考試綱要

1. contrast, for the types of real property investments, the main value determinants, investment characteristics, principal risks, and the most likely investor type
2. evaluate a real estate investment using net present value (NPV) and internal rate of return (IRR) analysis from the perspective of an equity investor;
3. calculate the after-tax cash flow and the after-tax equity reversion from real estate properties
4. explain the potential problems in using IRR as a measurement tool in real estate investments.
5. explain the need for market value estimates;
6. explain the concept of market value, and contrast market value to market price, cost, value in use, and value in exchange
7. describe the steps involved in the appraisal process
8. explain the basic principles of valuation involved in appraisal
9. describe the techniques that are commonly used to arrive at fair market value for appraisals
10. explain the relationship between a real estate capitalization rate and discount rate
11. determine the capitalization rate by three techniques, and justify the use of each technique in capitalization rate determination
12. estimate the market value of a real estate investment using the direct income capitalization approach and the gross income multiplier technique
13. contrast the limitations of the direct capitalization approach to those of the gross income multiplier technique

14. discuss the importance of private equity markets
15. describe the structure of the organized private equity market
16. discuss the role of each player in the private equity market
17. describe the characteristics of a limited partnership, and discuss the role of limited partnerships in the private equity market
18. discuss the relationship between a partnership and its portfolio companies, including performance incentives and mechanisms for direct control
19. discuss the relationship between the limited partners and the general partners

20. describe the concept and importance of control
21. explain the factors affecting the magnitude of a given control premium
22. describe the position of a minority shareholder

23. discuss how the use of each of five valuation approaches may affect the minority discount/control premium
24. discuss the selection of a standard of value and how the standard's selection affects minority discounts or control premiums
25. discuss additional factors that may justify greater minority discounts or control premiums
26. discuss top down, horizontal, and bottom up approaches for valuing minority interests
27. discuss market evidence with respect to control premiums and minority discounts

28. discuss the importance of marketability
29. discuss the results of the studies of private stock transactions prior to public offerings
30. discuss the transactional considerations encountered when attempting to liquidate a controlling interest in a closely held company
31. discuss the reasons for differences between private and public company acquisition P/E multiples
32. describe the factors that affect the discount for lack of marketability

33. contrast the classic and current definitions of a hedge fund
34. identify the general approaches to investment that are common to hedge funds
35. contrast the different segments of the hedge fund universe in terms of investment strategy, use of leverage, and risk control
36. analyze the risks inherent in hedge funds

37. differentiate the sources of value added using a long-only strategy versus a long-short strategy
38. discuss the rationale for pricing inefficiencies on the short side
39. discuss whether long-short strategies make better use of a manager's information than long-only management
40. discuss how to equitize a long-short strategy
41. explain why the alpha generated from a long-short strategy is transportable to other asset classes
42. contrast long-only strategies to long-short strategies in the following areas: trading costs, management fees, risk levels, and implementation of long and short positions

43. contrast the sources of risk using a long-only strategy versus a long-short strategy
44. appraise the risk properties of pair trading at the individual pair trade and portfolio levels
45. appraise and critique the long-short strategies in international equity markets

46. explain factors that promote the growth of the distressed debt market
47. explain the investment objectives of distressed debt investors (vultures)
48. describe the bankruptcy process and explain its relationship with distressed investing
49. explain how to use LBO (leveraged buy-out) firms' distressed debt to recycle private equity
50. describe the process for investing in distressed buyouts
51. explain how to convert distressed debt to private equity in a prepackaged bankruptcy
52. describe how to use distressed debt for a takeover
53. explain how to profitably invest in distressed debt as an undervalued security
54. explain how a distressed debt arbitrage is constructed
55. assess the effect of event risk on the skewness and kurtosis of the return distribution of distressed debt
56. discuss the major risks in distressed debt investing
57. compare private equity investing to distressed debt investing

58. explain the relationships among inflation (levels and changes) and commodities, stocks, and bonds
59. explain the relationship between commodities' exposure to event risk and return on commodity futures
60. compare the implications of event risk for commodities with those for financial assets
61. discuss the characteristics of an "investable" commodity futures index
62. explain each source of return for an unleveraged commodity futures index
63. explain how an investment manager can use commodity futures indexes
64. compare and contrast the purpose, composition, and characteristics of various commodity indexes

65. describe the potential effect on the portfolio returns distribution of the addition of commodity futures to a traditional stock and bond portfolio
66. compare the potential downside risk protection offered by commodity futures to that offered by international stocks

第一章: 房地產評價及投資

1. A. "Investment Analysis"

1. contrast, for ***the types*** of real property investments, the main value determinants, investment characteristics, principal risks, and the most likely investor type

	Main Value Determinants	Investment Characteristics	Principal Risks	Most Likely Investor Type
Vacant or Raw Land	1. Expansion of demand 2. convenient location 3. Travel patterns 4. planning/zoning/ highest-and-best use	1. passive 2. illiquid 3. limited leverage 4. rate of return by value appreciation 5. no tax depreciation 6. capital gains taxation 7. expenses capitalized	1. carrying costs 2. value appreciation uncertain	■ Speculator ■ Developer ■ Estate as store of value
Residential Rentals (apartment)	1. Expanding population 2. rising incomes 3. locations: convenience, favorable exposure 4. Prestige, sometimes important	1. moderately liquid 2. high leverage (loan-to-value ratio) 3. rate of return by periodic income and value appreciation 4. tax depreciation 5. ordinary and capital gains taxation	1. start up when new 2. management; probably necessary to hire professional for larger projects	■ High income: benefiting from tax shelter ■ Suitable for anyone but must be able to put up initial equity investment
Office buildings	1. Expanding local economy 2. location linkages 3. prestige/status, sometimes important 4. tenant-mix compatibility	1. active, unless leased to one firm 2. moderately liquid 3. rate of return by periodic income and value appreciation 4. tax depreciation 5. ordinary and capital gains taxation	1. start up when new 2. management: high level of service provided 3. competitive facilities 4. obsolescence 5. shift in location of business activity	■ High income: needing tax shelter ■ Suitable for anyone if professional management hired and able to put up initial equity investment

