



TRAINING COURSE

EARLY WARNING SYSTEMS

Florence School of Banking and Finance

House of Finance, Frankfurt

7-8 SEPTEMBER 2017

■ Introduction

This two-days course, presented by the Florence School of Banking and Finance, introduces the foundations of Early Warning Systems (EWS) for systemic risk, reviews the relevant literature, and provides illustration of EWS examples through workshops performed with Stata software. At the end of this course, participants should be able to understand the structure of EWS models, to be familiar with the main modeling applications, and to evaluate their advantages and limitations for policy analysis.

■ Course Instructors

Fabio Canova | Head of Training Florence School of Banking and Finance and BI Norvegian Business School

 $\textbf{Gianni De Nicol\'o} \mid \text{Programme Associate Florence School of Banking and Finance and International Monetary Fund}$

Manfred Kremer | Deputy Head of the Financial Research Division European Central Bank

■ Programme

7 SEPTEMBER

09.30 - 11.00	Session 1. Foundations of EWS
09.15 - 09.30	Welcome and presentation of the school
09.00 - 09.15	Registration

Defining and measuring tail risks

• The signal approach: Receiving Operating Characteristics (ROC) 11.00 - 11.30 Coffee break 11.30 - 13.00 Session 2. VaR-type approaches (1) ■ VaR, CoVaR and ∆CoVaR Systemic Expected Shortfall (SES) 13.00 - 14.00 Lunch break 14.00 - 15.30 Session 3. Workshop: Application of VaR-type approaches (1) CoVaR and \(\Delta CoVaR \), VAR in VaR 15.30 - 16.00 Coffee break Session 4. Workshop: Application of VaR-type approaches (2) 16.00 - 17.30 Systemic Expected Shortfall (SES) 8 SEPTEMBER 09.30 - 11.00 Session 5. Workshop: Application of Logit/ROC analysis Predicting currency, banking and sovereign debt crises 11.00 - 11.30 Coffee break 11.30 - 13.00 Session 6. Workshop: Constructing country ratings for tail risks using Logit/ROC analysis 13.00 - 14.00 Lunch break 14.00 - 16.00 Session 7. Risk Interdependencies through VARs and Panel VARs. **Networks and Connectedness measures (Fabio Canova)** Coffee break 16.00 - 16.30 16.30 - 17.30 Session 8. The CISS indicator: construction and applications by Manfred Kremer | ECB 17.30 - 17.45 Concluding remarks

Value-at-Risk (VaR)-type measures

Logit models