



Portfolio Optimization & Management

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Skema GE, Master 1, Track Finance & Quants - 21h

Syllabus

Introduction

Chapter 1 EQUITIES IN AN INVESTOR'S PORTFOLIO

Section 1: Properties of the fundamental value (DEDM)

Section 2: The Gordon-Shapiro approximation and the PER

Section 3: Market efficiency; What role for supply and demand?

Section 4: Market anomalies

Chapter 2 PORTFOLIO CHOICES

Section 1: Characteristics of a portfolio with two assets

Section 2: Minimising portfolio risk

Section 3: Two asset portfolio choice

Section 4: General case with n assets, geometric representation

Chapter 3 THE CAPITAL ASSET PRICING MODEL

Section 1: The Relation and its Interpretation

Section 2: Properties

Chapter 4 PORTFOLIO AND ASSET RISKS

Section 1: Contributions to Portfolio Risk

1.1. The risk of an equally weighted portfolio

1.2. The risk of a chosen portfolio

1.3. The risk of an asset in the optimal portfolio

Section 2: Type of risks and the discount rate

2.1. Systematic and specific risk

2.2. Beta, risk premium and the discount rate

Synthesis, examples and test training

References in English:

Bodie Zvi, Alex Kane, Alan Marcus, *Investments and Portfolio Management*, McGraw-Hill-Irwin, 2011.

Elton Edwin, Martin Gruber, Sepsen Brown, Willam Goetzmann, *Modern Portfolio Theory and Investment Analysis*, Wiley Custom, 2017

Reference in French:

Szpiro Daniel, *Produits financiers et gestion de portefeuille*, éditions Ellipses, 2021