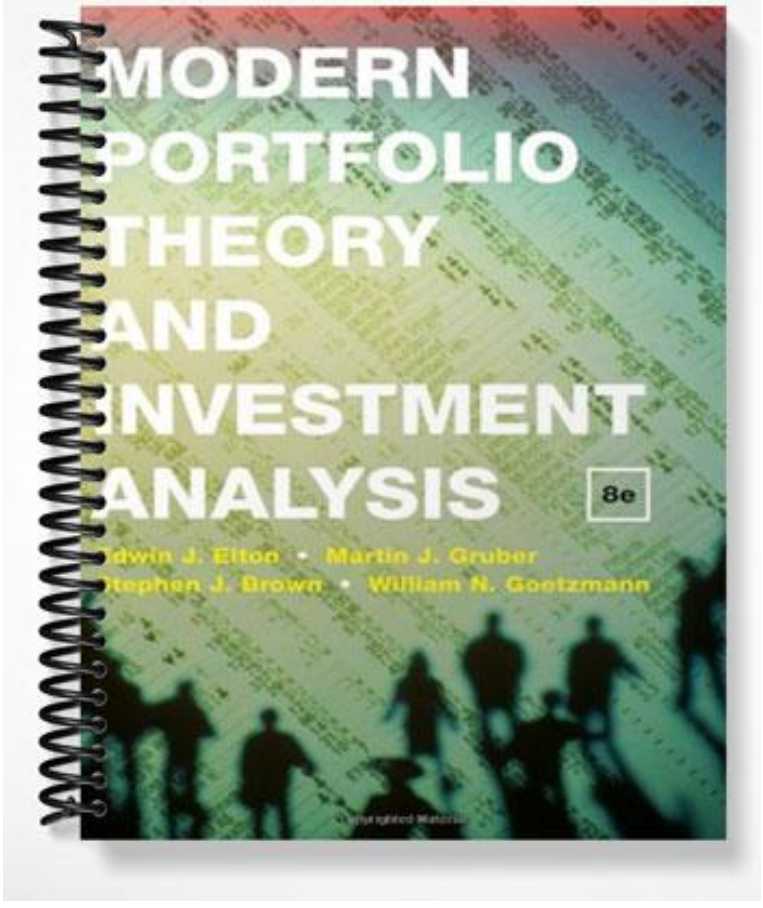
TEST BANK


MODERN
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THEORY
AND
INVESTMENT
ANALYSIS
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***Modern Portfolio Theory and Investment Analysis*, 7th Edition**

Test Bank

The following exam questions are organized according to the text's sections. Within each section, questions follow the order of the text's chapters and are organized by multiple choice, true-false with discussion, problems, and essays. The correct answers to the multiple choice questions are marked with a "*".

PART 1: INTRODUCTION

Part 1: Essays

1. Given a typical set of indifference curves and a budget constraint for a 1-period (2-date) consumption model, where will the optimum consumption pair (for date 1 and date 2) be found on the graph and why is it optimal?

2. List and discuss the characteristics of various types of financial securities.

3. List and discuss the characteristics of various types of financial markets.

PART 2; SECTION 1: MEAN-VARIANCE PORTFOLIO THEORY

Part 2; Section 1: Multiple Choice

1. Diversification among assets improves the opportunities faced by all risk-averse investors

   a. irrespective of the correlation coefficients
   b. only if correlations are not larger than 0
   c. only if the assets have similar variances
   d. for assets with relatively large variances
* e. none of the above

2. Which statement is true?

   a. An efficient portfolio always provides the highest expected rate of return.
* b. An efficient portfolio has less risk than any other asset or portfolio with comparable expected return and more return than any other asset or portfolio with comparable risk.
   c. Neither one of the above statements is true.

3. With a riskless asset and risky assets, the efficient portfolio opportunity set is a straight line. The preceding statement

* a. is true.
b. is false.
c. could be true or false, depending on the correlations of the risky assets.

