government bonds?
A. Actual/360
B. Actual/Actual
C. Actual/365
D. 30/360
Answer: B (LEAVE A REPLY)
Explanation
The day count convention used for US treasury bonds is Act/Act. The other choices are incorrect.

NEW QUESTION: 29
What kind of a risk attitude does a utility function with downward sloping curvature indicate?
A. risk mitigation
B. risk averse
C. risk seeking
D. risk neutral
Answer: B (LEAVE A REPLY)
Explanation
A utility function is graphed with utility on the y-axis and the variable driving utility (generally wealth) along the x-axis.
A concave utility function, ie a function with a downward sloping curve, indicates risk aversion. A convex utility function indicates a risk seeking attitude and a straight line (ie no curvature) indicates a risk neutral attitude.

NEW QUESTION: 30
Which of the following markets are characterized by the presence of a market maker always making two-way prices?
A. Exchanges
B. OTC markets
C. ECNs
D. Dark pools
Answer: A (LEAVE A REPLY)
Explanation
Over the counter and electronic communication networks match buyers and sellers. However, there is no market making function, ie, in periods of stress liquidity may completely disappear from these markets.

Exchanges normally have market makers that are required to present two way quotes on the securities they are making the market for. Therefore Choice 'a' is the correct answer.

NEW QUESTION: 31
A risk manager is deciding between using futures or forward contracts to hedge a forward foreign exchange position. Which of the following statements would be true as he considers his decision:
I. He would need to consider tailing the hedge for the futures contracts while that does not apply to forward contracts II. He would need to consider tailing the hedge for the forward contract while that does not apply to futures contracts III. He would need to consider counterparty risk for the futures contracts while that is unlikely to be an issue for the forward contract IV. He would be likely able to match up maturity dates to his liability when using futures while that may not be so for the forward contracts
A. I only
B. I and III
C. II only
D. II and IV
Answer: A (LEAVE A REPLY)
Explanation
Tailing the hedge refers to adjusting the number of futures contracts required to hedge a position given that futures contracts result in daily cash flows from daily P&L. In the case of forward contracts, P&L is not settled daily but at the end of the contract. Because margin payments (ie the daily P&L) for futures contracts create interest cost or income (depending upon the direction of the flows), the number of contracts required to hedge a given position can fluctuate. This effect is generally small for small positions, or where the time period under consideration is not very long. But it can get large for larger positions that are open for longer time periods, therefore requiring an adjustment to 'tail the hedge'. The adjustment is straightforward - the number of contracts required needs to be divided by (1+r)t, where r is the interest and t the time period (or by ert if continuously compounded rates are being used. Therefore statement I is true and statement II is false.
Statement III is not correct as counterparty risk is certainly an issue for forward contracts, while futures contracts are guaranteed by the exchange, besides having margin requirements and daily P&L movement in place.
Statement IV is not correct as futures come in standardized contracts with standard amounts and a few standard expiry dates to pick, whereas forward contracts are customized and dates, amounts and other details of the contract can be negotiated.

NEW QUESTION: 32
In an American option:
A. early exercise of the option is not permitted
B. early exercise of the option is permitted
C. only vanilla options are permitted, unlike a European option
D. early exercise of the option may be permitted provided other conditions are satisfied
Answer: (SHOW ANSWER)
In an American option, early exercise of the option is permitted. In a European option, early exercise is not permitted. Therefore Choice 'b' is the correct answer.

NEW QUESTION: 33
Which of the following have a negative gamma:
I. a long call position
II. a short put position
III. a short call position
IV. a long put position
A. III and IV
B. I and IV
C. II and III
D. I and II
Answer: C (LEAVE A REPLY)
Explanation
Short calls and short puts have negative gamma, ie their delta increases at a decreasing rate as the price of the underlying change. Likewise, remember that long calls and long puts have positive gamma.

NEW QUESTION: 34
The cheapest to deliver bond for a treasury bond futures contract is the one with the :
A. the lowest yield to maturity adjusted by the conversion factor
B. the lowest coupon
C. the lowest basis when comparing cash price to the futures spot price adjusted by the conversion factor
D. the highest coupon
Answer: C (LEAVE A REPLY)
Explanation

Treasury bond futures do not specify which bond can be used to effect delivery, but allow the seller to pick from a number of available bonds. As a result, one of these eligible bonds emerges as being the 'cheapest' to deliver, and this CTD bond is determined by the basis between the cash price of the bond and the futures spot price as adjusted by the conversion factor for this specific bond. (ie, basis = Cash Price of the Bond - Futures Price x Conversion Factor) The bond with the lowest basis is generally the CTD - therefore Choice 'c' is the correct answer.

NEW QUESTION: 35
Which of the following statements is a correct description of the phrase present value of a basis point?
A. It refers to the present value impact of 1 basis point move in an interest rate on a fixed income security
B. It refers to the discounted present value of 1/100th of 1% of a future cash flow
C. It is another name for duration
D. It is the principal component representation of the duration of a bond
Answer: (SHOW ANSWER)
Explanation
This is a trick question, no great science to it. Remember that the 'present value of a basis point' refers to PV01, which is the same as BPV (basis point value) referred to in the PRMIA handbook. In other textbooks, the same term is also variously called 'DV01' (dollar value of a basis point). Remember these other terms too.
PV01, or the present value of a basis point, is the change in the value of a bond (or other fixed income security) from a 1 basis point change in the yield. PV01 is calculated as (Price * Modified Duration/10,000).

NEW QUESTION: 36
The annual borrowing rate for investors is 10% per annum. What is the par no-arbitrage futures price for delivery one year hence for a stock currently selling in the spot market at $100 ? Assume the stock pays no dividends.
A. $110
B. $100
C. $105
D. $90
Answer: A (LEAVE A REPLY)
Explanation
The no-arbitrage futures price for the stock is the current spot price plus the carrying cost for one year, which in this case is $100 * 10% =$10. Therefore the no-arbitrage futures price for the stock is $110.
($100*(1+10%), or $100 + $10.)

NEW QUESTION: 37
Which of the following statements are true:
(I). A deep in-the-money call option has a value very close to that of a forward contract with a forward price equal to the exercise price
(II). If the volatility of a stock goes down to zero, the value of a call option on the stock will tend to be close to that of a forward contract so long as the option is in the money.
(III). All other things remaining the same, the issue of stock warrants exercisable at a future date will cause a decline in the current stock price
(IV). Implied volatilities are calculated from market prices of options and are forward looking
A. I and IV
B. II and III
C. III and IV
D. All of the above
Answer: D (LEAVE A REPLY)
Explanation
All the statements are correct, therefore Choice 'd' is the correct answer. Let us look at each of these statements one by one.
I. A deep in-the-money call option has a value very close to that of a forward contract with a forward price equal to the exercise price. This is true because a deep in the money call option is most likely to be exercised, and is therefore effectively like a forward contract to buy the stock at the exercise price.
We can also look at this using the BSM formula for a call option. If c be the value of a call option, and all other variables have their usual meaning (S0 is the spot price, K is exercise price, and t is time to expiry), then according to the Black Scholes model the value of a call is given by the following expression:
202.22.e1
As S0 becomes large, d1 and d2 become large, and therefore N(d1) and N(d2) approach 1, leaving the value of the call to be equal to 202.22.e2, which is the formula for a forward contract.
II. If the volatility of a stock goes down to zero, the value of a call option on the stock will tend to be close to that of a forward contract so long as the option is in the money.
Again, this is true because if volatility is low or zero, the stock price will grow at its expected rate, and end up to be what the forward price is (S0 ert). If the option is out of the money, the value of the option will tend to 0.
III. All other things remaining the same, the issue of stock warrants exercisable at a future date will cause a decline in the current stock price.
This is true because the stock warrants are likely to be exercised only when they are in the money, ie when their exercise price is less than the going stock price, and at that time it will dilute the value of the existing shares. However, the reduction in the price is priced into

the share price at the time of the issue of the warrants, and it is not that the share price falls the day they are exercised.
IV. Implied volatilities are calculated from market prices of options and are forward looking.
This statement is true: historical volatilities calculated from past prices are backward looking, while 'implied volatility' is the volatility implied from market prices, and is forward looking as it encapsulates the market's view of how volatile the future is likely to be.

NEW QUESTION: 38
For a pair of correlated assets, the achievable portfolio standard deviation will be the lowest when the correlation is:
A. = 1
B. = 0.33
C. = -0.33
D. = 0
Answer: (SHOW ANSWER)
Explanation
The lowest achievable standard deviation will be lowest when the assets are perfectly negatively correlated, ie when correlation = -1. In the case of the above choices, the lowest correlation is -0.33, which is the correct choice.

