

# Measuring systemic risk

## Online course

Centre for Econometric Analysis

Delivered by: Professor Giovanni Urga

### Course overview

There is huge body of literature aiming at evaluating the causes and consequences of economic and financial crises. This course will give an overview of how to identify and measure systemic financial risk. This is defined as the risk that an event will trigger a loss of economic value or confidence in, and attendant increases in uncertainty about, a substantial portion of the financial system that is serious enough to quite probably have significant adverse effects on the real economy. There are several methodological approaches to measure systemic risk. A first line of research focuses on the international banking system, the systemic event is induced by severe disequilibria within the banking sector. A second line of research focuses on global (rather than limited to the financial sector) market dynamics as primary source of financial instability. In this case, market information needs to be framed within a more general methodological approach. The international banking sector remains central to the analysis, but global banks' weakness may not be sufficient to induce a systemic event.

- You will learn indicators able to measure systemic risk at a global levels.
- You will learn how monetary policy decision are adopted by central banks during the crises
- You will learn how EU regulatory framework regarding systemic risks stemming from banking and financial distress.

### Target audience

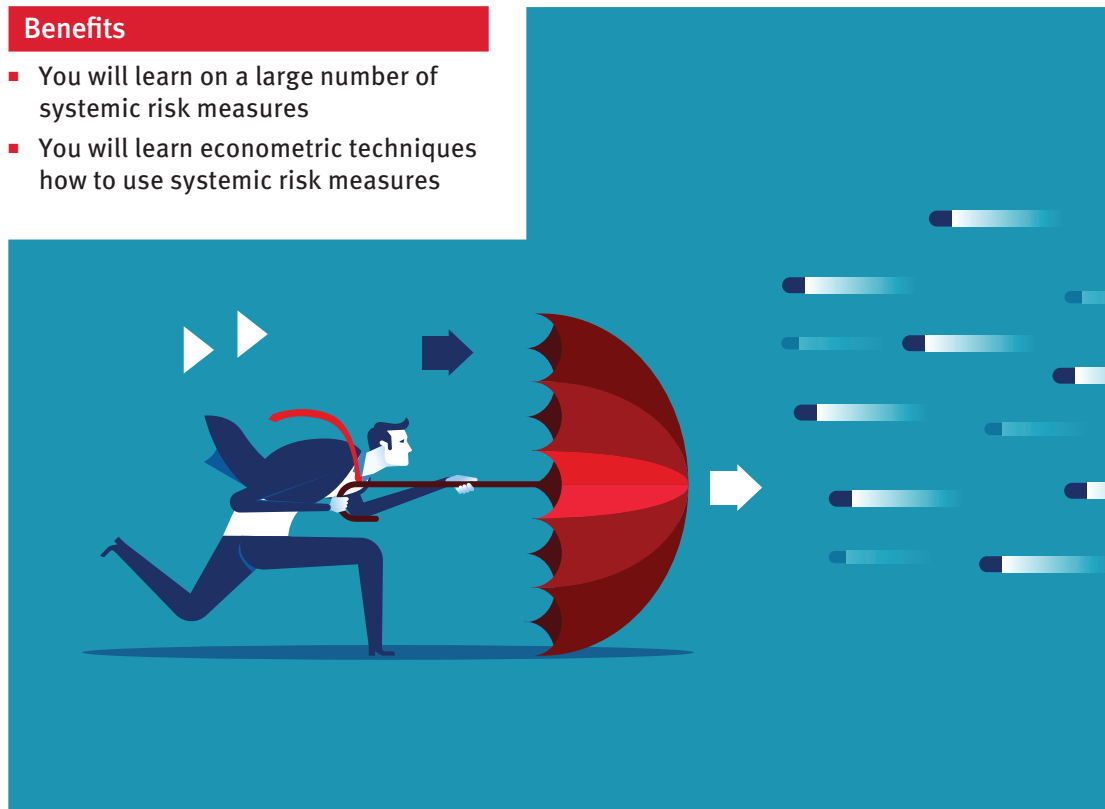
This course is useful to anyone with a research interest in financial stability and systemic risk. This course is essential for anyone who wishes to have a quantitative understanding of the systemically important financial institutions, with the ultimate goal of identifying the vulnerabilities of the financial system.

### Course prerequisites

The course requires intermediate knowledge in statistics and econometrics for economics and finance. Knowledge of the fundamentals of financial stability and systemic risk will help participants to obtain

### Benefits

- You will learn on a large number of systemic risk measures
- You will learn econometric techniques how to use systemic risk measures



### Fees:

£180 City students, alumni, staff

£210 External students

£360 External rate

A 15% discount is available for groups of three or more participants



## Professor Giovanni Urga

Giovanni is Professor of Finance and Econometrics and Director of the Centre for Econometric Analysis at Bayes Business School in London and Professor of Econometrics at the University of Bergamo (Italy). His research interests are in panel and factor models, financial econometrics, modelling (systemic, liquidity, premia) risk in (shadow) banking and (shadow) insurance and cross-market correlations, asset pricing, modelling and testing for multiple breaks and jumps. He has published in the Journal of Econometrics, Journal of Business and Economic Statistics, Journal of Banking and Finance, Journal of Financial Econometrics, Journal of Applied Econometrics, Journal of Financial Markets, Journal of Money Credit and Banking, Econometric Theory, International Journal of Forecasting, International Journal of Money and Finance and others. He is an Associate Editor for Empirical Economics, and has been a guest editor for the Journal of Econometrics and the Journal of Business and Economic Statistics. He has presented his works in several international conferences and seminars. He has been consultant in several international Institutions and he is consultant for Italian investment banks.

the maximum benefit from the course.

### Contents

Day 1 : Four hours online

#### Topic 1: Systemic Risk: Definitions and Measures

- Defining Shadow Entities vs. Commercial Banks
- Systemic Risk Measures: Theory
- Systemic Risk Measures: Implementation of *CoVaR*, *MES*, *SRISK*
- Empirical Applications
  - For the 141 EU banks from a companion paper (BMPI, 2016)
  - For the 179 UK Shadow entities [34 (Non-banking) Financial companies

and 149 MMFs] and 6 UK Traditional Banks Hausman test.

Day 2: Four hours online

#### Topic 2: Global Systemic Risk Indicators

- A new global systemic risk indicator
  - Choice of relevant variables
  - Parameter estimation
  - Quarterly and monthly global systemic risk indicator and its equilibrium values
- Monetary policy and systemic risk
  - Data description
  - Empirical results for the FED, ECB and BoE
  - Reaction to systemic instability
  - A robustness check using VIX and local cyclical indicators
- Early Warning indicators of Financial stability

### Recommended reading

A complete list of papers will be recommended at the beginning of the course.