Warehouses	1. Commercial/ industrial activity 2. location for ease of movement 3. structural design to endure change	1. most passive: often on long-term lease 2. moderately liquid 3. moderately leveraged 4. rate of return mainly by periodic income 5. tax depreciation 6. ordinary and capital gains taxation	1. obsolescence due to changes in material handling equipment and technology	■ retired: desiring both cash flow and limited management ■ anyone desiring tax shelter who has adequate initial equity capital
Neighborhood shopping centers	1. community growth 2. effective demand: population and income 3. convenient location relative to competition 4. adequate parking 5. tenant mix relative to spending patterns 6. effective lease negotiation	1. moderately active 2. liquidity limited 3. moderate leverage 4. rate of return by periodic income and value appreciation 5. tax depreciation 6. ordinary and capital gains taxation	1. Start up: getting proper tenant mix 2. management: need to provide adequate level of service 3. Vacancies 4. competitive facilities 5. obsolescence	■ reasonably wealthy: need to make large equity investment ■ anyone able to use tax shelter plus other benefits
Hotels/Motels	1. Locations: Linkages and convenience 2. demand: conference, tourist, resort, business 3. mix of facilities and services	1. active 2. moderately liquid 3. moderately to poor leverage 4. rate of return periodic income and value appreciation 5. tax depreciation 6. ordinary and capital gains taxation	1. management: high tenant turnover (professional management almost a necessity) 2. competing facilities	■ anyone able to use tax shelter and with adequate initial equity capital ■ smaller properties suitable for investors also willing to manage and maintain

3. calculate the after-tax cash flow and the after-tax equity reversion from real estate properties

You are estimating the NPV of purchasing a apartment building in town down Columbus, Ohio. You plan to rent it out and plan to sell the building four years later. You generate the following

data to help you decide whether to make the investment:

1. Net operating income is $64,000, and is expected to increase by 5% per year
2. The purchase price of this building is $525,000
3. Improvements are assumed to make up 85.9% of the $525,000 purchase price, or $451,000. Using a 27.5-year life, with straight-line cost recovery as required by the Tax Reform Act of 1986, gives $16,399 per year of tax depreciation
4. Equity contribution: $131,250
5. Debt Contribution; a fixed-rate mortgage is obtained for $393,750 at 8% per annum (compound monthly) for 30 years. The monthly payment to amortize this loan is $2,889.20. The loan-to-value ratio is 75%
6. The investors are assumed to have a 36% marginal income tax rate. The investors' capital gains tax rate is 20%. *Recaptured depreciation* will be taxed at the rate of 25%
7. The end-of-year 4 market value is expected to be $777,924. Selling commission is expected to account for 7% of the market value.
8. Annual compounding is used for the equity time-value-of-money calculations

Question:

1. Calculate the four years' after tax cash flow (ATCF)
2. calculate *After-Tax Equity Reversion* at the end of year four
3. using NPV method, make a decision as to whether to invest or not

Solution:

1.

	Year 1	Year 2	Year 3	Year 4
NOI	64000	67200	70560	74088
Depreciation	16399	16399	16399	16399
Interest expense	31381	31108	30812	30492
Pretax Income	16220	19693	23349	27197
Minus	Personal Tax@36			
Net Income	10381	12604	14943	17406
Add back				
Depreciation	16399	16399	16399	16399
Deduct				
Loan Repayment	3289	3562	3858	4178
After Tax Cash Flow	***23491***	***25441***	***27484***	***29627***

2. How to generate After-Tax Equity Reversion

Items	Rate	Amount	Deduction item
Selling price		**777924**	
-(Original cost-accumulated Depreciation)		459404	
-Selling expenses	@7%	54455	1
Capital Gain		264065	
Tax	Depreciation recapture @25%	16399	2
	Pure capital gain@20%	39694	3
Proceeds		667376	
-payback loans remaining		378862	4
After tax Equity reversion		***288514***	

3.

Hurdle Rate	**$131752@12%**	**$(2690)@38%**
Year 0	$-131250	$-131250
Year 1	$23491	$23491
Year 2	$25411	$25411
Year 3	$27484	$27484
Year 4	$29627	$29627
At the end of year 4 (net after-tax equity reversion)	$288514	$288514

B. "Overview of the Appraisal Process"

6. explain the concept of market value, and contrast market value to *market price*, *cost*, *value in use*, and *value in exchange*

- Market value = value in exchange = objective value
- Investment value = value in Use = subjective value
- A rational owner retains a property as long as value in use exceeds value in exchange. With time, depreciation is used up as a tax shelter, community change may make a location obsolete, or the owner decides to retire. Thus, for a variety of reasons, value in use drops

and eventually falls below value in exchange. At this point, disposition becomes advantageous and market activity results

8. explain *the basic principles* of valuation involved in appraisal

1. supply and demand
2. change
3. competition
4. substitution
5. variable proportions
   - Real estate reaches its point of maximum productivity or highest-and-best use, when the factors of production are in balance
6. contribution or marginal productivity
7. highest-and-best use
8. conformity
   - A property reaches its maximum value when it is located in an environment of physical, economic, and social homogeneity or of compatible and harmonious land uses
9. anticipation

C. "Income-Property Analysis and Appraisal"

10. explain the relationship between a real estate ***capitalization rate*** and *discount rate*

- Discount rates r represent the required rate of return, or yield, on real estate

- Capitalization rate (cap rate) $R_0 = r - g$ is net of value appreciation or depreciation
  - in times of rapid inflation, a very low cap rate is likely

Illustrations of Cap Rate:

1. If a office building investment demands a discount rate of 11% and the office rent is expected to increase by 3% per annum, then the cap rate is 8%
2. If this office building demands for a return of 11% and the office is going to depreciate by 3.5% p.a. then the building's cap rate will be 14.5%. This 3.5% depreciation rate is the negative growth rate and has a special term called "**recapture premium**"
3. If the office building demands for a pretax return of 11% and is going to depreciate by 1.5% in real terms but its rental income is expected to increase by a nominal 3.5% p.a., then the cap rate will be 9%

11. determine the capitalization rate by **three techniques**, and justify the use of each technique in capitalization rate determination

1. Market extraction method

- Use the recent transaction prices and annual NOIs of similar properties to estimate the cap rate of your covered property

$$R_0 = r - g = \frac{NOI}{MV_0}$$

Example:

You need to estimate a apartment's cap rate to calculate its market value. You estimated this apartment's NOI to be $780,000 per year. There are three similar apartments that are sold recently and their NOI are collected by you as follows:

	NOI (most recent year)	Market Transaction Price	Cap rate
Apartment No.1	$594000	$6000000	9.9%
Apartment No.2	$748000	$7400000	10.01%
Apartment No.3	$465000	$4680000	9.94%

The average of these three comparable apartments' rap rates is around 10%. You can use the NOI and cap rate estimates to arrive the market value of this apartment building:

$$MV_0 = \frac{\$780{,}000}{0.1} = \$7{,}800{,}000$$

2. band-of-investment method

under the band-of-investment method, individual rates of interest applicable to properties that use both debt and equity financing are weighted to arrive at the market rate of capitalization.

