

Portfolio Choice Principles

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Course Objectives

This course introduces crucial concepts of investment decision-making and portfolio theory. Students will develop skills and learn tools for analysing and understanding financial markets. The course delivers a critical understanding of choice under uncertainty and portfolio construction. Students will gain practical understanding of an investment process from the Strategic Asset Allocation to the Tactical Asset Allocation and Portfolio Construction. An introduction to Bloomberg is proposed by a market practitioner during one session.

Time: Monday 10:30AM-2:00PM; **Location:** G110; **First day of the course:** 9th, September 2019; **Length:** 4 courses of three and a half hours; **Exam:** Two-hour written test (last day of the course).

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Part 0. Investment Process: Basic concepts

Part 1. The Theory of Choice under Uncertainty

- 1.1 Five Axioms
- 1.2 Utility Functions
- 1.3 Risk Aversion and Attitudes Toward Risks
- 1.4 Stochastic Dominance
- 1.5 Non-Expected Utility Theory

Part 2. Mean-Variance Portfolio Theory

- 2.1 Measuring Risk and Return
- 2.2 Asset Allocation with 2 Risky Assets
- 2.3 Introducing a Risk Free Asset and the Tobin's Separation Theorem
- 2.4 Asset Allocation with N risky Assets
- 2.5 Portfolio Diversification

Part 3. Risk Measures and Other Criteria

- 3.1 Returns Behaviour and the Bell-Curve Hypothesis

3.2 Volatility: Traditional Measure of Risk

3.3 Alternative Risk Measures

3.4 Lower Partial Moments

3.5 VaR and the Expected Shortfall

4.6 Geometric Mean and Safety First Criteria

Essential References

Bodie Z., A. Kane and A. Marcus, (2009), *Investments*, 8th Edition, 1024 pages.

Copeland T. E., J.F. Weston and K. Shastri (2004), *Financial Theory and Corporate Policy*, Addison Wesley, 4th Edition, 1024 pages.

Elton E., M. Gruber, S. Brown and W. Goetzmann, (2006), *Modern Portfolio Theory and Investments Analysis*, John Wiley and Sons, 7th Edition, 752 pages.

French References

Aftalion F. (2004), *La Nouvelle Finance et la Gestion de Portefeuille*, Economica, 246 pages.

Aftalion F., Poncet P. et R. Portrait (1998), *La Théorie Moderne du Portefeuille*, Que sais-je ?, PUF, 127 pages.

Amenc N. et V. Le Sourd (2003), *Théorie du Portefeuille et Analyse de sa Performance*, Economica, 352 pages.

Broihanne M-H., Merli M., Roger P. (2004), *Finance comportementale*, Economica, 262 pages.

Chauveau T. (2004), *Equilibre d'un marché financier*, Hermès.

Poncet P. et R. Portait (2009), *Finance de marché*, Dalloz, 1101 pages.

Viviani J.-L. (2001), *Gestion de Portefeuille*, Seconde édition, Dunod, 322 pages.

Lecturer



Pr. Christophe Boucher is an Agrégé Professor in Economics and Finance at the University of Paris Nanterre. He is also Chief Strategist - Head of Quantitative Research & Strategy within ABN AMRO Investment Solutions. He graduated in Economics and in Finance, and holds a PhD in Economics in 2006 (“Misalignments, Aggregated Returns and Aggregated Volatility”). He has published several comments in newspapers and articles in academic journals such as *Journal of Banking and Finance*, *Economics Letters*, *Finance* and serves as a referee in several international leading journals. His interest mainly concerns strategic/tactical allocation, predictability of returns and volatility, asset pricing, monetary policy and macroeconomics. He received the “Young Economist Award” in 2006 from the European Economic Association (EEA) and the “Young Researcher in Economics Prize” from the Banque de France Foundation in 2010.