

# € TRAINING

5-Day Practical Training on Financial  
Contagion Risk and Network Analysis,  
Solvency and Liquidity Stress Testing



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## Introduction:

The introductory section will provide an overview of the training program, its objectives, and the targeted audience. It will set the context for understanding financial contagion risk, network analysis, solvency stress testing, and liquidity stress testing.

## Course Objectives:

At the end of this course, the participants will be able to:

- Understand the concept of financial contagion risk and its implications for financial stability.
- Gain proficiency in network analysis techniques to assess systemic risk and interconnectedness in the financial system.
- Develop practical skills in conducting solvency and liquidity stress tests.
- Familiarize participants with the toolkits and metrics used in contagion risk analysis.
- Enable participants to generate key contagion/network indices and produce analyses similar to those found in financial stability reports.

## Targeted Audience:

This training program is designed for professionals working in the financial industry, including risk managers, financial analysts, regulators, policymakers, and researchers. It is also beneficial for graduate students or individuals seeking to enhance their knowledge in the field of financial stability.

## Course Outlines:

### Unit 1: Introduction to Financial Contagion Risk and Network Analysis

- Overview of financial contagion risk and its significance.
- Types of contagion: interbank, sovereign, and market-based.
- Network analysis and its role in assessing systemic risk.
- Data requirements and sources for contagion risk analysis.
- Introduction to network visualization tools.

### Unit 2: Contagion Indices and Metrics

- Calculation and interpretation of systemic risk indices e.g., CoVaR, MES.
- Contagion measures based on network centrality e.g., degree, betweenness, eigenvector.
- Network density and clustering coefficients in contagion analysis.
- Identification of systemically important institutions using network metrics.
- Case studies: Application of contagion indices in real-world scenarios.

### Unit 3: Financial Stability Reports and Analysis

- Overview of financial stability reports FSRs and their role in assessing systemic risk.
- Key components of FSRs: stress testing, network analysis, and risk assessment.

- Interpreting FSRs: understanding the key findings and implications.
- Extracting relevant information for contagion risk and network analysis from FSRs.
- Practical exercise: Analyzing an FSR and replicating selected analysis.

#### Unit 4: Solvency Stress Testing

- Introduction to solvency stress testing and its importance in risk management.
- Scenario-based stress testing methodologies for assessing solvency risk.
- Calculation and interpretation of solvency stress test results.
- Incorporating systemic risk factors in solvency stress testing.
- Case studies: Practical application of solvency stress testing techniques.

#### Unit 5: Liquidity Stress Testing

- Overview of liquidity stress testing and its relevance for financial stability.
- Liquidity risk metrics and tools for assessing liquidity stress.
- Incorporating market-wide liquidity shocks in stress testing.
- Analysis of funding liquidity risk and contingent liquidity needs.
- Practical exercise: Conducting a liquidity stress test and analyzing the results.