Example:

Assuming that first mortgage loans are made up for up to 65 percent of property value 8 percent interest for 20 years (monthly compounding), and that the equity balance requires a return of 12 percent—after provision for appreciation or depreciation—to be financially attractive to owners or investors, then the market rate would be as follows:

Source of Funding	Percent of Value	Applicable Cost of Funding	Weighted Rate
Mortgage	65%	$0.08 + 0.0204 = 10.04\%$ *Note: 0.0204 is the sinking fund to be deposited in the bank per year to be repaid in full of $1 20 years later. So the sinking fund cost is 2.04% per year*	6.53%
Equity	35%	12.00%	4.2%
Total	100%		10.73%

- Consider a 10-year, 8 percent interest-only loan that has a face value of $5,000,000. Assuming monthly compounding and an 8 percent amortization rate, the sinking fund factor for this loan is closet to:
  a. 0.55%
  b. 2.04%
  c. 3.46%
  d. 6.56%

The answer is d

- Consider a 12-year, 9 percent interest-only loan that has a face value of $5,000,000. Assuming monthly compounding, the total mortgage cost to the borrowed for this loan is closet to:
  a. 8.55%
  b. 13.66%
  c. 14.76%
  d. 15.56%

The answer is b

3. build-up method

- Under the built-up method, the cap rate would be a composite of the following:
  (1) pure interest
  (2) rate for non-liquidity
  (3) recapture premium
  (4) rate of risk (risk premium)

Example:

You work with another apartment and collected its NOI to be $130000 for the coming year. Additional information is collected while you want to use the build-Up method to arrive the apartment's market value:

Net Operating Income	$130000
Anticipated economic life of structure	50 years
Pure interest rate	6.50%
Non-liquidity premium	2.00%
Recapture premium	2.00%
Risk premium	1.50%

The built-up rate is:

6.5% + 2.00% + 2.00% + 1.50% = 12.00%

$$MV = \frac{NOI}{R_0} = \frac{\$130{,}000}{0.12} = \$1{,}083{,}333$$

12. estimate the market value of a real estate investment using ***the direct income capitalization approach*** and the ***gross income multiplier technique***

- Direct income capitalization approach

$$MV_0 = \frac{NOI}{r - g} = \frac{NOI}{R_0}$$

$R_0 = r - g$ is known as the capitalization rate or going-in rate

- Gross Income Multiplier (GIM) Technique
  1. Like P/E multiple in stock valuation, GIM use sales price of particular income-generating properties as the numerator and Gross annual income of those properties as denominator, so that a GIM or average of GIM of those properties and be determined.
  2. Use that GIM to multiply by our targeted property's estimated Gross income to get the "indicated market value"

Example:

You are estimating a townhouse's market value. Using the following three nearly townhouses' sales prices and their respective gross annual income, you then can assign the townhouse's GIM and multiple it by its gross income to arrive at its market value.

$$GIM \ \ for\ a\ \ property = \frac{Sales\ \Pr ice}{Gross\ annual\ \ Income}$$

$$GIM, comparable\ 1 = \frac{\$610000}{\$101400} = 6.02$$

$$GIM, comparable\ 2 = \frac{\$745760}{\$124500} = 5.99$$

$$GIM, comparable\ 3 = \frac{\$680000}{\$113200} = 6.01$$

The average of the above three GIMs is around 6 times. Using the figure to multiple by the estimated Gross Income of the townhouse of $108000 to get the indicated market value of :

$$Indicated\ market\ value = Gross\ \ Income \times market\ driven\ GIM\ = 108000 \times 6 = \$648000$$

13. contrast the limitations of the direct capitalization approach to those of the gross income multiplier technique

Direct capitalization approach	**Gross income multiplier technique**
1. The determination of an appropriate cap rate is sometimes very difficult 2. Without reliable NOI and selling prices of similar properties, cap rate cannot be extracted from the market with confidence 3. only applicable to income producing properties; does not provide an accurate valuation of owner-occupied homes	1. sales of some types of income properties occur infrequently 2. rental data are not always available for deriving the multiplier 3. gross rents are used instead of net operating income 4. Comparables' building-to-land ratios differ, ages differ, zoning differ, maintenance level differs 5. property taxes Note: unless the comparables are similar in all aspects, a distorted GIM may be derived from the market

第二章: 未上市股票投資、控制溢酬、少數股權及缺乏市場性折價

2. “The Economics of the Private Equity Market”

14. discuss the importance of private equity markets

The private equity market is an important source of funds for start-ups, private middle-market companies, firms in financial distress and public firms seeking buyout financing

18. discuss the relationship between a partnership and its portfolio companies, including performance incentives and mechanisms for direct control

19. discuss the relationship between the *limited partners* and the *general partners*.

Mechanisms Used to align the interests of participants in the private equity market

Limited partners—general partners	Partnership—Portfolio companies
Performance Incentives: ***Reputation*** ***General partner compensation***	Performance Incentives: *Managerial Ownership* *Managerial Compensation*
Direct Means of Control: Partnership covenants Advisory boards	**Direct Means of Control:** ***Voting rights*** ***Board seats*** ***Access to capital***

3. A. “Minority Interest Discounts, Control Premiums, and Other Discounts and Premiums”

20. describe the concept and importance of *control*

1. Appoint management
2. determine management compensation and perquisites
3. set policy and change the courses of business
4. acquire or liquidate assets

5. select people with whom to do business and award contracts
6. market acquisitions
7. liquidate, dissolve, sell out, or re-capitalize the company
8. sell or acquire treasury shares
9. register the company's stock for a public offering
10. declare and pay dividends
11. change the articles of incorporation or bylaws
12. block any of the above actions

21. explain the factors affecting the magnitude of a given *control premium*

1. The nature and magnitude of non-operating assets
2. the nature and magnitude of discretionary expenses
3. the perceived quality of existing management
4. the nature and magnitude of business opportunities which are not currently being exploited
5. the ability to integrate the acquiree into the acquiror's business or distribution channels

✎ Which of the following factors does NOT affect the magnitude of the control premium?