NEW QUESTION: 39
Which of the following statements is true:
I. The standard deviation of a short position is the same as the standard deviation of a long position II. The expected return of a short position is the same as that a long position in the same asset III. If two assets are perfectly positively correlated, then a short position in one and a long position in the other are negatively correlated IV. If we increase the weight of an asset in a portfolio, its correlation with other assets in the portfolio scales up proportionately
A. I, II, III and IV
B. II and IV
C. I and III
D. II, III and IV
Answer: (SHOW ANSWER)
Explanation
Statement I is true as standard deviation is the root of the squared deviations, and is always positive, and identical regardless of the positions being long or short.Statement II is false as the expected return of a long position is exactly the negative of the expected return of the short position.Statement III is correct as a correlation of +1 between two long positions implies a correlation of -1 between one long and one short position. This is the basis of hedging, for example, of spot positions with futures.Statement IV is inaccurate.

The weight of an asset in a portfolio does not change the correlation of the asset with the portfolio, or with other assets.Therefore Choice 'c' is the correct answer.

NEW QUESTION: 40
What is the delta of a forward contract on a non-dividend paying stock?
A. Forward contracts do not have a delta
B. 0
C. Less than 1 but greater than zero
D. 1
Answer: D (LEAVE A REPLY)
Explanation
A forward contract is a derivative contract, and has a delta of 1. Therefore Choice 'd' is the correct answer.
This is because the value of a forward contract is given by S - Ke^(-rt), where S is the current spot price, r the risk free rate, K the forward price, and t the time to maturity. As S changes from S to (S + S), the value changes to (S + S) - Ke^(-rt), ie the change in value is exactly S in response to a change in the price of the underlying by S. Therefore the forward contract has a delta of 1.
All other choices are incorrect.
Note that this is different from the delta of a futures contract which is different from 1, and equal to e^(rt), a number greater than 1.

NEW QUESTION: 41
If the CHF/USD spot and 3 month (91 days) forward rates are 1.1763 and 1.1652, what is the annualized forward premium or discount?
A. 3.73% premium
B. 0.94% premium
C. 0.94% discount
D. 3.785% discount
Answer: D (LEAVE A REPLY)
Explanation
Forward premium or discount can be easily calculated as {(Forward rate - Spot rate) / Spot rate x 365/number of days]. In this case, it can be calculated as =((1.1652 - 1.1763) / 1.1763) * 365/91 = 3.785%, which is a discount as it is a negative number. It can also be interpreted as a discount as the forward price is lower than the spot price.

NEW QUESTION: 42
[According to the PRMIA study guide for Exam 1, Simple Exotics and Convertible Bonds have been excluded from the syllabus. You may choose to ignore this question. It appears here solely because the Handbook continues to have these chapters.] Which of the following statements are true for a contingent premium option:

I. They are also called 'pay-later' options
II. Premiums are due only if the option expires in the money
III. They are a combination of a vanilla option and an appropriate number of cash-or-nothing options IV. They are preferred because the premiums are always less than those on equivalent vanilla options
A. II, III and IV
B. I, II and III
C. I, II, III and IV
D. I, II and IV
Answer: B (LEAVE A REPLY)
Explanation
Contingent premium options are options where no premiums are due upfront, and are due only at expiry and only if the option finishes in the money. (If this sounds too good to be true, remember that at expiry it is possible that the premiums due exceed the payoffs from the option. So there is no free lunch.) For this reason they are also called pay-later options. They are simple combinations of a vanilla option and the 'right' number of cash-or-nothing options. The buyer of a contingent premium option has effectively purchased a vanilla option and sold enough number of cash-or-nothing options so that the net premium due at inception is zero.
Therefore statement I, II and III are correct and Choice 'b' is the correct answer.

NEW QUESTION: 43
The rate of dividend on a stock goes up. What is the effect on the price of a put option on this stock?
A. It may affect the put value either way depending upon the risk-free rate
B. It increases the value of the put
C. It decreases the value of the put
D. It does not affect the value of the put
Answer: (SHOW ANSWER)
Explanation
Everything else remaining the same, an increase in the rate of dividends causes the value of call options to fall and the value of put options to rise. Therefore, Choice 'b' is the correct answer. (In the exam, the question could address either a call or a put option, so be aware of the answer in either case).
To understand this, consider how dividends are accounted for when valuing an option using the Black Scholes model. Future dividends are discounted to the present using the risk free rate and this discounted value is reduced from the spot price used in the BSM valuation. Effectively, this reduces the spot price used in the BSM formula. When the spot price reduces, and the exercise price remains the same, then the value of the call option goes down. In the same way, when spot price is reduced by the present value of dividends

(and the exercise price stays the same), obviously the put option becomes more valuable. Therefore an increase in the rate of dividends increases the value of the put option.
There is another intuitive way to think about this: A call option is like a long position in the stock, but the holder of the call option is not entitled to receive dividends (unlike the holder of the stock). Since the holder of the call option has to forego the dividends, he is willing to pay less for the option; or in other words, the value of the call reduces.
In the same way, a put option is like having a short position in the stock. The holder of the short position has to borrow the stock in order to get into the short position in the first place. When dividends are paid, the holder of the short stock position has to make good any dividends that might be paid to the lender of the stock. The holder of a put option does not have to make any such payments. Therefore the put option is more valuable, and the existence of dividends (or an increase in dividends) increases the value of the put option. (Try this out using the Black Scholes Excel model given under the tutorials by varying the spot price.)

NEW QUESTION: 44
A portfolio comprising a long call and a short put option has the same payoff as:
A. a long underlying asset and a short bond position
B. a short underlying asset and a short bond position
C. a long underlying asset and a long bond position
D. a short underlying asset and a long bond position
Answer: (SHOW ANSWER)
Explanation
To answer this question, we need to look at the put-call parity, which can be expressed as:
Value of call - Value of put = Spot price - Exercise price discounted to the present or,
Value of call - Value of put = Stock - Bond with a future value equal to exercise price
Therefore, a long call and a short put is equivalent to a long stock position and a short bond.
Choice 'a' is therefore the correct answer. (Alternatively, we could also have constructed a graph of the payoff profiles to arrive at the same answer).

NEW QUESTION: 45
What is the price of a treasury bill with $100 face maturing in 90 days and yielding 5%?
A. $95.24
B. $95.00
C. $98.78
D. $101.23
Answer: C (LEAVE A REPLY)
Explanation
The price of a treasury bill can be calculated as [Future value / (1 + yield x days-to-maturity/365)] =

100/(1+5%*90/365) = $98.78.

NEW QUESTION: 46
If the implied volatility is known for a call option, what can be said about the implied volatility for a put option with the same strike and maturity?
A. The implied volatility for the put will be the same as that for the call but with a negative sign
B. The implied volatility for the put will be the same as that for the call
C. The implied volatility for the put will be given by the expression [1 -] where is the implied volatility for the call
D. The implied volatility for the put cannot be determined from the implied volatility of the call
Answer: B (LEAVE A REPLY)
Explanation
The implied volatility for a call and a put is identical if the two have the same strike and expiry. Therefore Choice 'b' is the correct answer and the remaining choices are incorrect.

NEW QUESTION: 47
An asset manager holds an equity portfolio valued at $25m with a beta of 0.8. She would like to reduce the beta of the portfolio to 0.6 for the next 3 months using index futures. Index futures are curently trading at
1450, and the contract multiple is 250. How should the asset manager trade the index futures to get his desired result? Assume her portfolio is well diversified.
A. Sell 35 index futures contracts
B. Sell 55 index futures contracts
C. Buy 25 index futures contracts
D. Sell 14 index futures contracts
Answer: D (LEAVE A REPLY)
Explanation
The portfolio's beta is 0.8, and therefore in order to completely hedge the portfolio (ie reduce beta to 0), the portfolio manager would need to short 0.8 * $25m/(1450*$250) =

55.17 contracts, or 55 contracts. However, the ask here is to reduce the beta to 0.6, and not 0.
The number of contracts required to reduce the beta of a portfolio from to is give by (-) * Value of portfolio / Value of a single contract. In this case, this calculation works out to (0.8 - 0.6) * $25m/(1450*250) = 13.8, or roughly 14 contracts.
The portfolio manager should short 14 index futures contracts to reduce the total portfolio beta to 0.6.

