MODERN PORTFOLIO THEORY:
FOUNDATIONS, ANALYSIS, AND NEW DEVELOPMENTS
Table of Contents

Preface

Chapter 1 Introduction

PART 1: PROBABILITY FOUNDATIONS

Chapter 2 Assessing Risk

Chapter 3 Risk and Diversification: An Overview

(This chapter contains ten Figures and three Tables of real numbers)

3.1 Reconsidering Risk
    3.1A Symmetric Probability Distributions
    3.1B Fundamental Security Analysis
3.2 Utility Theory
    3.2A Numerical Example
    3.2B Indifference Curves
3.3 Risk-Return Space
3.4 Diversification
    3.4A Diversification Illustrated
    3.4B Risky A + Risky B = Riskless Portfolio
    3.4C Graphical Analysis
3.5 Conclusions

PART 2: UTILITY FOUNDATIONS

Chapter 4 Single-Period Utility Analysis

(This chapter contains sixteen Figures, four Tables of real numbers, and six Numerical Examples)

4.1 Basic Utility Axioms
4.2 The Utility of Wealth Function
4.3 Utility of Wealth and Returns
4.4 Expected Utility of Returns
4.5 Risk Attitudes
    4.5A Risk Aversion
    4.5B Risk Loving Behavior
    4.5C Risk Neutral Behavior
4.6 Absolute Risk Aversion
4.7 Relative Risk Aversion
4.8 Measuring Risk Aversion
    4.8A Assumptions
    4.8B Power, Logarithmic, and Quadratic Utility
    4.8C Isoelastic Utility Functions
    4.8D Myopic, But Optimal
4.9 Portfolio Analysis
    4.9A Quadratic Utility Functions

PART 3: MEAN-VARIANCE PORTFOLIO ANALYSIS

Chapter 5 Graphical Portfolio Analysis

(This chapter contains fourteen Figures, nine Tables of real numbers, and two Numerical Examples)

Chapter 6   Mathematical Portfolio Analysis

(This chapter contains twelve Figures and two Tables of real numbers)

Chapter 7 Advanced Portfolio Aanalysis Topics

(This chapter contains six Figures and eight Numerical Examples)

Chapter 8 Index Models and Return Generating Process

(This chapter contains four Figures, three Tables of real numbers, and five Numerical Examples)

PART 4: NON-MEAN-VARIANCE PORTFOLIOS

Chapter 9. Non-Normal Distributions of Returns

(This chapter contains four Figures and one Table of real numbers)

Chapter 10. Non-Mean-Variance Investment Decisions

(This chapter contains 27 Figures, 8 Tables of real numbers, and 6 Numerical Examples)

Chapter 11 Risk Management: Value at Risk

(This chapter contains 1 Figure, 2 Tables of real numbers, and 2 Numerical Examples)

PART 5: ASSET PRICING MODELS

Chapter 12 The Capital Asset Pricing Model (CAPM)

(This chapter contains 5 Figures and 1 Numerical Example)

Chapter 13 Extensions of the Standard CAPM

Chapter 14 Empirical Tests of CAPM

Chapter 15 Continuous-Time Asset Pricing Models

15.1 Intertemporal CAPM

15.2 Consumption-based CAPM

    15.2A Derivations

    15.2B The Consumption-based CAPM with Power Utility Function

15.3 Concluding Remarks

Appendix:

    A15.1 Lognormality

    A15.2 The Consumption-based CAPM with Lognormality

Chapter 16 Arbitrage Pricing Theory (APT)

(This chapter contains 2 Figures and 1 Numerical Example)

16.1 Arbitrage Concepts

16.2 Index Arbitrage

    16.2A Basic Ideas of Index Arbitrage

    16.2B Index Arbitrage and Program Trading

    16.2C Use of ETFs for Index Arbitrage

16.3 The Asset Pricing Equation

    16.3A One Single Factor with No Residual Risk

    16.3B Two Factors with No Residual Risk

    16.3C K Factors with No Residual Risk

    16.3D K Factors with Residual Risk

16.4 Asset Pricing On A Security Market Plane

16.5 Contrasting APT with CAPM

16.6 Empirical Evidence

16.7Comparing APT and CAPM

16.8 Concluding Remarks

PART 6: IMPLEMENTATIING THE THEORY

Chapter 17 Portfolio Construction and Selection

(This chapter contains 8 Figures, 5 Tables of real numbers, and 2 Numerical Examples)

17.1 Efficient Markets

    17.1A Fama's Classifications

    17.1B Formal Models

17.2 Using Portfolio Theories to Construct and Select Portfolios

17.3 Security Analysis

Chapter 18 Portfolio Performance Evaluation

(This chapter contains 11 Figures and 7 Tables of real numbers)