



# DIECO RESEARCH SEMINARS

# THE CAPITAL-ON-CAPITAL COST IN SOLVENCY II RISK MARGIN

## SPEAKER:

Anna Maria Gambaro Assistant Professor of Mathematical Finance Università del Piemonte Orientale

### COORDINATORS:

Elisa Mastrogiacomo (DIECO) Asmerilda Hitaj (DIECO)

## 18 DEC, 2024 11:30

#### TOPIC

The presentation explores advancements in time-consistent valuation of insurance liabilities, focusing on the concept of capital-oncapital cost and its implications for revising risk margin (RM) calculations. Capital-on-capital is defined as the component of RM required to cover risks associated with future regulatory capital variations, distinct from liability cash-flow uncertainties. We introduce a mathematical framework comparing two valuation approaches: one using backward iteration of the one-period SCR risk measure and another based on the additive-SCR (ASCR), a novel dynamic formulation representing expected total capital requirements until maturity. Through application to a portfolio of long-term equity-linked life insurance contracts, we demonstrate the non-negligible role of capital-on-capital costs in liabilities with long maturities. The findings provide practical insights into RM calculations and regulatory capital management.

#### **BIO OF ANNA MARIA GAMBARO**

Anna Maria Gambaro is a researcher at the Department of Business and Economics Studies at the University of Piemonte Orientale. She earned her PhD in Mathematics for Finance from the University of Milano-Bicocca. Her research interests lie in the application of mathematical models to finance, operations management, and insurance risk management. She has authored articles published in leading international journals, including the European Journal of Operational Research, Insurance: Mathematics and Economics, and Production and Operations Management. In addition to her academic work, she has collaborated as a consultant with multinational firms such as PwC and Deloitte, contributing her expertise to complex projects in finance and risk management.



The in-person presentation will be held in Room 1, Padiglione Seppilli (Via Ottorino Rossi, 9, Varese) Scan the QR code to join the seminar online in MS Teams