NEW QUESTION: 48
Which of the following statements are true:
I. Implied volatility refers to volatility estimates made by risk managers for their VaR calculations II. Implied volatility is generally observed to be constant across strikes and expiries, as otherwise we would have riskless arbitrage possible.
III. Volatility smile refers to the shape of the implied volatility curve across different strike prices IV. An option portfolio cannot have negative theta
A. III
B. III and IV
C. I, II and IV
D. I and III
Answer: A (LEAVE A REPLY)
Explanation
Implied volatility is the volatility that is priced in the current market prices. In other words, we know the formula for pricing an option, and we find the value of the volatility for which we get the current market price.
It is the volatility that the market is ascribing to that security. Therefore statement I is not correct.
Implied volatility in the market tends to vary across strikes, even with the same underlying. There is a certain level of demand for out of the money puts, for example, from investors trying to set a floor for their losses. At the same time, there is a natural supply of out of the money calls from investors trying to earn some relatively risk free premiums. These factors cause options with different strikes to be priced in a way as to give different estimates of market volatility at each strike *& resulting in the 'volatility smile'). Therefore statement II is not correct.
The shape of the implied volatility curve is called the 'volatility smile', because of the shape it sometimes takes. Statement III is correct.
Theta is the rate of change of an option's price with the passage of time. It causes the value of the option to decrease over time, such that if it is out of the money and close to expiry, the price of the option approaches zero. Theta is therefore negative by definition. Statement IV is not correct. Remember that theta will be positive for short positions.

NEW QUESTION: 49

Which of the following is NOT an assumption underlying the Black Scholes Merton option valuation formula:

A. Volatility of the underlying and the risk free interest rate is constant

B. There is no credit risk

C. There are no transaction costs

D. The option can be exercised at any time up to expiry

Answer: D (LEAVE A REPLY)

NEW QUESTION: 50

A bond has a Macaulay duration of 6 years. The yield to maturity for this bond is currently 5%. If interest rates rise across the curve by 10 basis points, what is the impact on the price of the bond?

A. Increase of 57 basis points

B. Decrease of 57 basis points

C. Increase of 10 basis points

D. Decrease of 10 basis points

Answer: B (LEAVE A REPLY)

Explanation

Since Macaulay duration is 6 years, the modified duration is 6/(1+5%) = 5.71. This means that if interest rates were to rise by 1%, the bond price would decrease by 5.71%. Since interest rates have risen by 10 bps, (100bps = 1%), the bond's price would fall by roughly 0.571%, or 57 basis points

NEW QUESTION: 51

A stock sells for $100, and a call on the same stock for one year hence at a strike price of $100 goes for $35.

What is the price of the put on the stock with the same exercise and strike as the call? Assume the stock pays dividends at 1% per year at the end of the year and interest rates are 5% annually.

A. $41.50

B. $31.20

C. $35

D. $31.95

Answer: (SHOW ANSWER)

Explanation

We know from the put-call parity that:

Call - Put = Stock - Deposit

In the given situation,

Stock price = 100

call = 35

Put = ?

Exercise price = 100
However, we cannot use the stock price as-is, we need to adjust it for dividends that will be received during the period for which the option is valid. Dividends are $1, which need to be discounted to the present. In financial theory, dividends are often assumed to be continuously paid, though in reality they are single discrete payments at points in time. In this situation, for simplicity we assume that the dividend is paid at the end of the year, and needs to be discounted to the present and deducted from the spot price.
Therefore:
Stock price adjusted for dividends = $100 - ($1/1.05) = $100 - $0.95 = $99.05 Similarly, the bank deposit amount, which is the PV of the exercise price, can be calculated as
$100/1.05 =
$95.24
We can now calculate the price of the put by plugging the numbers above in the put-call parity:
35 - Put = $99.05 - $95.24
Therefore the value of the put = 31.19, which is closest to 31.20 which therefore is the correct answer.

NEW QUESTION: 52
A stock that pays no dividends is trading at $100 spot or $104 as a three month forward. The interest rate you can borrow at is 6% per annum. US treasury yields are 4% per annum. What should you do to profit in the situation?
A. Buy the forward and also buy the stock
B. Sell the stock and buy the forward
C. Buy the stock and sell the forward
D. It is not possible to profit from the situation
Answer: C (LEAVE A REPLY)
Explanation
Since the stock is selling for $100 spot, its 3 month forward price for you would be $100*(1 + 6%*3/12) =
$101.50. Since the forward is priced at $104, it is 'rich' compared to the spot and should be sold. A profitable trade would be to buy the spot and sell the forward.
Imagine you borrow $100 and buy the stock, and simultaneously sell the forward. At the end of 3 months, you will receive $104 in return from the forward, and be obliged to return the initial $100 borrowed together with interest of $1.50 for the three months. You would make a riskless profit of $2.50 per share in three months.
Thus Choice 'c' is the correct answer.
Note that the treasury yield is irrelevant, what matters is the rate at which you can finance the trade which is
6% per annum.

NEW QUESTION: 53
Security A has a beta of 1.2 while security B has a beta of 1.5. If the risk free rate is 3%, and the expected total return from security A is 8%, what is the excess return expected from security B?
A. 6.25%
B. 7.17%
C. 4.17%
D. 9.25%
Answer: A (LEAVE A REPLY)
Explanation
This question requires us to use the CAPM.
Recall that according to CAPM the expected return on an asset = The risk free rate + x Market risk premium.
Using the beta and expected return of security A, we can determine the market risk premium to be (8% -
3%)/1.2 = 4.1667%. The excess return is the return over the risk free rate, and for security B, this is nothing but the beta multiplied by the market risk premium. Therefore the correct answer is 4.1667% x 1.5 = 6.25%.
Note that this is the 'excess return', and not the total return. (Total return will include the risk free rate).

NEW QUESTION: 54
A large utility wishes to issue a fixed rate bond to finance its plant and equipment purchases. However, it finds it difficult to find investors to do so. But there is investor interest in a floating rate note of the same maturity.
Because its revenues and net income tend to vary only predictably year to year, the utility desires a fixed rate liability. Which of the following will allow the utility to achieve its objectives?
A. Issue a floating rate note and hedge the risk of movements in interest rates by entering into an interest rate swap to pay fixed and receive floating
B. Buy a floating rate note and hedge the risk of movements in interest rates by entering into an interest rate swap to pay fixed and receive floating
C. Issue a floating rate note and immediately buy a similar floating rate note, together with a long position in interest rate futures
D. Issue a floating rate note and hedge the risk of movements in interest rates by entering into an interest rate swap to pay floating and receive fixed
Answer: (SHOW ANSWER)
Explanation
Choice 'a' is the correct answer as the issue of the floating rate note will provide the utility with the funds it needs, and the interest rate swap would offset the floating rate payment and leave it with a net fixed payment.

Choice 'd' is incorrect as the swap is in the wrong direction.
Choice 'c' is incorrect as buying and selling a floating rate bond would mean the utility will not have any funds that it wants to issue the note for, and combining it with interest rate futures would be just absurd.
Choice 'b' is incorrect as buying a floating rate note would use funds while the utility is trying to raise funds.

NEW QUESTION: 55
Basis risk between spot and futures prices for stock indices is caused by changes in:
I. The risk free rate, or the funding cost for the futures
II. Expected dividend yield
III. Volatility of the underlying stock index
A. I and III
B. I and II
C. I, II and III
D. II and III
Answer: B (LEAVE A REPLY)
Explanation
Basis risk between spot and futures prices is the risk that the prices of the futures contract will not move in lockstep with the spot prices. Basis risk creates a problem when investors are trying to get exposure to a stock price through a futures contract, or are trying to hedge a position using a futures contract, and over time the prices of these two diverge.
To understand why basis risk arises, we need to think about how futures prices are determined. Futures prices are nothing but the spot prices plus the carrying cost, ie what it would cost for the seller of the contract to buy the spot security and hold it till the time of delivery in the future. During this holing period, the seller of the contract has to pay interest to fund his purchase in the spot market, and also receives and distributions such as dividends. In the case of commodity futures, he may also have to pay storage charges.
When determining the futures prices, it is not known with complete certainty as to what the carrying costs will ultimately turn out to be - interest rates may change, dividends may turn out to be more or less, leading to changes in the futures prices without changes in the spot prices. This gives rise to basis risk.
Therefore changes to the risk free rate, which is a proxy for the true funding cost of the futures position and changes in expected dividends creates basis risk. Volatility of the underlying is irrelevant for futures.
Therefore Choice 'b' is the correct answer.

NEW QUESTION: 56
Using a single step binomial model, calculate the delta of a call option where future stock prices can take the values $102 and $98, and the call option payoff is $1 if the price goes up, and zero if the price goes down.

