6. Portfolio evaluation provides a feedback mechanism for improving the entire portfolio management process." Explain.

7. T....

... ween investment and speculation.

7. "Investment is well-grounded and carefully planned speculation." Discuss.

... ... of the health of the economy. Discuss.

5. "Stock exchanges provide the linkage between the savings in the household sector and the investments in the corporate sector." Explain.

... borrowed funds?

4. Monthly return data (in per cent) for IPCL stock and the NSE index for a 12 month period are presented as follows:

Month	IPCL	NSE Index
1	10.27	11.00
2	9.31	3.69
3	6.73	4.20
4	−5.68	−4.93
5	2.60	3.05
6	2.86	5.88
7	2.78	3.74
8	3.84	2.63
9	−6.51	−2.10
10	−23.42	−21.35
11	0.00	−4.55
12	6.64	2.80

Calculate beta of IPCL stock.

... ... QUESTIONS

"An investor cannot consistently earn excess returns by undertaking fundamental analysis or technical analysis." Discuss.

2. "When an investor is assumed to use riskless lending and borrowing in his investment activity, the shape of the efficient frontier transforms into a straight line." Illustrate.

3. Write notes on:

6. Describe the circumstance in which call option on shares will not be exercised by the owner. Also discuss the consequences of a call option remaining unexercised.

7. "The maximum profit available to a call writer is limited to the option premium; while the loss may be limitless." Explain.

6. Cite recent examples of political, social, or economic events (market risk) that have excited
   a. the stock market, and
   b. stocks in a specific industry, to surge ahead or plummet sharply.

8. Financial risk or leverage in the case of individuals is normally associated with margin trading, or increasing one's ability to purchase securities by borrowing money. Investor A has analyzed a stock for a one-year holding period. There is a fifty-fifty chance that the stock, currently selling at $10, will sell for $9 or $12 by year-end. The investor can borrow on 50 percent margin from his bank at 9 percent per annum. (Ignore taxes and transaction costs.)
   a. What are the investor's expected holding-period yield and risk if he buys 100 shares and does not borrow from his bank?
   b. What are expected yield and risk if he buys 200 shares, paying half the cost with borrowed funds at 9 percent per annum?

9. The following statistics result from correlating the rates of return on PepsiCo stock and the rates of return on the S&P 500 Stock Index:

	PEPSICO	S&P 500
Average return	9.80%	3.53%
Total variance	127.32	42.26
Alpha	5.87	
Beta	1.11	
Correlation with SP 500	.62	

   a. What rate of return is expected on PepsiCo stock if the S&P 500 Stock Index has an expected return of 15 percent?
   b. How closely does the rate of return on PepsiCo correlate with the rate of return on the S&P 500 Stock Index?

6. What economic factors would you be most interested in forecasting if you were an analyst investigating major consumer durable-goods sales for next year?

7. If you were told that more families than ever before would have second cars next year and that the expected lives of cars had increased, which industries do you suppose would benefit most?

8. It has often been said that common stocks are a good "hedge against inflation." Why do you suppose people think this way? Are you inclined to agree or disagree with this sentiment?

10. The analysis of sales growth is generally the starting point in estimating earning power potential for an industry (and firms therein). Further, on a perspective basis, it is common to look at an industry from an industrial-life-cycle point of view.

    a. Assume that two companies in an industry have identical rates of sales growth. Why might an analyst nevertheless consider the sales record of one superior to that of the other?

    b. Which stage of the industrial life cycle is the most attractive from an investment point of view?

20. If you were considering for investment an industry with low fixed costs and low profit margins, what other factors would you want to explore before deciding to invest in this industry? Why?

13. If most of the call options on a stock are in-the-money, the stock price has most likely risen rapidly in the last few months. Discuss this statement.