A. the value of existing employees and management
B. the value of strategic alternatives to the current business model
C. synergistic value from mergers
D. the composition of the board of directors

The answer is D

23. discuss how the use of each of ***five valuation approaches*** may affect the minority discount/control premium

■ **The Income approach**

1. the various methods within the income approach all have two basic elements in common:
   - ❒ a numerator consisting of an amount or amounts of expected economic income
   - ❒ a denominator consisting of a rate of return at which the economic income is discounted or capitalized
2. Almost all the difference in control versus minority value in the income approach is found in the numerator—the expected economic income—rather than in the denominator—the discount or capitalization rate.
3. the big difference between control and minority ownership in the income approach generally is found in the economic income projections
4. the most common example of economic income projections that would lead to a minority

or control value is whether owners' compensation is adjusted to reflect value of services rendered

Note:

1. when valuing minority interests, more weight should be put on earnings related approaches and less on asset-related approaches than when valuing a controlling interest
2. when valuing minority interests, actual dividends rather than dividends-paying capacity are relevant

- **The capital Market (Guideline Company) Method**

1. derive a value on publicly traded minority shares
2. if conditions in the market for companies in the industry at the valuation date are such that controlling interests can be sold for more than the aggregate value of the publicly traded minority shares, then a control premium is warranted if valuing a controlling interest
3. when controlling premium is reflected in merger and acquisition activities, then we can properly call this premium as ***"acquisition premium"***, since in many cases they include the impact of synergies and other factors beyond pure elements of control.

- **Merger and Acquisition Method**

1. Most merger and acquisition transactions are controlling interests. Therefore, if an indication of value is developed based on merger and acquisition data, a control premium generally would not be appropriate.
2. If valuing a minority ownership interest, then a minority interest discount usually would be appropriate

- **Asset Accumulation Method (Adjusted Net Asset Value)**

1. Adjusted net asset value generally represents a controlling ownership interest value, since only a controlling stockholder could decide to replace or liquidate assets or put them to their highest and best use in a going concern context

- **The Excess Earnings Method**

1. can be views as a variant of the asset accumulation method, adjusting tangible assets to fair market value and simply aggregating all the intangible asset value into a single calculation based on excess earnings.
2. The earnings are adjusted to reflect the prerogatives of control. Thus, the excess earnings methods would produce a control value

24. discuss the selection of a standard of value and how the standard's selection affects ***minority discounts or control premiums***

- Fair Market Value

- Investment Value

1. as the value to a particular investor considering that investor's cost of capital, perception of risk, and other unique characteristics
2. because of the particular attributes of ownership that may have unique appeal to any specific investor, the investment value of a minority interest in a certain enterprise may be equal to, greater than, or less than fair market value and also equal to, greater than, or less than a pro rata portion of the total enterprise value

- Intrinsic Value

1. usually means minority value in publicly traded stocks

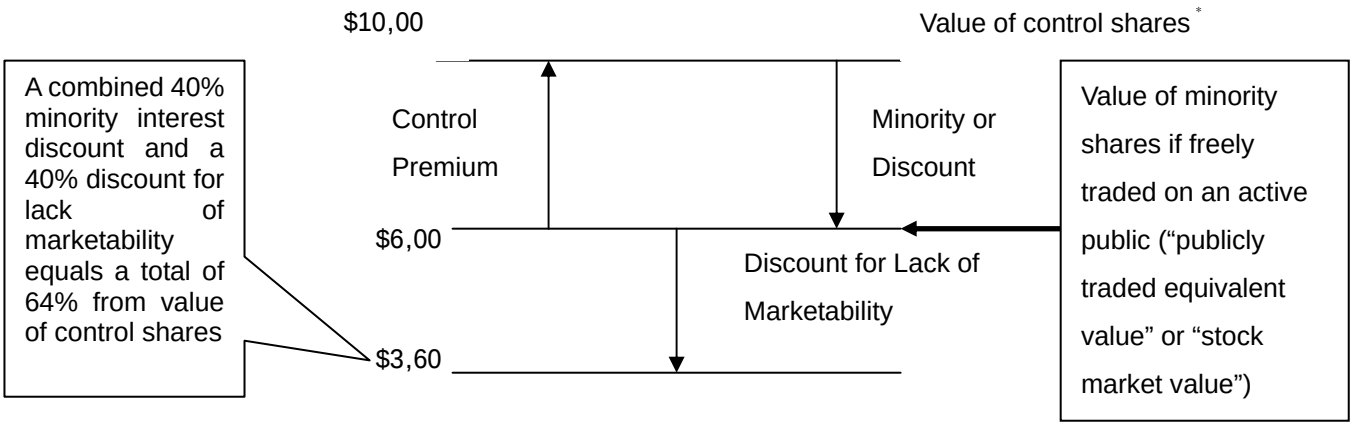
- Fair Value

25. discuss additional factors that may justify greater minority discounts or control premiums

- Effect of Distribution
- Articles of Incorporation, Bylaws, and Shareholder Agreements
- Potential Dilution
- Preemptive Rights: such rights are designed to protect stockholders from dilution
- Cumulative vs. Non-cumulative Voting

- Contractual Restrictions
- Effect of Regulation
- Financial Condition of Business

26. discuss top down, horizontal, and bottom up approaches for valuing minority interests



* Control shares in a privately held company may also be subject to some discount for lack of marketability, but usually not nearly as much as minority shares

Methods	Key Points	Process/Notes
Top down	Control value less discounts	1. Estimate the value of the equity of the total enterprise (control basis) 2. compute the minority owner's pro rata interest in the total 3. estimate the amounts applicable to the pro rata value of the total enterprise to properly reflect the value of the minority interest. This step must also include estimating whether a further discount for lack of marketability is applicable and how much (see the above figure)
Horizontal	Comparison with other minority interest transactions	1. widely accepted by courts
Bottom up	Start with nothing and find sources of value	1. Project the flow of expected distributions (timing and amounts) 2. project an amount realizable on sale of the interest (time and amount) 3. discount the result of steps 1 and 2 to

		present value at an appropriate discount rate, reflecting the degree of uncertainty of realizing the expected returns at the times and in the amounts projected

27. discuss market evidence with respect to control premiums and minority discounts

- when market P/E is high, the acquisition P/E tends to be low

B. "Discounts for Lack of Marketability"

30. discuss the transactional considerations encountered when attempting to liquidate a controlling interest in a closely held company

1. Uncertain time horizon to complete offering or sale
2. Cost to prepare for and execute offering or sale
3. Risk as to eventual price
4. Form of transaction proceeds
5. Inability to hypothecate