Ignore interest.

A. 1/2

B. 1/4

C. 1

D. 1/3

Answer: B (LEAVE A REPLY)

Explanation

To solve this question, we need to revisit how delta is calculated in a single step binomial model:

Consider a portfolio with just two positions: 1 Long Call option, and Short Stock. We do not know what (Delta) is.

Now if the current price of the stock is P, which can take the value P2 (higher value) and P1 (lower value) in the future at time T, then needs to be such that the value of the portfolio is equal in both the cases. If the price goes up, the value of the option will be $1 (given) and the value of the short stock will be - P2. If the price goes down, the value of the option will be $0, and the value of the stock will be - P1.

Therefore, $1 - P2 = $0 - P1.

Solving for , we get = $1 /(P2 - P1) = $1 / ($102-$98) = 1/4.

NEW QUESTION: 57

A receiver option on a swap is a swaption that gives the buyer the right to:

A. swap two options between the two counterparties

B. receive the fixed rate and pay a variable rate

C. receive the swap spread in effect on a future date and pay a variable underlying rate

D. pay the fixed rate and receive a variable rate

Answer: B (LEAVE A REPLY)

Explanation

A swaption is an option to enter into a fixed for floating interest rate swap at a point in the future, with the fixed rate decided upfront. These options can be European, Bermudan or American, in terms of what dates the option can be exercised. A receiver option on a swap is an option that gives the buyer the right to enter into a swap and receive the fixed rate and pay the variable rate. In the case of a payer option, the buyer pays the fixed rate and receives the variable rate. One way to remember this is that receiving and paying are terms used with reference to the fixed rates.

NEW QUESTION: 58

Which of the following does not explain the shape of an yield curve?

A. Market segmentation theory

B. The expectations hypothesis

C. The efficient markets hypothesis

D. The liquidity preference theory

Answer: C (LEAVE A REPLY)

Explanation

The efficient markets hypothesis states that all known information is captured in the prices of a security. It does not explain the shape of the yield curve.

The expectations hypothesis, the LPT and the market segmentation theory are all attempts to explain the shape of the term structure of interest rates.

Therefore Choice 'c' is the correct answer as it does not explain the shape of the yield curve.

NEW QUESTION: 59

A bank advertises its certificates of deposits as yielding a 5.2% annual effective rate. What is the equivalent continuously compounded rate of return?

A. 4.82%

B. 5%

C. 5.07%

D. 5.20%

Answer: (SHOW ANSWER)

Explanation

The equivalent continuously compounded rate in this case can be calculated as ln(1+5.2%) = 5.07%. The other answers are incorrect.

Refer to the tutorial on interest rates for more details on how continuously compounded rates work.

NEW QUESTION: 60

Which of the following statements is not correct with respect to a European call option:

A. A increase in the risk-free rate of interest always increases the value of the option

B. An increase in the price of the underlying always increases the value of the option

C. An increase in the time to expiry always increases the value of the option

D. An increase in the volatility of the underlying always increases the value of the option

Answer: C (LEAVE A REPLY)

Explanation

An increase in volatility increases the value of the option, and so do increases in the price of the underlying and the risk free rate. However, since a European option can only be exercised at expiry, an increase in the time to expiry may not necessarily increase the value of the option as it may increase the uncertainty around a more certain payout. Consider the extreme case of a deep in the money European call option that has 1 day left to expiry, and a payout is certain. Now imagine the time to expiry is increased by say, 6 months. Now the payout is no longer certain as no one knows what the value of the underlying will end up at after 6 months. In such a case, the value of the option would decline. But this applies only to a European option. An American option, which can be exercised any time, will not be affected by this reasoning.

NEW QUESTION: 61
Which of the following statements is true in relation to the capital markets line (CML):
I. The CML is a transformation line that is tangential to the efficient frontier II. The CML allows an investor to obtain the highest return for a given level of risk chosen according to the investor's risk attitude III. The CML is the line passing through the point on the efficient frontier with the highest Sharpe ratio, and a y-intercept equal to the risk free rate IV. The Sharpe ratio for the points on the CML increase in a linear fashion
A. I and III
B. II, III and IV
C. I and II
D. I, II and III
Answer: D (LEAVE A REPLY)
Explanation
The highest possible transformation line, ie the transformation line with the maximum slope, is the transformation line joining the risk free rate on the y-axis and the portfolio with the maximum Sharpe ratio on the efficient frontier. This line is called the 'capital markets line'. Investors can pick any point on this line according to their risk appetite, and doing so would maximize the return they can obtain for their desired level of risk. The capital markets line is tangential to the efficient frontier. The Sharpe ratio stays constant throughout the CML. Therefore statement IV is not true, while the rest are.

NEW QUESTION: 62
The objective function satisfying the mean-variance criterion for a gamble with an expected payoff of x, variance var(x) and coefficient of risk tolerance is is:
A)
$Maximize\left[\frac{e(x.var(x))}{2\lambda}\right]$
B)
$Minimize\left[e(x)-\frac{var(x)}{2\lambda}\right]$
C)

$Minimize\left[\frac{e(x.var(x))}{2\lambda}\right]$

D)

$Maximize\left[e(x)-\frac{var(x)}{2\lambda}\right]$

A. Option A

B. Option B

C. Option C

D. Option D

Answer: (SHOW ANSWER)

Explanation

Choice 'd' represents the mean-variance function to be maximized for selecting between mutually exclusive gambles. The other choices are incorrect.

(The mean-variance criterion is a fairly complex subject, and this question is only intended to make sure that you know, and can identify the function that is being maximized. A complete explanation/derivation of the mean-variance criterion, that links together expected returns, volatility and the risk tolerance of the investor to arrive at the efficient frontier is beyond the scope of the PRM syllabus.)

NEW QUESTION: 63

Which of the following assumptions underlie the 'square root of time' rule used for computing volatility estimates over different time horizons?

I. asset returns are independent and identically distributed (i.i.d.)

II. volatility is constant over time

III. no serial correlation in the forward projection of volatility

IV. negative serial correlations exist in the time series of returns

A. I and II

B. I and III

C. III and IV

D. I, II and III

Answer: (SHOW ANSWER)

Explanation

The square root of time rule can be used to convert, say a 1-day volatility to a 10-day volatility, by multiplying the known volatility number by the square root of time to get the volatility over a different time horizon.

However, there are key assumptions that underlie the application of this rule, and statements I to III correctly state those assumptions. If serial correlations (whether negative or positive) exist, then asset returns are not independent as they are affected by the prior day or prior period's returns, and we cannot use the square root of time rule. Therefore Choice 'd' is the correct answer.

In order to use the 'square root of time' rule, asset returns should be iid, volatility should stay constant (ie there should be no volatility clustering), and no serial correlations (ie the returns of one day should not be affected by the returns of the prior periods). Choice 'd' is the correct answer.

NEW QUESTION: 64
Euro-dollar deposits refer to
A. A deposit denominated in the ECU
B. A US dollar deposit outside the US
C. A Euro deposit convertible into dollars upon maturity
D. A Euro deposit in the USA
Answer: B (LEAVE A REPLY)
Explanation
Eurodollar deposits refer to US dollar denominated deposits outside the US, for example in a banking center such as London, and held by a non-US bank or a foreign branch of a US bank. Choice 'b' is the correct answer.

NEW QUESTION: 65
Calculate the fair no-arbitrage spot price of oil if the price of a one year forward is $75, the discrete one year interest rates are 6%, and annual storage costs are $4 per barrel paid at the end of the year.
A. $70.75
B. $74.53
C. $71
D. $66.98
Answer: D (LEAVE A REPLY)
Explanation
If $x be the spot price of oil, then in order for the forward price to be $75, the following relationship must hold: ($x + $4/(1.06))*(1 + 6%) = $75. Solving, we get x = $66.98

NEW QUESTION: 66
Which of the following is not a money market security
A. Treasury notes
B. Treasury bills
C. Bankers' acceptances
D. Commercial paper
Answer: A (LEAVE A REPLY)
Explanation
A money market security is one that is initially issued with a maturity of less than one year. Treasury bills are short-term government securities with maturities ranging from a few days to 52 weeks. Bills are sold at a discount from their face value, and do not carry a coupon.