16. Must the return of all securities be equal if the stock market is efficient? Explain your answer.

6. Suppose two stocks have a correlation of +1.0. Can a portfolio of these two stocks reduce risk? Explain.

10. Suppose you expected inflation to move from 4 to 6 percent. What would this do to the SML?

PROBLEMS

1. The following data are available to you as a portfolio manager:

SECURITY	EXPECTED RETURN	BETA	STANDARD DEVIATION
Blue	.32	1.70	.50
White	.30	1.40	.35
Red	.25	1.10	.40
Grey	.22	.95	.24
Black	.20	1.05	.28
Brown	.14	.70	.18
NYSE stock index	.12	1.00	.20
Treasury bills	.08	0	0

    a. Draw the SML. Plot each stock on your graph.

    b. In terms of an SML, which of the securities listed above are undervalued? Why?

5. Individual investors make investing decisions under conditions of uncertainty, while professional investors make such decisions under conditions of controlled risk taking, thereby eliminating the uncertainty. Agree or disagree and explain your reasoning.

4. Consider a corporate bond rated AAA versus another corporate bond rated only BBB. Could you say with confidence that the first bond will not default while for the second bond there is some reasonable probability of default?

2-5 For each of the following issues, indicate whether the price of the issue should be par value, above par value, or below par value:

	Issue	Coupon Rate	Yield Required by Market
a.	A	7 ¼%	7.25%
b.	B	8 3/8%	7.15%
c.	C	0%	6.20%
d.	D	5 7/8%	5.00%
e.	E	4 ½%	4.50%

Checking Your Understanding

3. Why are money market funds the safest type of mutual fund an investor can hold?

4. Why is negative correlation between two securities in a portfolio better than no (zero) correlation?

5. Given the use of the correlation coefficient, which is clear and easy to understand, why do we need to consider covariances?

6. Suppose we add a very risky stock to a well-diversified portfolio. Could such an action lower the portfolio's risk?

7-3 The Markowitz approach is often referred to as a mean-variance approach. Why?

7-10 What is the relationship between the correlation coefficient and the covariance, both qualitatively and quantitatively?

7-2 Four securities have the following expected returns:

$$A = 12\%, B = 15\%, C = 22\%, \text{ and } D = 30\%$$

Calculate the expected returns for a portfolio consisting of all four securities under the following conditions:

a. The portfolio weights are 25 percent each.

b. The portfolio weights are 10 percent in A, with the remainder equally divided among the other three stocks.

c. The portfolio weights are 20 percent each in A and B, and 30 percent each in C and D.

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1. Given the large number of portfolios in the attainable set, why are there so relatively few portfolios in the efficient set?
2. On an intuitive level, what is the value of talking about indifference curves when discussing the efficient frontier?
3. How should evidence of high correlations between domestic and foreign stock indexes influence investor behavior with regard to international investing?

8-1 Closing prices for SilTech and New Mines for the years 1997–2012 are shown below.

a. Calculate the total returns for each stock for the years 2012–1998 to 3 decimal places. Note that the price for 1997 is used to calculate the total return for 1998.

c. Calculate the covariance between these two stocks based on the 15 years of returns.

d. Using the 11 different proportions that SilTech could constitute of the portfolio ranging from 0 percent to 100 percent in 10 percent increments, calculate the portfolio variance, standard deviation, and expected return.

e. Plot the tradeoff between return and risk for these two stocks based on the calculation in (d). Use the XY scatter diagram in Excel.

	SILTECH	NEWMINES
2012	198.08	21.634
2011	84.84	34.867
2010	71.89	44.67
2009	32.2	49.8
2008	10.69	49.55
2007	7.16	46.86
2006	10.95	53.11
2005	7.44	48.75
2004	25.7	63.12
2003	10.23	37.04
2002	3.28	31.67
2001	5.22	21.78
2000	7.97	14.45
1999	9.64	9.39
1998	7.13	14.99
1997	14.39	10.72

e. Using the formulas for the expected return and risk of a portfolio, calculate these values for each of the following portfolio weights.

w1 = stock fd % of funds in	w2 = bond fd % of funds in	Portfolio Expected Ret	Std Dev
0.1	0.9		
0.2	0.8		
0.3	0.7		
0.4	0.6		
0.5	0.5		
0.6	0.4		
0.7	0.3		
0.8	0.2		
0.9	0.1		

f. Which of the portfolios in (d) is the minimum variance portfolio?

g. Based on your analysis, should investors hold a portfolio of 100 percent bonds?