32. describe the factors that affect the discount for lack of marketability

1. "Put" Rights
2. Dividend Payments
   - Stock with no or low dividends typically suffer more from lack of marketability than stocks with high dividends
   - Preferred stocks typically have far less discount for lack of marketability than common stocks
3. Potential Buyers
4. Size of Block
5. Prospect of Public Offering or Sale of Company
6. Information Access and Reliability
7. Restrictive Transfer Provisions

第三章: 避險基金投資

4. "The Reality of Hedge Funds"

34. identify the general approaches to investment that are common to hedge funds

1. shorting
   - short positions are used to offset the systematic market risk common to long positions
   - the use of short positions in a sense doubles the hedge fund manager's opportunity to profit from security selction
2. leverage
3. concentration
4. derivatives
5. efficient execution

35. contrast the different segments of the hedge fund universe in terms of *investment strategy, use of leverage, and risk control*

1. fundamental long/short funds

2. quantitative long/short funds

3. arbitrage/relative value funds

4. macro funds

5. funds of funds

36. analyze the risks inherent in hedge funds

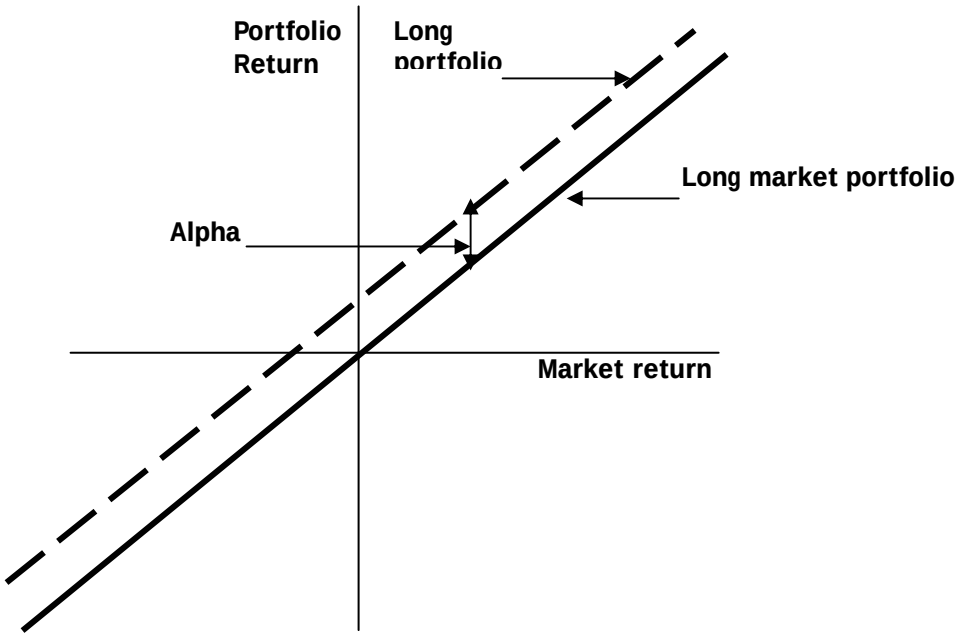
1. Market risk
2. security-specific risk
3. non-market, common factor risk
4. liquidity risk
5. "herd" risk
6. "Greeks" risk
7. borrow and counter-party credit risk

8. operational risk
9. redemption risk

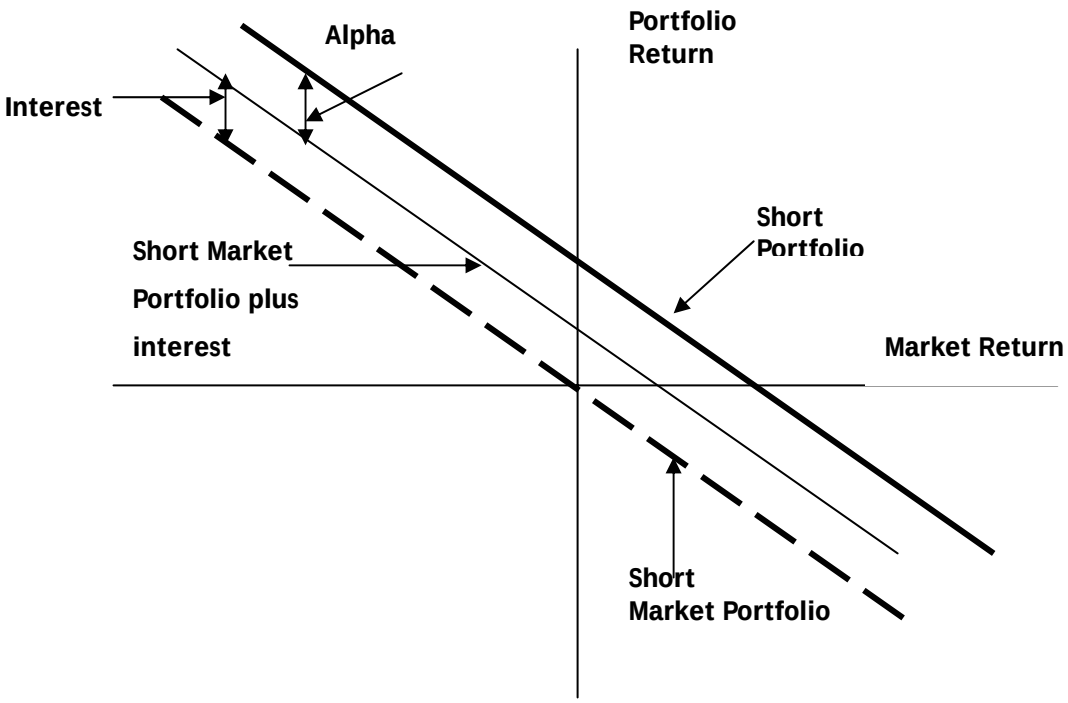
5. A. "Controlled Risk Strategies"

37. differentiate the sources of value added using a ***long-only strategy versus a long-short strategy***