Treasury notes and treasury bonds are not money market instruments as they are issued for a maturity greater than a year. Treasury notes are issued with maturities of 2, 3, 5, 7, and 10 years and pay interest every six months. Treasury bonds pay interest every six months and mature in 30 years.
Commercial paper is issued by corporations to meet their short term funding needs and is a money market instrument. Bankers' acceptances are short term loans to corporations that are guaranteed by a bank.
Of the given list, since treasury notes are the only instrument that are not money market securities, Choice 'a' is the correct answer.

NEW QUESTION: 67
For a portfolio of equally weighted uncorrelated assets, which of the following is FALSE:
A. Returns can be averaged to get portfolio return
B. Asset variances can be averaged together to obtain portfolio variance
C. Portfolio risk is less than if the assets were positively correlated
D. Standard deviations can be averaged together to obtain portfolio volatility
Answer: (SHOW ANSWER)
Explanation
All the statements given are true, except that standard deviations cannot be averaged to get the portfolio standard deviation unless the assets are perfectly positively correlated. Therefore Choice 'd' is the false statement, and the correct answer.
For a portfolio of uncorrelated assets, ie correlations being equal to zero, variances can be added together to get portfolio variance. Also, regardless of correlations, portfolio returns are always the weighted average of asset returns, and just averages will do in this case as the portfolio is said to be equally weighted across the assets. A correlation of zero produces a risk level less than that possible with positive correlations.

NEW QUESTION: 68
Which of the following are valid reasons that explain an upward sloping yield curve?
I. The market expects interest rates to increase in the future
II. The market expects interest rates to decline in the future
III. Investors prize liquidity over illiquidity
IV. Investors believe the economy is likely to enter recession
A. I, III and IV
B. II and III
C. II and IV
D. I and III
Answer: D (LEAVE A REPLY)
Explanation
There are two main theories that explain an upward sloping yield curve. The first is the market expectations hypothesis (called 'pure expectations'). According to this explanation,

the yield curve represents investor expectations of future yields, and forward rates are predictors of future interest rates. The yield curve slopes upwards when investors expect interest rates to go up in the future. Thus, statement I is correct. By the same logic, statement II is incorrect.
The second explanation for an upward sloping yield curve is the liquidity preference theory - according to which investors value liquidity and are prepared to pay more for instruments that mature earlier. Having their money tied up in longer maturity instruments increases all kinds of risks, and therefore longer term instruments are priced lower than instruments maturing earlier. Since the price of instruments that mature earlier is higher, their yield is lower than that of longer dated securities, thereby leading to an upward sloping yield curve. Therefore statement III is correct.
Statement IV actually explains why an yield curve may be downward sloping - in fact an inverted yield curve is considered an indicator of an upcoming recession. Therefore statement IV does not explain an upward sloping yield curve, and is therefore not a correct choice for the answer.
Thus statements I and III correctly explain an upward sloping yield curve. Other choices are incorrect.

NEW QUESTION: 69
If the 1-year forward rates for years 1,2,3 and 4 are 2%, 3%, 4% and 5% respectively, what is the zero coupon spot rate for 4 years
A. 3.49%
B. 5%
C. 3.50%
D. 4%
Answer: (SHOW ANSWER)
Explanation
The zero coupon spot rate for 4 years can be calculated as = (1.02*1.03*1.04*1.05)^(1/4) - 1 = 3.49%, which is the correct answer. (3.50% is just the mathematical average of the rates for the four years and is not correct, even though close.)

NEW QUESTION: 70
Which of the following is NOT true about a fixed rate bond:
I. The higher the coupon, the lower the duration
II. The higher the coupon, the lower the convexity
III. If the bond is callable, it has negative modified duration
IV. If the bond is callable, the bond has negative convexity
A. IV
B. III
C. II
D. I

Answer: B (LEAVE A REPLY)

Explanation

A higher coupon brings forward the cash flows of a bond, thereby lowering duration. Therefore statement I is true. The lower the duration the lower the convexity. Therefore a higher coupon leads to lower duration and therefore lower convexity. Thus statement II is true.

Bonds do not have negative modified duration, therefore statement III is false.

If the bond is callable, it leads to negative convexity as a fall in interest rates is likely to induce the issuer to call the bond and re-issue at the new lower interest rates (much like refinancing mortgages when interest rates fall), therefore the upside from a fall in rates is limited. This creates 'negative convexity'. Thus statement IV is correct.

NEW QUESTION: 71

An investor expects stock prices to move either sharply up or down. His preferred strategy should be to:

A. buy a butterfly spread

B. buy a condor

C. buy a collar

D. buy a straddle

Answer: (SHOW ANSWER)

Straddles and strangles are strategies that would benefit from sharp movement in option prices, regardless of direction. These comprise a long call and a long put, which would benefit regardless of whether prices rise or fall. The only time they would lose money would be when prices stay constant.

A collar would gain when stock prices fall, and not when they rise. Since our investor does not have a view on the direction of the movement, this strategy will not work for him.

A butterfly spread or a condor would gain when prices stay range-bound, so that cannot be a useful strategy.

Therefore Choice 'd' is the correct answer.

NEW QUESTION: 72

Which of the following statements is true:

I. A high market beta implies a high degree of correlation with the market II. Correlation coefficient and covariance between assets have the same sign III. A correlation of zero indicates the absence of a linear relationship between the two assets IV. Unless assets are perfectly correlated, diversification always reduces portfolio risk.

A. I

B. I and II

C. I, II, III and IV

D. II, III and IV

Answer: D (LEAVE A REPLY)

Explanation
A high beta does not necessarily imply a high correlation with the market. The relationship between beta and correlation can be expressed as 103.04.e2103.04.e2, where x is the market portfolio and y is

$$\beta = \rho_{x,y} \cdot \frac{\sigma_y}{\sigma_x}$$

the asset under consideration.

$$This\ is\ because\ \beta = \frac{covariance_{x,y}}{variance_x}$$

$$Now\ \rho_{x,y} = \frac{covariance_{x,y}}{\sigma_x \sigma_y}$$

$$Which\ implies\ \beta = \rho_{x,y} \cdot \frac{\sigma_y}{\sigma_x}]$$

103.04.e
This means that a high market beta could be due to high volatility of the asset in question, and not because of a high correlation. Therefore statement I is not correct.Statement II is correct as correlation and covariance have the same sign. This is because correlation = covariance/product of standard deviations. Since standard deviation is always positive, correlation and covariance will have the same sign.A correlation of zero indicates the absence of a linear relationship between two variables - therefore statement III is correct.Statement IV is correct as well, because unless correlation is +1, diversification always reduces total portfolio risk.

NEW QUESTION: 73
[According to the PRMIA study guide for Exam 1, Simple Exotics and Convertible Bonds have been excluded from the syllabus. You may choose to ignore this question. It appears here solely because the Handbook continues to have these chapters.] A digital cash-or-nothing option can be hedged reasonably effectively using:
A. a long call and a long put with a higher strike
B. a long call and a short call with a lower strike
C. a long call and a short call with a higher strike
D. a short call and a long put with a higher strike
Answer: (SHOW ANSWER)
Explanation
Consider a long vanilla call at a strike of K1, and a short call with a strike price of K2 so that K2>K1. If you construct the payoff diagrams for these option positions, you will see that the combined payoff resembles very closely the payoff of a digital cash-or-nothing option. By bringing K2 and K1 closer together, we can make it very close to a digital cash-or-nothing option. Therefore Choice 'c' is the correct answer.

NEW QUESTION: 74
If the delta of a call option is 0.3, what is the delta of the corresponding put option?
A. 0.7
B. -0.7
C. -0.3
D. 0.3
Answer: B (LEAVE A REPLY)
Explanation
From the put-call parity, we know that Call - Put = Stock - Bank deposit. Since the bank deposit has a zero delta, and the delta of the Stock itself is 1, we get the relationship Delta of Call - Delta of Put = 1. Therefore, if the delta of a call option is 0.3, the delta of the corresponding put option is 0.3 - 1 = -0.7

NEW QUESTION: 75
What is the approximate delta of an exactly at-the-money call option?
A. Close to -0.5
B. Close to 0.5
C. Close to 0
D. Close to 1
Answer: (SHOW ANSWER)
Explanation
The delta of an at-the-money call option is close to 0.5. It is close to 1 when it is deep in the money. It is close to 0 when it is deep out of the money. It is never negative. Therefore Choice 'b' is the correct answer.

NEW QUESTION: 76
Which of the following will have the effect of increasing the duration of a bond, all else remaining equal:
I. Increase in bond coupon
II. Increase in bond yield
III. Decrease in coupon frequency
IV. Increase in bond maturity
A. III and IV
B. I and III
C. I and II
D. II, III and IV
Answer: A (LEAVE A REPLY)
Explanation
An increase in coupon brings the 'average' cash flows closer, thereby decreasing duration. The higher the coupon, the lower the duration.