4. Consider the following data for portfolios A and B, which are both on the efficient frontier:

$$\bar{R}_A = 11\%;\ \bar{R}_B = 14\%;\ \sigma_A = 10\%;\ \sigma_B = 17\%$$

If you want to earn 12% by investing in A and B, what portion of your money must you invest in A?

a. 1/5
* b. 2/3
c. 1/3
d. 4/5

5. The separation theorem

* a. says that you can determine the optimum portfolio of risky assets for an investor without having to know anything about the investor.
b. implies that all investors hold the same portfolio of the riskless asset and risky assets.
c. holds even if the lending and borrowing rates are different, provided that both rates are riskless.
d. allows the construction of an efficient portfolio by separating efficient assets from inefficient assets.

Part 2; Section 1: True-False With Discussion

1. Recently, a large pension-fund manager stated that no useful information about the fund's appropriate mix of stocks and risky bonds could be obtained from portfolio theory, since the correlation between the returns on stocks and bonds is essentially zero. Accepting the manager's estimate of the correlation, discuss the correctness of the statement.

2. Discuss whether the following statement is true or false:
The separation theorem tells you how to separate an investor from his or her money.

3. Discuss whether the following statement is true or false:
One function of a capital market is to separate consumption decisions from decisions of investment in physical production facilities.

4. Discuss whether the following statement is true or false:
Diversification does not pay if two assets are positively correlated with each other.

Part 2; Section 1: Problems

1. Consider the following data for securities A, B, and C:

$$\bar{R}_A = 20\%;\ \bar{R}_B = 10\%;\ \bar{R}_C = 8\%;\ \sigma_A = 4\%;\ \sigma_B = 2\%;\ \sigma_C = 2\%;$$
$$\rho_{AB} = 0.4;\ \rho_{AC} = 0.2;\ \rho_{BC} = -1.0$$

   a. What is the expected return and standard deviation of a portfolio constructed by placing 60% of your money in A and 40% in B?
   b. What is the expected return on the portfolio constructed from among the above three securities that has the smallest possible risk?
   c. If an investor had to place 100% of his or her money in only one of the above three securities,
      1. which security would a risk-neutral investor pick?
      2. what can you say about the preference ordering of the three securities for a risk-averse investor?

2. Assume different riskless lending and borrowing rates and the availability of all risky assets. Draw the efficient frontier.

3. You are in a world where there are only two assets: gold and stocks. You are interested in investing your money in one or both of the assets. Consequently, you collect the following data on the assets' returns over the past six years:

	Gold	Stock Market
average return	8%	20%
standard deviation	25%	22%

   Your estimate of the assets' correlation is –0.4.

   a. If you were constrained to pick only one of the two assets, which one would you choose?
   b. What is the average return and standard deviation of a portfolio composed of equal proportions of gold and stocks?
   c. What is the average return and standard deviation of the portfolio composed of gold and stocks that has the lowest risk?
   d. You now learn that GPEC (a cartel of gold-producing countries) is going to vary the amount of gold produced depending on stock prices in the U.S. by producing less gold when the stock market is up and more gold when the stock market is down. What effect will this have on portfolios composed of gold and stock? Explain.

4. Assume that the average variance of return for an individual security is 50 and that the average covariance is 10. What are the expected variances of portfolios composed of 5, 10, 20, 50, and 100 securities?

5. You are evaluating two risky investments, A and B, that have the following distributions:

probability	return on A	return on B
0.6	20%	30%
0.4	10%	10%

   a. What are the expected returns and standard deviations for A and B?
   b. Suppose that an investor must pick either A or B to hold in some combination with the riskless asset (R_F = 8%). Which risky asset should the investor choose?

6. The stock returns for firm A and firm B have the following characteristics:

firm	expected return	standard deviation
A	10%	8%
B	12%	20%

   The correlation between the two stocks is 1.0.

   a. If there are no restrictions on short sales or borrowing, what are the portfolio weights, expected return and standard deviation on the portfolio of these two assets with the lowest risk (minimum variance)?
   b. Susan is an officer of firm A. Under a company stock purchase plan, she currently holds $200,000 worth of A's stock, and this represents her total assets. This stock cannot be sold. Susan can purchase additional amounts of stock A or stock B, and she can sell stock B short. It is illegal for her to sell stock A short. How can Susan eliminate the risk in her holding? Be specific (give numbers).