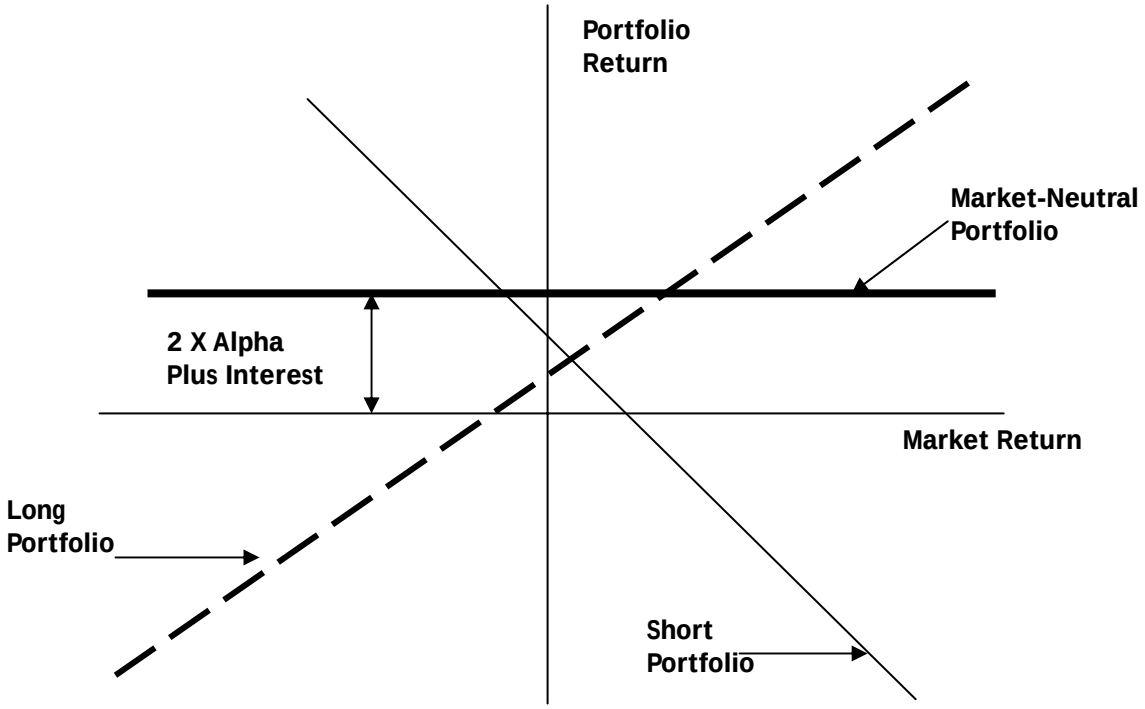
Payoff: Long Portfolio



Payoff: Short Portfolio



Payoff: Market-Neutral Long-Plus-Short Portfolio



38. discuss the rationale for pricing inefficiencies on the short side

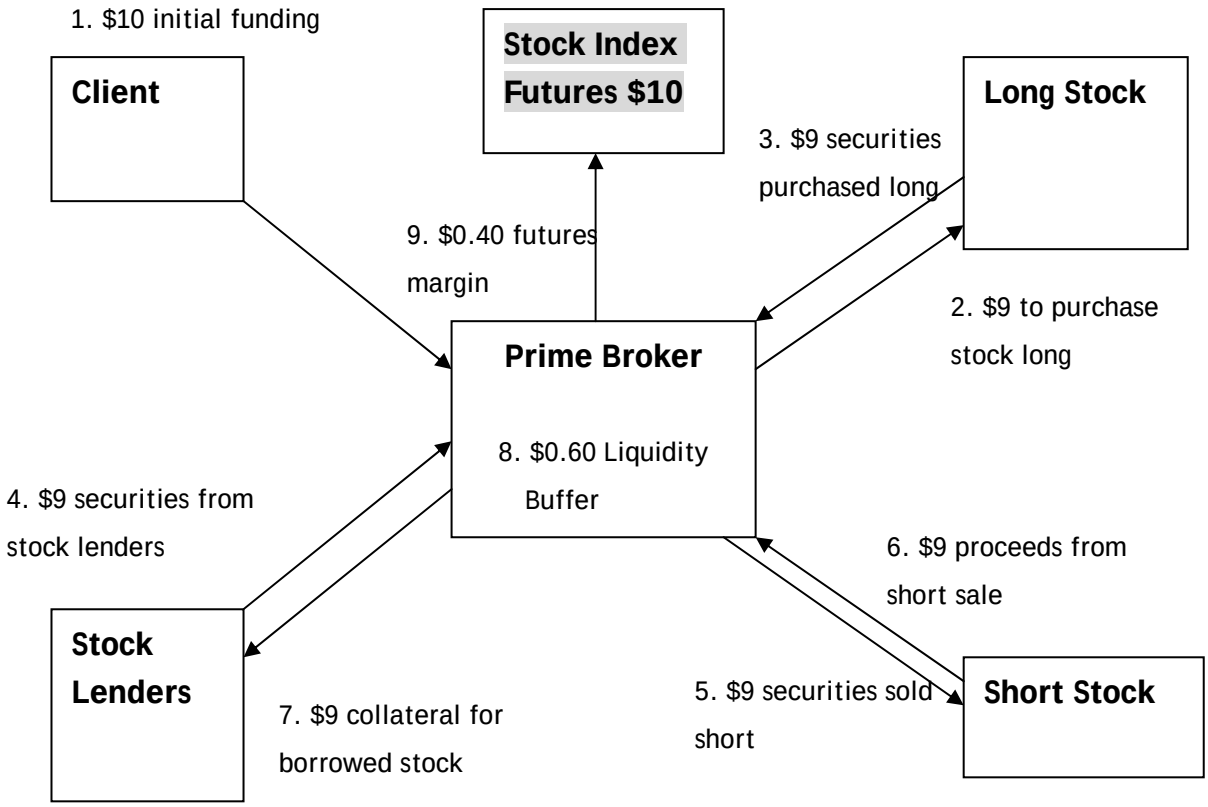
1. when short selling is restricted and investors' opinions are diverse
2. listed companies like to produce good news
3. buy generates more volume than sell
4. analysts are hesitant to issue sell reports to dampen their relations with covered companies

39. discuss whether long-short strategies make better use of a manager's information than long-only management

1. Managers are able to use all their insights, including insights about poor performers as well as good performers
2. Long positions in stocks that are undervalued and short position in stocks that are overvalued make use of all available market information to enhance returns
3. using long-short strategies can eliminated systematic risk
4. managers can control risk without being held hostage by the capitalization weightings of the stocks in the underlying benchmark index

40. discuss how to equitize a long-short strategy

- market-equal long-short eliminates the portfolio's exposure to market risk and to market return. This exposure can be added back via the purchase of stock index futures in an amount equal to the initial investment. The return on the overall portfolio will reflect the change in the price of the futures plus the underlying long-short return spread.