An increase in yield discounts the cash flows that are further away more than it does the closer cash flows, so an increase in yield decreases duration.
An increase in coupon frequency brings the bond's cash flows closer, thereby decreasing duration. Decreasing the coupon frequency has the opposite effect.
An increase in maturity pushes the payments further out, thereby increasing duration.

NEW QUESTION: 77
The gamma of a call option is 0.08. What is the gamma of the corresponding put option?
A. -0.08
B. 0.92
C. 0.08
D. -0.92
Answer: (SHOW ANSWER)
Explanation
From the put-call parity, we know that Call - Put = Stock - Bank deposit. Since the bank deposit has a zero Gamma, and the Gamma of the Stock itself is also 0, we get the relationship Gamma of Call - Gamma of Put =
0. Therefore, if the Gamma of a call option is 0.08, the Gamma of the corresponding put option is also 0.08.

NEW QUESTION: 78
If , and represent the delta, gamma and theta of any derivative whose value is V; r be the risk free rate; be the volatility and S the spot price of the underlying, which of the following equations will hold true? (Note that is the notation used for partial derivatives)
I. 202.21.q1
II. 202.21.q2
III. 202.21.q3
IV. 202.21.q4
A. III and IV
B. II
C. I and II
D. III

Answer: C (LEAVE A REPLY)

Explanation

This question relates to the Black Scholes PDE (partial differential equation). The Black Scholes PDE is derived by combining the results of a stock price following a Weiner process with a mathematical result known as Ito's lemma and holds true for all derivatives whose prices depend upon S, the price of the underlying and upon t, which indicates time. The derivation of the Black Scholes PDE is beyond the scope of the PRM syllabus (and also of the author of this question), but we need to know what it is. The PDE can be written as:

202.21.q1

Substituting , this can also be written as

202.21.e

202.21.q2

Therefore the first and the second equations are correct, and the other two are wrong. Choice 'c' is the correct answer.

You should know the PDE in case there is a numerical question about it. The two ways of writing it (as I and II above in the question) express the same relationship. The BSM formula itself for valuing a vanilla European option is based upon the PDE. Most other options are also valued using the fundamental relationship expressed in the PDE.

NEW QUESTION: 79

Repos are used for:

I. Short term borrowings

II. Managing credit risk exposures

III. Money market operations by central banks

IV. Facilitating short positions

A. I, III and IV

B. II, III and IV

C. II and IV

D. I, II and III

Answer: A (LEAVE A REPLY)

Explanation

Repos are collateralized borrowing arrangements. They are used for providing short term funding. They are not used for managing credit risk exposures. They are also used by central banks as part of their money market operations. They are also useful for facilitating short positions, for example, in corporate bonds where the party desirous of shorting the bond may 'borrow' the bond on repo in order to be able to sell it short.

NEW QUESTION: 80

The quote for which of the following methods of physical delivery of a futures contract would be the cheapest?

A. Free on board
B. Free alongside ship
C. In store
D. Cost, insurance and freight
Answer: (SHOW ANSWER)
Explanation
'In store' delivery is for delivery in a standardized location, and the buyer is handed a 'warrant' that allows him to pick the goods up. This is the cheapest means of physical delivery. The other prices will be higher as they involve more costs for the seller who has to get the goods on board a ship, or to the docks, or insurance and freight as well. Choice 'c' is the correct answer.

NEW QUESTION: 81
What is the fair price for a bond paying annual coupons at 5% and maturing in 5 years. Assume par value of
$100 and the yield curve is flat at 6%.
A. $104.33
B. $95.79
C. $100.00
D. $94.73
Answer: (SHOW ANSWER)
Explanation
The coupon payments can be considered an annuity which can be valued using the formula for the PV of annuities= annuity . Therefore the value of the five coupon payments is 5 * ((1-1/(1.06^5))/0.06) = $21.06 Similarly the principal payment at the end of 5 years can be valued as 100/1.065 = $74.73 Therefore the total value of the bond today is $95.79

NEW QUESTION: 82
Suppose the S&P is trading at a level of 1000. Using continuously compounded rates, calculate the futures price for a contract expiring in three months, assuming expected dividends to be 2% and the interest rate for futures funding to be 5% (both rates expressed as continuously compounded rates)
A. $1,007.50
B. $1,000.00
C. $1,007.53
D. $1,012.58
Answer: C (LEAVE A REPLY)
Explanation
The futures price of the contract will be the future value of the spot price, calculated at a net rate equal to the cost of funding the futures position, less any dividends or other

distributions. Also note that when rates are continuously compounded, Future Value = Present Value x (exp(rate x time)).
Therefore in this case the futures price for the S&P = 1000 * exp((5%-2%)*3/12) = 1007.53

NEW QUESTION: 83
A short position in a 3 x 6 FRA is equivalent to which of the following?
A. Borrow now for 3 months and lend 3 months hence for 3 months
B. Lend now for 3 months and borrow now for 6 months
C. Do a fixed for floating interest rate swap for 3 months
D. Borrow now for 3 months and lend now for 6 months
Answer: D (LEAVE A REPLY)
Explanation
The buyer of an FRA is considered 'long', and a 3 x 6 FRA allows him or her to borrow funds at the agreed rate starting at the end of month 3 till the end of month 6. (ie, 3 x 6 indicates that the borrowing period commences at 3 months, and ends at 6 months, for a period of 6 - 3 = 3 months). The seller has exactly the opposite position, ie he or she is committed to lend funds at the agreed rate for 3 months starting at the end of
3 months from today (for a 3 x 6 FRA). [Note that the obligation to borrow or lend in and FRA does not mean that either parties will actually do that, instead they will just exchange cash flows to get to get to an identical economic situation.] Since the seller, or the short, is committed to lending in the future starting 3 months from now, it is akin to borrowing now for 3 months, and investing the borrowed amount for 6 months. During the first 3 months, the amounts borrowed and lent 'cancel' out (conceptually) and after the 3 months the short returns the amount borrowed, and is left with just the net amount lent, ie the FRA.
Thus the correct answer is Choice 'd'. Choice 'b' describes the position of the FRA buyer. Choice 'a' and Choice 'c' are nonsensical.

NEW QUESTION: 84
A bond with a 5% coupon trades at 95. An increase in interest rates by 10 bps causes its price to decline to
$94.50. A decrease in interest rates by 10 bps causes its price to increase to $95.60. Estimate the convexity of the bond.
A. 5.79
B. 1.053
C. -5
D. 1053
Answer: (SHOW ANSWER)
Explanation
Convexity is nothing but the second derivative with respect to price - or in other words, it is the first derivative of the modified duration. If we could determine two data points for modified duration, we can determine convexity too.

The modified duration is the percentage change in bond price from a 1% change in yield. In this case, for the up move, the modified duration can be calculated as follows:
Change in price for 10 bps change in yield = $0.60/$95 =0.006316
Change in price for a 1% change in yield = 0.006316 * 10 = 0.06316
Therefore modified duration = 0.06316 * 100 = 6.316
For the down move in price, the modified duration is similarly $0.50/$95 * 10 * 100 = 5.263. The convexity therefore is the difference between these two modified durations divided by the change in interest rates - note that these two points are separated by 10 basis points and not 20. Therefore convexity is (6.32 - 5.26)/0.1% = 1052.6.
[Note on how duration was calculated: In this case, we can estimate the duration of the bond as follows: we know that a 10 bps increase in rates causes the price to move to $94.50, and a 10 bps decrease causes the price to increase to $95.60. Thus, over the range of the 20 bps, the average change in price per basis point is ($95.60 - $94.50)/20 bps = $1.10/20 = $0.055/basis point, or $0.055* 100 = $5.5 for 100 basis points (ie 1%). We know that modified duration is equivalent to the percentage change in the bond price as a result of a 1% change in interest rates. A 1% change in the interest rates leading to a $5.5 change in a bond priced at $95 equates to $5.5/$95 = 5.79%, in other words the modified duration is roughly equal to 5.79 years.
In fact if we know the price of a bond at any two different interest rates, we can make an estimate of modified duration. Modified duration is just the first derivative with respect to price, and given two prices and the associated yields, we can easily calculate modified duration to be the ratio of the change in price to the change in interest rates. In this question, we are given both an up move and a down move. Using this estimation, only one data point (ie, either the up price or the down price) in addition to the starting point ($95) would have been enough to come to a rough estimate of modified duration. You will notice that the modified duration would be slightly different if we were to use the high point and the starting point (ie $95.60 and $95), and the starting point and the lower point ($95 and $94.50). The difference is due to convexity. The decrease in price is lower than the increase in price - and this is due to the convexity of the bond.]

