



TRAINING COURSE

FLORENCE SCHOOL OF BANKING AND FINANCE

MEASURING AND MANAGING SYSTEMIC RISK

Course Instructor: Gianni De Nicoló | Programme Associate, Florence School of Banking and Finance and IMF

Sala Europa

Villa Schifanoia, Via Boccaccio 121 - Florence

21-23 MARCH 2017

■ INTRODUCTION

This course introduces the concept of systemic risk, outlines how systemic risk arises within the financial sector, how it may impact real activity, and details selected measures to track its evolution in the cross sectional and time series dimensions. Selected methods used for measuring and assessing the build-up of systemic risk are presented through workshops carried out using STATA software. The course concludes reviewing and critically examining current policies to manage systemic risk.

■ REFERENCES

- Adrian, Tobias, and Markus K Brunnermeier, 2016, [CoVaR](#), *American Economic Review*, 106(7): 1105-1141.
- Benoit, Sylvain, Jean-Edouard Colliard, Christophe Hurlin, and Christophe Pérignon, 2016 Where the Risks Lie: A Survey on Systemic Risk, *Review of Finance*.
- Bisias, Dimitrios, Mark Flood, Andrew Lo and Stavros Valavanis, 2012, "A Survey of Systemic Risk Analytics, Office of Financial Research," Working Paper #0001, January http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1983602
- De Nicolò, Gianni, Giovanni Favara, and Lev Ratnovski, 2012, "Externalities and Macroprudential Policy," IMF Staff Discussion Note, No.12/05. (Washington: International Monetary Fund)
- De Nicolò, Gianni and Lucchetta, Marcella, 2015, Forecasting Tail Risks, *Journal of Applied Econometrics*, Forthcoming. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2685707
- Gorton, G, and G Ordonez, 2016, "Good Booms, Bad Booms", NBER Working Paper 22008.
- Schularick, M, and A Taylor, 2012, Credit Booms Gone Bust: Monetary Policy, Leverage Cycles and Financial Cycles, 1870-2008, *American Economic Review* 102 (2): 1029-1061.

■ PROGRAMME

21 MARCH

- 09.15 - 09.30 Welcome by **Pierre Schlosser** | Florence School of Banking and Finance
- 09.30 - 11.00 **Session 1. What is Systemic Risk?**
- Key triggers of the 2007-2009 financial crisis
 - A definition of systemic risk
 - Drivers of systemic risk
 - Implications for measurement
- 11.00 - 11.30 *Coffee break*
- 11.30 - 13.00 **Session 2. Measurement of Tail Risk**
- VaR-type tail risk measurement
 - Unobserved tail risk thresholds: logit and ROC analysis
- 13.00 - 14.00 *Lunch break*

- 14.00 - 15.30 **Session 3. Workshop: Application of VaR-type Measures**
- 15.30 - 16.00 *Coffee break*
- 16.00 - 17.30 **Session 4. Workshop: Application of Logit and ROC Analysis**
- 17.30 - 18.30 *Wine-tasting at the course venue*

22 MARCH

- 09.30 - 11.00 **Session 5. Time Dimension: Systemic Risk and Financial Cycles**
- Financial cycles
 - Measurement of financial cycles
 - Financial cycles and systemic risk
- 11.00 - 11.30 *Coffee break*
- 11.30 - 13.00 **Session 6. Workshop: Financial Cycles and Banking Distress**
- 13.00 - 14.00 *Lunch break*
- 14.00 - 15.30 **Session 7. Cross Sectional Dimension: Spillovers and Contagion**
- Assessing systemic linkages: network analysis
 - Identification of Systemically Important Financial Institutions (SIFIs)
 - CoVaR and ΔCoVaR
- 15.30 - 16.00 *Coffee break*
- 15.30 - 17.30 **Session 8. Workshop: Application of CoVaR and ΔCoVaR**
- 19.30 - 21.30 *Dinner @ Restaurant Finisterrae, Piazza Santa Croce 12*

23 MARCH

- 09.30 - 11.00 **Session 9. Assessing Vulnerabilities through Stress Testing**
- A brief review of stress testing architecture
 - Designing scenarios for assessing vulnerabilities at the ECB , by Dejan Krusec, ECB
 - Discussion
- 11.00 - 11.30 *Coffee break*

11.30 - 13.00

Session 10. Managing Systemic Risk

- Macro-prudential policy as systemic risk management
- Open issues

13.00 - 13.15

Concluding remarks