Investing - Risk Factors & Risk Models

Description

Risk-taking is an important part of the business of any financial services firm. Some losses are inevitable, but to be successful over time, risks taking must be controlled. In this course we discuss how risk can be identified, quantified and modelled.

This course is held in two parts. Each part can be attended separately, but a good understanding of risk and risk measures is a pre-requisite to attend the second part on risk factors and risk models.

Part 1 - The risk toolkit:

The first part of the course focusses on the basic risk toolkit. We start by discussing the different aspects of risk, how to measure them and how risks add up in a portfolio. Afterwards we focus more on the tail risk in investment portfolios, how to measure this tail risk and the different methods to calculate Value at Risk. While we focus on the technical aspect of risk, we don't lose sight of the investor: Is proper risk management important for the long-term investor? Does risk really diversify away when you think long term? And if yes, how long is long-term?

Part 2 - Risk factors and risk models:

The second part of the course focuses on risk models and risk factors. In asset management asset classes have traditionally been considered the main building blocks of portfolios. Risk factors provide a different view. A risk factor approach considers distinctive return patterns ("risk factors") as the basic building blocks of investing. Risk models identify these risk factors and attribute portfolio risk (and returns) to the different factors. This yields new insights into risk and return. We start by discussing the most classic of all risk model, the 1964 CAPM. Then we introduce multifactor models, discuss the difference between economic and statistical models (PCA) and discuss examples in equity and fixed income.

Learning Objectives

Risk toolkit (part 1)

- Understand how risk is quantified and measured in investing
- Understand the challenge of measuring tail risk
- Understand how risk aggregates and impacts portfolios

Risk factors and risk models (part 2)

- Understand why risk matters in investing
- Understand what risk factors are
- Understand the different types of risk models and how they work

Course Topics

Risk toolkit (part 1)

- What is risk: How we think about risk and what are the most popular measures (Vol, VaR, Drawdown, Scenarios)
- Uncertainty in the real investment world: Historic distributions from different asset classes.
- Portfolio risk: How does asset risk add up in a portfolio?
  - A measure of interaction: covariance and correlations
  - A geometric analogy
- How long is long term? An exercise about risk and time.
- Tail risk, distribution & VaR
- The simple world of normal returns
- Analytic VaR: Variance/Covariance approach
- Non-normality: Historic VaR

Risk factors and risk models (part 2)

- CAPM and Beta - Market risk and the limit of diversification
- The economics behind risk factors – Traditional Beta, Alternative Beta and Alpha.
- Risk factor models – A look under the hood: Economic vs statistical factors (PCA).
- PCA case study - A very worked equity example where you can see all moving parts.
- Fixed Income 3 drivers: How to decompose curve movements.

Who is this Course for?

Everybody who wants a comprehensive overview of how risk is quantified and measured in the investment industry.

Duration

This is a 1-day course delivered as two 3 hours webinars on consecutive days.

Language

English

Trainer Profile

The NoscoPartners are all banking professionals with a strong academic background and extensive education experience. As practitioners, they worked for many years on the business and education side of s global bank, where client focus and practical relevance is key. More on www.noscopartners.com

SIX Swiss Exchange AG
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T + 41 58 399 3099
education@six-group.com
www.six-group.com/education

Educational Partners

NoscoPartners
Financial Market Expertise