NEW QUESTION: 85
An investor has a bullish outlook on the market. Which of the following option strategies would suit him?
I. Risk reversal
II. Collar
III. Bull spread
IV. Butterfly spread
A. II and IV
B. I, III and IV
C. I and III
D. I, II, III and IV

Answer: (SHOW ANSWER)

Explanation

The investor would benefit from the risk reversal and the bull spread as both these strategies have a payoff profile that benefit from rising prices of the underlying. The collar is the opposite of risk reversal, and benefits during a bear market, and the butterfly spread benefits when prices remain range bound. Therefore Choice 'c' is the correct answer.

NEW QUESTION: 86

Security A and B both have expected returns of 10%, but the standard deviation of Security A is 10% while that of security B is 20%. Borrowings are not permitted. A portfolio manager who wishes to maximize his probability of earning a 25% return during the year should invest in:

A. Security A

B. 50% in Security A and 50% in Security B

C. Security B

D. None of the above

Answer: (SHOW ANSWER)

Explanation

Security A 'dominates' security B, ie it offers the most return per unit of volatility. However, because it is less volatile, its returns are likely to be more concentrated around its mean compared to Security B which will have

'fatter tails' compared to Security A. Therefore Security B will offer a much better chance of making the desired 25% return. Of course, this also means that Security B is much more likely to lose a lot more money than Security A. However, if the portfolio manager is only interested in maximizing his chances of making a

25% or greater return, he should select Security B. The answer can be verified using Excel's Normdist formula, and probability of exceeding 25% will be given by [=1-NORMDIST(0.25,0.1,0.1,TRUE)] for Security A and =1-NORMDIST(0.25,0.1,0.2,TRUE)] for Security B. A combined portfolio of the two will have a return of 10% and variance less than that of Security B (or at the most equal to the weighted average of the two variances, even if their correlation is 1), which means a combined portfolio will also have a lower probability of exceeding a 25% return.

This question reflects how portfolio managers may be tempted to make sub-optimum decisions for their investors by swinging for the fences by taking large bets, for example, when they have had a big drawdown and have to make it up to the high water mark levels before they earn performance fees.

NEW QUESTION: 87

Which of the following statements are true:

I. All investors regardless of their expectations face the same efficient frontier which is always the market portfolio II. Investors will have different efficient frontiers based upon

their views of expected risks, returns and correlations III. Investors risk appetite will determine their choice of the combination of risk-free and risky assets to hold IV. If all investors have identical views on expected returns, standard deviation and correlations, they will hold risky assets in identical proportions

A. III and IV

B. II, III and IV

C. I and II

D. I, II, III and IV

Answer: B (LEAVE A REPLY)

Explanation

Investors have differing view of the market, which means differing view of expected returns, correlations and volatilities. Not only do they have differing views, these views change frequently as new information reveals itself. Accordingly, each investor has their own version of the efficient frontier. Once investors have determined their efficient frontiers, they will determine the extent of risk they wish to hold. If they had identical views, they would have held the same portfolio. But they do not, and if they did, there would be very little trading in the markets.

All the above statements are true except statement I which is false due to differing investor expectations.

(Re statement IV: If investors have different risk appetites, their portfolio will vary in the split between the risky and the riskfree assets. But inside the 'risky' assets bundle the proportion of the assets will be identical.

Ie, they would express their varying risk appetites by varying how much of the risky bundle and the riskfree asset they hold, but inside the risky bundle the proportion of the different risky assets will be the same.)

NEW QUESTION: 88

The rule that optimal portfolios will maximize the Sharpe ratio only applies when which of the following conditions is satisfied:

I. It is possible to borrow or lend any amounts at the risk free rate

II. Investors' risk preferences are fully described by expected returns and standard deviation III. Investors are risk neutral

A. II

B. I, II and III

C. I and III

D. I and II

Answer: D (LEAVE A REPLY)

Explanation

The Sharpe ratio does not require investors to be risk neutral, only that for a given level of returns they prefer less risk to more risk. (Risk neutral means that investors are indifferent to the level of risk, and are only driven by a desire to maximizing expected value,

regardless of risk levels.) The ability to borrow and lend any amounts of money at the risk free rate is a fundamental assumption for the rule that optimal portfolios will maximize the Sharpe ratio.
This rule also assumes that risk preferences are completely described by return and standard deviation of returns.
Therefore Choice 'd' is the correct answer as statements I and II are correct.

NEW QUESTION: 89
What would be the total all in price payable on an 5% annual coupon bond quoted at a clean price of $98, where the settlement date is 60 days after the latest coupon payment. Use Act/360 day basis.
A. $98.83
B. $98.00
C. $97.17
D. $100.00
Answer: (SHOW ANSWER)
Explanation
The all in price would be equal to the clean price plus accrued interest. The accrued interest for the 60 days that have passed since the last coupon payment is $5 x 60/360 = $0.83. Therefore the dirty price, or the all in price, will be $98.83. (Note that the $5 is the annual 5% coupon on the $100 face.)

NEW QUESTION: 90
A 'consol' is a perpetual bond issued by the UK government. Its running yield is 5%. What is its duration?
A. Infinity
B. 5 years
C. 20 years
D. 25 years
Answer: (SHOW ANSWER)
Explanation
The duration of a perpetuity is 1/running yield. Therefore the correct answer is 1/.05 = 20 years

NEW QUESTION: 91
A floating rate note pays daily overnight LIBOR. It matures in exactly one year. What is the duration of the note?
A. 0.5 years
B. 0.33 years
C. 0 years
D. 1 year

Answer: C (LEAVE A REPLY)

Explanation

Since the note pays daily LIBOR, there is no interest rate risk associated with this instrument. Note that interest rate risk for a fixed income instrument arises when the current interest rate changes to a rate different from that the instrument pays. In this case, the rate floats, and is reset daily, therefore there is no risk and the duration is 0. Choice 'c' is the correct answer.

NEW QUESTION: 92

Backwardation can happen in markets where

A. convenience yield is less than the total interest and carrying costs

B. convenience yields are greater than the total interest, storage and other carrying costs

C. convenience yields are positive

D. convenience yields are zero

Answer: (SHOW ANSWER)

Explanation

Convenience yield is the benefit from having access to the commodity - and if the convenience yield is very high, for example in a market where manufacturers must never run out of a particular raw material, then these can switch the total cost of carry (which include interest and storage costs, less convenience yields) to being negative. This causes forward prices to become lower than spot prices, a phenomenon known as backwardation. Therefore Choice 'b' is the correct answer. If convenience yields are less than other carrying costs, then backwardation will not happen. The sign of convenience yields does not matter, what matters is their relative magnitude when compared to the other costs of carry.

To understand this in an intuitive way, consider that forward prices are nothing but spot prices, plus interest, plus storage costs, less convenience yields. If interest and storage costs are less than the convenience yield, the market will be backwarded.

NEW QUESTION: 93

Calculate the net payment due on a fixed-for-floating interest rate swap where the fixed rate is 5% and the floating rate is LIBOR + 100 basis points. Assume reset dates are every

six months, LIBOR at the beginning of the reset period is 4.5% and at the end of the period is 3.5%. Notional is $1m.

A. Fixed rate payer receives $2500

B. Fixed rate payer pays $2500

C. No payments need to be exchanged

D. Floating rate payer receives $5000

Answer: A (LEAVE A REPLY)

Explanation

The LIBOR rate to use is the one at the beginning of the period, is 4.5%. The fixed rate payer owes 5%, and the floating rate payer owes 4.5% + 100bps. Thus the fixed rate payer will receive a payment equal to 0.5% for six months on $1m. This works out to $2500.

(Recall that a fixed for floating interest rate swap exchanges fixed for floating rate payments, with only the net payment being made by either party.) The LIBOR rate to use is the one at the beginning of the period, is 4.5%. The fixed rate payer owes 5%, and the floating rate payer owes 4.5% + 100bps. Thus the fixed rate payer will receive a payment equal to 0.5% for six months on $1m. This works out to $2500.

(Recall that a fixed for floating interest rate swap exchanges fixed for floating rate payments, with only the net payment being made by either party.)

NEW QUESTION: 94

According to the mean-variance criterion, which of the following statements are true in relation to an investor who does not borrow or lend?

