Collegio Carlo Alberto

UNIVERSITÀ DEGLI STUDI DI TORINO

SOLUTIONS FOR RISK MANAGEMENT
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Course objectives

This course is a hands-on presentation of the Suite Algorithmics – Market Risk, provided by IBM for teaching purposes. The Algorithmics Suite consists in front-to-back solution, including dataflow management and the following tools:

- · data modelling
- · Algo DB
- · pricing tool (Risk Watch)
- · reporting tool (ARA)

Students will thus practice on the software used by primary global insurance and financial conglomerates.

Topics

<u>Financial Engineering:</u> the pricing engine allows modelling 300 different pay-offs It includes the Stochastic Pricing Module, Variable Annuities e Used Defined Expressions often used to meet Solvency 2 requirements.
Levering on Financial Engineering methodologies, students will implement a set of different financial instruments, by studying the different possible model designs.
Risk factors scenarios modelling (VaR vs Stress scenarios) is analyzed in deep so that the student can learn how to perform risk analysis based of market best practice.
The models validation is an integrated part of the course to let the students gaining confidence of the calculation routine of a software market leading solution.
At the end of the course, the students will be able to perform:
-Market data modelling
-Usage of pricing module based on Financial Engineering specifications of few pay-offs
-Stress test analysis on deterministic scenarios
-Pricing and analytics model validation

Software needed
Suite Algorithmics, IBM
Prerequisites
Academic courses of the Master in Finance Insurance and Risk Management
Exam type
None