B. "Market Neutral: Engineering Return and Risk"

44. appraise the risk properties of ***pair trading*** at the individual pair trade and portfolio levels

- Aggregating a number of pairs with low mutual correlation into a portfolio reduces risk
- If all pairs have the same risk characteristics and the pairs are not correlated, then as the number of pairs increases, the level of risk decreases

第四章: 重整公司債券股權投資

6. "A Primer on Distressed Debt Investing"

47. explain the investment objectives of distressed debt investors (vultures)

1. to gain an equity investment stake
2. help the troubled company to get on its feet, thus earning a significant return as the value of their distressed debt recovers
3. help impatient creditors to cut their losses and wipe a bad debt off their books

✎ Which of the following statements concerning investing in distressed debt is FALSE?

a. a significant increase in the price of the distressed debt can be realized by restoring the firm to a creditworthy status
b. The primary objective of vultures is to purchase distressed debt at pennies on the dollar and to earn a competitive return should the condition of the underlying company improve
c. Distressed debt can be immediately redeemed by all classes of creditors for 35% of the original value
d. A return can be earned by collecting on the distressed debt that creditors wish to remove from their books

The answer is c

54. explain how a ***distressed debt arbitrage*** is constructed

1. a hedge fund manager purchases distressed debt which she believes is undervalued. At the same time, she shorts the companies' underlying stock
2. the idea is that if the bonds are going to decline in value, the company's stock price will decline even more dramatically because equity-holders have only a residual claim behind debt-holders
3. conversely, if the company's prospects improve, both the distressed debt and equity will appreciate significantly.
4. the difference will be between the accrued interest on the debt versus dividends paid on the stock.
5. since a company coming out of a workout or turnaround situation almost always conserves its cash and does not pay cash stock dividends, the hedge fund manager should earn large interest payments on the debt compared to the equity

55. assess the effect of ***event risk*** on the skewness and kurtosis of the return distribution of distressed debt

- Distressed debt's return distribution show a negative skewness and a large positive kurtosis

56. discuss the major risks in distressed debt investing

1. business risk
2. lack of liquidity

第五章: 商品期貨投資

7. A. "Investing in Commodity Futures"

58. explain the relationships among inflation (levels and changes) and commodities, stocks, and bonds

Arguments why commodity prices should be negatively correlated with the prices of stocks and bonds

1. physical commodity prices such as oil are an underlying source of inflation

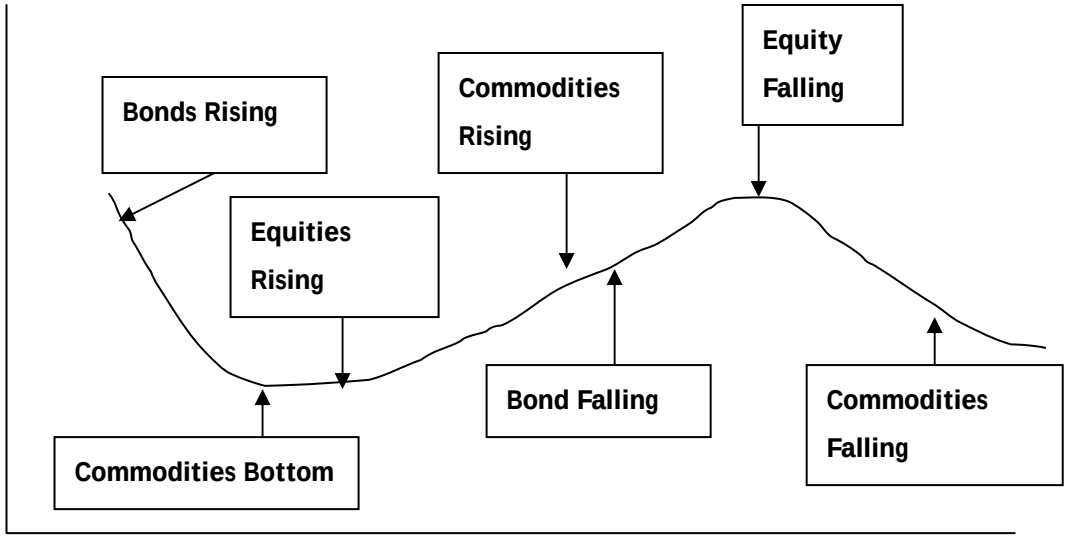
2. higher inflation means higher short-term interest rates. This is also has a beneficial impact on commodity futures investments because of their collateral yield

3. inflation is well documented to have a detrimental impact on the values of stocks and bonds

4. commodity futures prices are positively correlated with the change in the inflation rate while capital assets are negatively correlated with the changes in the rate of inflation

5. Three primary input to economic production determines a finished goods' prices: capital, labor and raw materials. In the short to intermediary term, the cost of labor should remain same. Therefore, for any given price level of production, an increase in the return to capital must mean a reduction in the return to raw materials. The result in a negative correlation between commodity prices and the prices of capital assets

6. commodity futures prices are impacted by short-term expectations while stocks and bonds are affected by long-term expectations
   - in a strong economy financial assets may decline over fears of increased inflation or sustainability of the economic growth. These are long-term concerns
   - conversely, commodity prices will react favorably because they are influenced by the high demand for raw materials under the current market conditions.
   - The result in that commodity futures prices and stock and bond prices can react very differently at different parts of the business cycle



59. explain the relationship between commodities' exposure to **event risk** and ***return on commodity futures***

1. commodity tend to have "positive" exposure to event risk
2. positive skewness
3. commodity event uncorrelated
4. diversify away financial markets that are negatively impacted by the supply shortage of key commodities like oil

60. compare the implications of ***event risk*** for commodities with those for financial assets

1. Commodity price shocks tend to favor supply disruptions rather than sudden increases in supply. These disruptions provide positive returns for commodities at the same time that they provide negative returns for financial assets

2. the event risk associated with commodities tends to favor investors in the commodity markets while detrimentally impacting investors in the financial markets

✎ Which of the following statements concerning event risk is TRUE?

a. a decrease in the supply of a commodity, resulting in higher costs of production, directly contributes to an increase in financial asset prices
b. Any increase in the price of a commodity (i.e. due to shortages) results in a corresponding increase in financial asset returns in related industries

c. Returns on financial assets are well insulated from events such as natural disaster, war, or embargo
d. Event risk decreased financial asset returns, resulting in a negative bias compared with commodity future index returns

The answer is d

61. discuss the characteristics of an "investable" ***commodity futures index***

1. Holding long only positions
2. Must be a un-leveraged physical commodity futures

✎ Which of the following statements best describes an "investable" commodity futures index?
a. Concentration on a single class of commodities and only invests the initial margin required by the exchange or broker
b. Reflects the total return earned from a long position in un-leveraged physical commodity futures, does not include financial futures, and does not take short positions in the underlying futures contracts
c. Includes a significant investment in financial instruments, such as stocks and bonds, in order to lesson the risk associated with investing in commodity futures
d. Has a beta of one and reacts in line with the overall market (i.e. decreases in price when equities decrease in price)

The answer is b.

