Lisbon School of Economics & Management
Universidade de Lisboa

Risk Management

MASTER IN FINANCE - 2024/2025

I. Professor:

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II. Syllabus:

1. Foundations of Risk Management
    1.1. Risk Management Framework
    1.2. Capital Requirements and Institutional Structure

2. Credit Risk
    2.1. Main definitions and measures
        2.1.1. Expected and Unexpected Losses
        2.1.2. Credit Risk in Banking Decision Procedures
    2.2. Models for individual exposures
        2.2.1. Structural Models
        2.2.2. Other Models
    2.3. Portfolio Models
        2.3.1. Models based on Ratings and Credit VaR
        2.3.2. Models with correlated defaults
    2.4. Credit Derivatives and Securitizations

3. Interest Rate Risk for non-marked-to-market assets
    3.1. Interest Rate Gaps
    3.2. Alternative Methods

4. Market Risk
    4.1. Value-at-Risk (VaR)
    4.2. Expected shortfall
    4.3. Capital Requirements
    4.4. Parametric and non-parametric methods of VaR estimation
    4.5. VaR for stock portfolios
    4.6. VaR for bond portfolios
    4.7. Backtesting VaR

5. Liquidity Risk
    5.1. Definitions and principles
    5.2. Balance Sheet Management and metrics
        5.2.1. Cash-flow modeling
        5.2.2. Liquidity stress testing
        5.2.3. Funding Plans

6. Stress Tests

III. References

Main:

Bessis, Joel (2015), "Risk Management in Banking – Fourth Edition", Wiley.

Crouhy, Michel, Dan Galai and Robert Mark (2014), "The Essentials of Risk Management", 2nd Edition, McGraw-Hill.

Hull, John (2018), "Options, Futures and Other Derivatives", 10h Edition, Prenctice-Hall.

Hull, John C. (2023), "Risk Management and Financial Institutions", Sixth Edition, Wiley.

Jorion, Philippe (2007), "Value at Risk – The New Benchmark for Managing Financial Risk", Mc-Graw Hill, 3rd edition.

Riskmetrics (2007), "Creditmetrics – Technical Document".

Saunders, Anthony and Marcia Millon Cornett (2018), "Financial Institutions Management – A Risk Management Approach", 9th Edition, McGraw-Hill International.

Schönbucher, Phillip J. (2003), "Credit Derivatives Pricing Models", Wiley Finance.

Additional:

Choudhry, Moorad (2018) "The Moorad Choudhry Anthology: Past, Present and Future Principles of Banking and Finance", Wiley.

Deventer, Donald R. van, Kenji Imai, Mark Mesler (2013), "Advanced Financial Risk Management: Tools and Techniques for Integrated Credit Risk and Interest Rate Risk Management", 2nd Edition, Wiley.

Malz, Allan M. (2011), "Financial risk management: models, history, and institution", Wiley.

Ong, Li Lian and Andreas A. Jobst (2020), "Stress Testing - Principles, Concepts, and Frameworks", IMF.

Taleb, Nassim (2007), "The Black Swan: The Impact of the Highly Improbable", Allen Lane.

IV. Evaluation

Written exam (open book with paper-based resources and excluding IT devices).