I. The investor would select a portfolio of assets to minimize drawdowns II. The investor would prefer a portfolio on the efficient frontier III. The investor would prefer a portfolio with a higher return given the same level of risk IV. The investor would maximize portfolio return alone as the mean-variance criterion assumes risk neutrality

A. III

B. I and II

C. III and IV

D. II and III

Answer: (SHOW ANSWER)

Explanation

According to the mean variance criterion, an investor would always:

- prefer less risk to more risk given a certain level of returns,
- prefer more returns to less returns given a certain level of risk,
- if two portfolios are such that one provides higher returns at a higher risk, and the other provides a lower return at a lower risk, then we cannot say which of the portfolios the investor would prefer as that would depend upon the investor's risk preference.

The implication of the above is that an investor will always prefer a portfolio on the efficient frontier (the first two points above), as the portfolios on the efficient frontier always represent the maximum return for any given level of risk (or lowest risk given a certain level

of desired return). As between two portfolios both of which are on the efficient frontier (last point above), the investor will pick based upon his or her level of risk tolerance.
Therefore statement II and III are correct, and Choice 'd' is the correct answer. The reference to drawdowns and risk neutrality in statements I and IV are meaningless in the context and are incorrect.

NEW QUESTION: 95
The most risky tranche of a structured credit derivative is called:
A. the risky tranche
B. the senior tranche
C. the equity tranche
D. the mezzanine tranche
Answer: C (LEAVE A REPLY)
Explanation
The riskiest tranche of a structured product is called the equity tranche. All other choices are incorrect.

NEW QUESTION: 96
An investor has a portfolio with a value of $1,000,000 and a beta of 2.5. He believes the portfolio carries more market risk than he desires and wishes to reduce the beta to 1. How many futures contracts should be buy or sell to reduce the beta if the futures contracts have a beta of 1.2 and the notional value of each contract is
$240,000?
A. Buy 1 contracts
B. Sell 5 contracts
C. Buy 4 contracts
D. Sell 9 contracts
Answer: B (LEAVE A REPLY)
Explanation
The investor's needs to sell futures contracts, as his current position is long. He needs to sell ($1,000,000 x (2.5-1)) / ($240,000 x 1.2) = 5.2 contracts, or rounded to 5 contracts.
It is important to note here that the investor wishes to retain a beta of 1, and does not want to get rid of all market exposure.

NEW QUESTION: 97
According to the dividend discount model, if d be the dividend per share in perpetuity of a company and g its expected growth rate, what would the share price of the company be. 'r' is the discount rate.
A. https://riskprep.com/images/stories/questions/123.01.a.png
B. https://riskprep.com/images/stories/questions/123.01.c.png
C. https://riskprep.com/images/stories/questions/123.01.d.png

D. https://riskprep.com/images/stories/questions/123.01.b.png
E. Option
F. Option
G. Option
H. Option
Answer: A (LEAVE A REPLY)
Explanation
According to the dividend discount model, the spot share prices represent the present value of all the future cash flows from the stock. If held till perpetuity, this becomes an annuity equal to the dividend, growing at its expected growth rate. Therefore Choice 'a' is the correct answer. Choice 'c' would represent the total market cap, and not the value per share that the question asks.

NEW QUESTION: 98
Which of the following are valid credit enhancements used for credit derivatives:
I. Overcollateralization
II. Excess spread
III. Cash reserves
IV. Margin requirements
A. I, II and IV
B. II, III and IV
C. I, II and III
D. I, II, III and IV
Answer: C (LEAVE A REPLY)
Explanation
Overcollateralization is when the notes issued by the special purpose vehicle are less in value compared to the underlying pool of assets, thereby providing a buffer to absorb losses. Excess spread implies that the notes issued carry a lower interest rate than the interest rate received on the underlying assets. Cash reserves are reserves intended to take first hits when losses happen. All of these are valid credit enhancements for structured products. Additionally, 'insurance wraps' are also used as a credit enhancement. Choice 'c' is the correct answer.
'Margin requirements' do not mean anything in this context and are not a valid credit enhancement used for credit derivatives.

NEW QUESTION: 99
The gamma in a commodity futures contract is:
A. zero
B. always negative
C. parabolic
D. dependent upon the convexity

Answer: A (LEAVE A REPLY)

Explanation

Futures contracts carry no gamma. Only options have gamma. Choice 'a' is the correct answer. Any instrument whose price varies in a linear fashion with respect to the underlying will have gamma equal to zero.

NEW QUESTION: 100

[According to the PRMIA study guide for Exam 1, Simple Exotics and Convertible Bonds have been excluded from the syllabus. You may choose to ignore this question. It appears here solely because the Handbook continues to have these chapters.] A company that uses physical commodities as an input into its manufacturing process wishes to use options to hedge against a rise in its raw material costs. Which of the following options would be the most cost effective to use?

A. Writer-extendible options

B. Correlation options

C. Vanilla options

D. Average rate options

Answer: D (LEAVE A REPLY)

Explanation

Average rate options will be the most cost effective in this scenario as they are cheaper than vanilla options.

Writer extendible options on commodities will be even more expensive, and correlation products are irrelevant to the manufacturing company's hedging needs.

NEW QUESTION: 101

By market convention, which of the following currencies are not quoted in terms of 'direct quotes' versus the USD?

A. EUR

B. INR

C. KWD

D. CAD

Answer: A (LEAVE A REPLY)

Remember how exchange rates are generally quoted. Most exchange rates are quoted in terms of how many foreign currencies does USD 1 buy. Therefore, a rate of 99 for the JPY means that USD 1 is equal to JPY 99.

These are called 'direct rates'. However, there are four major world currencies where the rate quote convention is the other way round - these are EUR, GBP, AUD and NZD. For these currencies, the FX quote implies how many US dollars can one unit of these currencies buy. So a quote of "1.1023" for the Euro means EUR 1 is equal to USD 1.1023 and not the other way round.

NEW QUESTION: 102
The effectiveness of a hedge is determined by:
A. the correlation between the asset being hedged and the asset being used as a hedge
B. the correlation and standard deviation of the hedge asset
C. the alpha coefficient of the linear regression between the asset being hedged and the hedge
D. the beta coefficient of the linear regression between the asset being hedged and the hedge
Answer: A (LEAVE A REPLY)
Explanation
The effectiveness of the hedge is solely determined by the correlation between the position being hedged, and the position being used as the hedge. A hedge can be perfect when correlation is 1, and will be less than perfect when it is anything other than 1.The effectiveness of the optimal hedge is given by the formula (1-2), where is the correlation between the two. Therefore Choice 'a' is the correct answer. Standard deviations affect the hedge ratio, not the effectiveness of the hedge.
(Note: In other texts, hedge effectiveness is explained to be measured by , which is essentially the same as (1-
2), both expressions being functions of . You can use either, being aware that one measures the variance explained, and the other is a measure of the unexplained variance.)

NEW QUESTION: 103
Gamma risk can be hedged by:
A. an option position with an identical but numerically opposite gamma
B. a bank deposit which at maturity will be worth the strike price
C. gamma cannot be hedged
D. a short stock position determined by the delta of the option
Answer: A (LEAVE A REPLY)
Explanation
Gamma risk is unique to options. Therefore gamma risk can only be hedged using options, and Choice 'a', ie an option position that offsets any existing gamma in the portfolio, is the only way to hedge gamma.
Positions in stock or bank deposits do not carry gamma and therefore cannot be used to hedge gamma risk.

NEW QUESTION: 104
An equity portfolio manager desires to be 'market neutral'. His portfolio is valued at $10m and has a beta of
0.7 to the broad market index. The index is currently at 1000 and an index contract multiplier is specified as
250. What should he do to make the beta of his portfolio zero?

A. Sell 40 contracts of the index futures contract
B. Buy 28 contracts of the index futures contract
C. Buy 40 contracts of the index futures contract
D. Sell 28 contracts of the index futures contract
Answer: D (LEAVE A REPLY)
Explanation
In terms of beta, his exposure is $10m*0.7 = $7m. This exposure is long. In order order to neutralize his long exposure, he needs to have an equal an identical short position with the same beta as this long position (of course, in the short direction). We need to figure out how many contracts will have a beta equal to his held position. (The beta of a futures contract is slightly different from 1 when compared to spot, but in the absence of other information in the question it is always okay to assume that the beta of the futures contract is 1. Such precision does not matter because of other errors such as rounding etc that cannot be anyway done away with.) He needs to short futures contracts on the index with $7m in notional value. The value of each contract is currently 1000*250 =$250,000. He therefore needs to short $7m/$250,000 = 28 contracts to become market or beta neutral.