62. explain each source of return for an *unleveraged* commodity futures index

1. Spot Prices

2. Collateral Yield

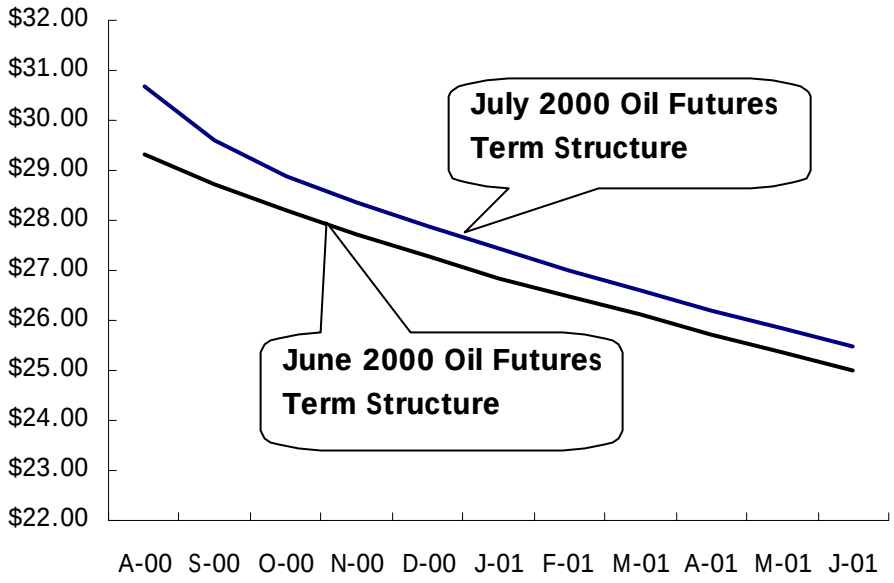
- The interest earned on the Treasury bill used as collateral is called the collateral yield, and it can be a significantly part of the total return to a commodity futures index
- Changes in inflation rates will be reflected in the yield on Treasury bills. This is another way that commodity futures index can hedge against inflation

3. Roll yield

- When the futures markets are in backwardation, a positive return will be earned from a simple "buy and hold" strategy. The positive return is earned because as the futures contract gets closes to maturity, its price must converge to that of the spot price of

the commodity. Since the spot price is greater than the futures price, the means that the futures price must increase in value.

- This convergence is known as "rolling up the yield curve", or simply, "roll yield".



Contract Maturity	Price as of July 2000	Less Price at June 2000	Less Change in Spot Price	Equals Roll Yield
Aug-00	$30.67	$29.31	$0.50	$0.86
Sep-00	$29.60	$28.71	$0.50	$0.39
Oct-00	$28.90	$28.20	$0.50	$0.20
Nov-00	$28.35	$27.72	$0.50	$0.13
Dec-00	$27.88	$27.26	$0.50	$0.12
Jan-01	$27.42	$26.85	$0.50	$0.07
Feb-01	$27.00	$26.47	$0.50	$0.03
Mar-01	$26.60	$26.10	$0.50	$0.00
Apr-01	$26.21	$25.73	$0.50	$-0.02
May-01	$25.84	$25.36	$0.50	$-0.02
Jun-01	$25.49	$24.99	$0.50	$0.00

63. explain how an investment manager can use commodity futures indexes

1. a commodity futures index can be used to implement a specific view on the expected returns from commodities as an asset class
2. commodity futures indices can to used to provide passive portfolio diversification

64. compare and contrast the purpose, composition, and characteristics of various *commodity indexes*

Full name/ Company	The Goldman Sachs Commodity Index	Dow-Jones-AIG Commodity Index	Chase Physical Commodity Index	Mount Lucas Management
Reduced Name	**GSCI**	**DJ-AIGCI**	**CPCI**	**MLMI**
Number of commodities in the composite	26	20	19	25, but including financial and currency futures
How to weight each futures	Economic (price)	Activity (liquidity) Less on production	Value	Equal weighted
How weights is adjusted and how often is adjusted	Use five year price moving average	Weighting is adjusted once a year	Weighting is adjusted once a year	Re-balances every month based on the prior 12-month moving average
Upper or lower weighting limits for each futures in the composites?	--	Yes, the upper bound is 33% and lower bound 2%	--	--
Long Only?	Yes	Yes	Yes	Long and short
Investment strategy type	momentum	momentum	Contrarian	Trending following
All commodities are investable in the composite?	Yes	Yes	Yes	Yes
Skewness	Positive	Positive	Positive	Negative
Positive Kurtosis?	strong	weak	strong	Strong
Portfolio diversification when combined with Stocks and Bonds?	Efficient frontier moves upward left	Good to risk averse investors	Efficient frontier moves upward left	Efficient frontier moves upward left

B. "Commodity Futures in a Portfolio Context"

65. describe the potential effect on the portfolio returns distribution of the addition of commodity futures to a traditional stock and bond portfolio

- The addition of commodity futures into the investment portfolio pushes the investment frontier upward left (creating more efficient risk and return combinations) in the Markowitz return/risk framework

- The greater the risk aversion of the investor, the greater will be the marginal utility of investing in commodity futures (counter-intuitive because commodity futures are often perceived as risky investment)

66. compare the potential *downside risk protection* offered by commodity futures to that offered by international stocks

GSCI +28bp per month
DJ-AIGCI: +26bp
CPCI: +21bp
MLMI: +19bp
EAFE -4bp

✎ Which of the following statements best describes the downside protection offered by including commodity futures indexes in a traditional portfolio of domestic stocks and bonds? Commodity futures indexes provide:

a. no downside protection
b. no difference in downside protection versus international stocks
c. better downside protection than international stocks
d. wore downside protection than international stocks

The answer is C.