



## **TRAINING COURSE**

### **FLORENCE SCHOOL OF BANKING AND FINANCE**

# ***EMPIRICAL METHODS TO EVALUATE FINANCIAL REGULATION***

**Course Instructor: Steven Ongena** | University of Zurich

Sala Europa

Villa Schifanoia, Via Boccaccio 121 - Florence

**19-20 APRIL 2017**

## ■ **INTRODUCTION**

The objective of this course is to introduce the student to the scientific literature on the methodological aspects in empirical banking, in particular in the empirical methods to evaluate financial regulation. To accomplish this objective, the course introduces relevant research methodologies used in empirical banking, with a special emphasis on inter-temporal (e.g., duration analysis and event study) and cross-sectional methods (e.g., matching).

## ■ **READING MATERIAL**

- Degryse, H., M. Kim, and S. Ongena, 2009, *Microeconometrics of Banking* (Oxford University Press).
- Cerqueiro, G., H. Degryse, and S. Ongena, 2011, "Rules versus discretion in loan rate setting," *Journal of Financial*
- Kiefer, N.M., 1988, "Economic duration data and hazard functions," *Journal of Economic Literature* 26, 646-679.
- Ongena S. and D.C. Smith, 2001, "The duration of bank relationships," *Journal of Financial Economics* 61, 449-475.
- Stuart, E.A., 2010. "Matching methods for causal inference: A review and a look forward." *Statistical Science* 25(1), 1-21.

- Ioannidou, V. P., and S. Ongena, 2010, "Time for a change": Loan conditions and bank behavior when firms switch banks, *Journal of Finance* 65, 1847-1878.
- Cerqueiro, G., Ongena, S., K. Roszbach, 2016. Collateralization, bank loan rates and monitoring: Evidence from a natural experiment, *Journal of Finance*, 71 (3), 1295-1322.
- James, C.M., 1987. Some evidence on the uniqueness of bank loans. *Journal of Financial Economics* 19, 217-235.
- McWilliams, A. and D. Siegel, 1997, Event studies in empirical research: Theoretical and empirical issues, *Academy of Management Journal*, 40, 626-657.
- Ongena S., D.C. Smith and D. Michalsen, 2003, Firms and their distressed banks: lessons from the Norwegian banking crisis (1988-1991), *Journal of Financial Economics*, 67.1, 81-112.
- Karceski J., S. Ongena and D.C. Smith, 2005, The impact of bank consolidation on commercial borrower welfare, *Journal of Finance* 60:4, 2043-2082.
- Jiménez, G., S. Ongena, S., J.-L. Peydró, J. Saurina, 2014. Hazardous times for monetary policy: What do 23 million bank loans say about the effects of monetary policy on credit risk-taking? *Econometrica* 82:2, 463-505.
- Jiménez, G., S. Ongena, S., J.-L. Peydró, J. Saurina, Forthcoming, Macroprudential policy, countercyclical bank capital buffers and credit supply: Evidence from the Spanish dynamic provisioning experiments, *Journal of Political Economy*.

## ■ PROGRAMME

### 19 APRIL

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|---------------|--|
| 09.00 - 09.15 | Welcome by <b>Pierre Schlosser</b>   Florence School of Banking and Finance  |
| 09.15 - 11.00 | <b>Session 1. Heteroskedastic Modelling</b> <ul style="list-style-type: none"> <li>▪ Modelling of heterogeneity in granted loan terms</li> <li>▪ Heteroskedastic estimation</li> </ul>         |
| 11.00 - 11.30 | <i>Coffee break</i>  |
| 11.30 - 13.15 | <b>Session 2. Duration Analysis and Applications</b> <ul style="list-style-type: none"> <li>▪ Modelling of survival and duration of bank-firm connections</li> <li>▪ Duration model</li> </ul> |
| 13.15 - 14.15 | <i>Lunch break</i>   |
| 14.15 - 16.00 | <b>Session 3. Matching (Part 1 and 2)</b>  |

- Loan terms when firms switch banks
- Coarsened exact matching
- The impact of foreign bank entry
- Propensity score matching

16.00 - 16.15

*Coffee break*

16.15 - 17.15

**Practical Session**

**Stata TA: Analyzing Panel Data**

- Introduction to panel data in STATA
  - Clustering
  - Probit models
- Fixed effects with an application to banks' credit lines
  - xtreg command

Reference: Sufi, Amir, Bank Lines of Credit in Corporate Finance: An Empirical Analysis, *Review of Financial Studies*, March 2009, 22(3), 1057-1088.

18.00 - 21.00

*Social Activities outside the EUI*

**20 APRIL**

09.00 - 11.00

**Session 5. Difference-in-Difference**

- The impact of changes in collateral regulation
- Difference in differences

11.00 - 11.30

*Coffee break*

11.30 - 13.15

**Session 6. Event Studies and Applications**

- Loan, bank distress and bank merger announcements
- Event study methodology

13.15 - 14.15

*Lunch break*

14.00 - 16.00

**Session 7. Elements of an Identification Strategy (part 1 and 2)**

- Risk-taking channel of monetary policy
- Two-step model, interactions, fixed effects
- Dynamic provisioning and its impact
- Difference in differences, interactions, fixed effects

16.00 - 16.15 *Coffee break*

16.15 - 17.15 **Practical Session**

**Stata TA: Analyzing Panel Data**

- Fixed effects with an application to banks' credit lines  
- areg command
- The reghdfe command by Sergio Correia
- Diff-in-diff exercise with an application to banks' credit lines

Reference: Sufi, Amir, Bank Lines of Credit in Corporate Finance: An Empirical Analysis, *Review of Financial Studies*, March 2009, 22(3), 1057-1088.

17.15 - 17.30 *Concluding Remarks*