9-17 How does an investor decide where to be on the new efficient frontier represented by the CML?

9-5 Assume that the risk-free rate is 7 percent and the expected market return is 13 percent. Show that the security market line is

$$E(R_i) = 7.0 + 6.0\beta$$

Assume that an investor has estimated the following values for six different corporations:

Corporation	β_i	$R_i(\%)$
GF	0.8	12
PepsiCo	0.9	13
IBM	1.0	14
NCNB	1.2	11
EG&G	1.3	18
EAL	1.5	10

Calculate the ER_i for each corporation using the SML, and evaluate which securities are overvalued and which are undervalued.

3. Neither the zero growth rate case nor the constant growth rate case show any signs of a present value process in their equations. How, then, can the DDM be said to involve a present value process?

4. Assume a group of investors uses the constant growth version of the DDM to value GE. Are they likely to come up with different estimates of value?

10-9 Kendall Consulting Company is currently selling for $30, paying $1.20 in dividends, and investors expect dividends to grow at a constant rate of 5 percent a year.

a. If an investor requires a rate of return of 14 percent for a stock with the riskiness of Kendall Company, is it a good buy for this investor?

b. What is the maximum an investor with a 14 percent required return should pay for Kendall Company? What is the maximum if the required return is 15 percent?

10-10 The Parker Dental Supply Company sells at $36 per share, and Ray Parker, the CEO of this well-known Research Triangle firm, estimates the latest 12-month earnings are $3 per share with a dividend payout of 50 percent. Dr. Parker's earnings estimates are very accurate.

a. What is Parker's current P/E ratio?

b. If an investor expects earnings to grow by 10 percent a year, what is the projected price for next year if the P/E ratio remains unchanged?

c. Dr. Parker analyzes the data and estimates that the payout ratio will remain the same. Assume the expected growth rate of dividends is 10 percent, and an investor has a required rate of return of 16 percent, would this stock be a good buy? Why or why not?

d. If interest rates are expected to decline, what is the likely effect on Parker's P/E ratio?

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1. Should investors expect stock prices to reflect all available information?
2. Suppose stock price movements are predictable. Would this be evidence of market efficiency or market inefficiency? Explain.

12-21 Assume that you analyze the activities of insiders and find that they are able to realize consistently above-average rates of return. What form of the EMH are you testing?

13-1 The following annual data are available for a stock market index:

Year	End-of-Year Price (P)	Earnings (E)	Dividends (D)	P/E	(D/E) (%)	(D/P) (%)
2008	107.21	13.12	5.35	8.17	40.78	4.99
2009	121.02	16.08	6.04	7.53	37.56	4.99
2010	154.45	16.13	6.55	9.58	40.61	4.24
2011	137.12	16.70	7.00	8.21	41.92	5.11
2012	157.62	13.21	7.18	11.93	54.35	4.56
2013	186.24	15.24	6.97			

The 2013 values in italics are estimates.

a. Calculate the 2013 values for those columns left blank.

b. On the assumption that $g = 0.055$, calculate k for 2013 using the formula $k = (D/P) + g$ and show that $k = 0.092425$.

c. Using the 2013 values, show that $P/E = 12.22$.

15-22 Why would an investor want to know the beta coefficient for a particular company? How could this information be used?

1. Agree or disagree with the following statement, and explain your reasoning. "Investors are routinely quoted the yield to maturity on a bond, but the chance of them actually earning this quoted yield at the termination of the investment is almost zero."

2. Explain why, for a bond selling at a discount, the coupon rate is less than the current yield, which is less than the yield to maturity.