

Applied Risk Management

Module 6, 2022/23

Denis Gavrilin
Managing Director, Bank Soyuz

TAs: Natan Anisimov
Senior Analyst, Bank Soyuz

Course description

This course will provide you with the insides of risk management framework in financial institutions and enterprises. We will cover broad range of risk metrics that are commonly used, with the focus on market risk, credit risk an operational risk, capital allocation and three lines model as an update to previously established three lines of defense model. Several speakers from the industry are expected (ex Big-4, banks, enterprises).

Course requirements, grading, and attendance policies

Prerequisites

Though there are no formal prerequisites, you will have great benefit previously attending Risk Management, Derivatives and Fixed Income Instruments.

Participation

Mandatory and conditional to be graded is a full and timely participation in all classes. There is a strong anticipation that every student will actively participate and make a qualitative contribution to class discussion.

Home assignments and cases

Home assignments should be prepared using Python or R as a programming tool. Cases should be prepared in groups of 3 people. The case report should be prepared in form of the presentation to an executive officer and contain problem statement (including relevant information from the case), analysis (assumptions, arguments, optimal and alternative solutions), and conclusions (summary of your logic and recommendations).

Grading

The course grade will be based on two individual home assignments (20%), three cases (30%) and closed-book final exam (50%). Active class participation may add up to 10% bonus points (note that quality rather than quantity of your interventions will count).

Course contents

Course orientation session
Risk Culture and Why It Matters
Three lines model
Risk-management standards and regulation framework
High-Level Summary of Basel Accords and Reforms
Economic Capital Frameworks
Economic Capital Measures and Governance

Estimating Market Risk Measures: Value-At-Risk, Expected Shortfall, and Specific Metrics
Non-Parametric Approaches
VaR Mapping
Backtesting VaR
Credit Analysis: Tools and Methods
Rating Assignment Methodologies and Credit Risk Models
Portfolio Credit Risk
IFRS 9 requirements
Defining and Measuring Operational Risk: Standardized Measurement Approach and Loss
Distribution Approach
Risk Capital Attribution and Risk Adjusted Performance Measurement
Stress Testing Banks
Risk Management in Non-Financial Entities

Course materials

Required textbooks and materials

Risk Management and Financial Institutions, Fifth Edition, by John C. Hull
The Essentials of Risk Management, Second Edition, by Michel Crouhy, Dan Galai, and Robert Mark

Additional materials

Measuring Market Risk, Second Edition, by Kevin Dowd
Value at Risk: The New Benchmark for Managing Financial Risk, Third Edition, by Philippe Jorion
Credit Risk Modeling using Excel and VBA, Second Edition, by Peter N. Posch and Gunter Löffler
Risk Management and Value Creation in Financial Institutions, by Gerhard Schroeck

Academic integrity policy

Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.