### Research Interests

**Financial economics**: Systemic risk, Financial regulation, Monetary policy, Financial contagion and Financial stability.

# Current position

**Temporary Lecturer and Research Assistant** (attaché temporaire d'enseignement et de recherche), LEDa, Paris-Dauphine & PSL Research Universities, 2019-2021

### Education

### 2016-present Paris-Dauphine & PSL Research Universities.

PhD in Economics

Title: Systemic risk, financial contagion and the role of central banks an;d regulators (under the supervision of Sidartha Gordon)

### 2015–2016 Paris-Dauphine & PSL Research Universities.

Master degree in Monetary and Financial Economy

Master thesis: Central bank in a contagion model (under the supervision of Sylvain Benoit and Sidartha Gordon).

#### 2012–2015 Tunisia Polytechnic School.

Engineering degree

Option: Economics and Scientific Management.

### 2010–2012 Tunis Preparatory Institute for Engineering Studies.

First university cycle diploma

Success in the National Competitive Entrance Examination to Engineering Schools (Rank: 22/1800).

### Research Work

### Reshaping monetary policies to reach financial stability, working paper

Abstract: I propose a new approach to assess central banks interventions by introducing a central bank in the contagion model proposed by Greenwood, Landier and Thesmar (2015). I study how, using reshaped unconventional policies, the central bank can safeguard financial stability. In a theoretical study, I show that an optimal asset purchase policy depends, inter alia, on the banks' portfolio composition: for two banks having the same portfolio composition, the total budget of the central bank goes to the bank with the highest leverage ratio. However, with different portfolios, the amount allocated to buy assets from each bank depends on banks characteristics'. I show also that, for a Refinancing Operation, the bank with the highest connectedness-to-leverage ratio benefits from the most important loan. My framework is then applied to European banks during the sovereign debt crisis, which allows me to verify the effectiveness of these reshaped unconventional monetary policies. I find also that an asset purchase as a monetary policy is beneficial, especially when the central bank buys specific sovereign debts.

#### Bail-in vs. Bailout: a Persuasion Game, working paper (with Sylvain Benoit)

Abstract: We propose a model with incomplete information where a distressed bank asks its creditor, a healthy bank, to reduce its debt. Given the information disclosed by the regulator about the asset quality of the distressed bank and its possible bailout by the government, the healthy bank can accept or not the bail-in operation. The role of the regulator is to select the optimal disclosure rule that reduces its expected loss function. We find that the *full disclosure* is desirable in some circumstances, especially in extreme periods, but not in others. For instance, when the bail-in cost is large, the optimal loss is reached thanks to a *partial disclosure* in normal times. In contrast, when the bailout cost is high, *no disclosure* minimizes the regulator's expected welfare losses in normal times.

### What if the information prevents from cascade defaults in financial networks, work in progress

Abstract: The goal of this paper is to study how the information disclosed by the regulator can prevent from cascade of defaults in financial networks. Thereafter, I consider a financial system composed of N banks in the spirit of Eisenberg and Noe (2001). Banks are connected through interbank claims. In my model, a group of fundamentally defaulting banks asks their creditors (other banks of the network in our framework), to reduce their debts. The latter can accept or not this bail-in operation based on information disclosed by the regulator about banks' assets quality. My first results show that the more intense the cascade of defaults, the more a surviving bank is likely to agree to rescue fundamentally defaulting banks even if they are not directly linked. When I look at the regulator's disclosure rule in the case of a single defaulting bank linked to several healthy banks, I find that disclosure may be desirable in some cases but not in others. These results not only depend on different costs (bail-in, bailout, liquidation an bankruptcy costs) but also they are driven by network structure and density. For instance, when bail-in cost is not high and when the distressed bank has dense connections, the regulator want to encourage bail-ins. To this end, in normal time, the regulator's disclosure rule must be non-informative.

# Conferences and workshops

- 2020 LEDa poster session (Paris-Dauphine & PSL Research Universities), accepted at the International Conference of the French Finance Association (AFFI).
- 2019 2nd Annual Conference of the JRC Community of Practice in Financial Research (JRC CoPFiR).
- 2018 Dauphine Doctoral Workshop in Economics (JDD), 1st Annual Conference of the JRC Community of Practice in Financial Research (JRC CoPFiR).
- 2017 34th International Conference of the French Finance Association (AFFI), Macro-Finance Seminar (Paris-Dauphine & PSL Research Universities).

# Teaching Activities

2019 Introduction to Econometric, (Undergraduate, Licence 3).

2017-present Macroeconomics: short and medium-term analysis, (Undergraduate, Licence 2).

2016-2018 **Optimization**, (Magisterium Bank Finance Insurance, First year).

2016-present Microeconomics under uncertainty, (Undergraduate, Licence 3).

# Professional experience

February-June 2015

**Engineering graduation internship**, Economic and Social Commission for Western Asia (United Nations) in cooperation with Tunisian Institute of Competitiveness and Quantitative Studies.

Impact analysis of structural reforms of the Tunisian economy using a Computable General Equilibrium model.

July-August Engineering internship, Amen Bank.

Risk quantification of a shares portfolio using the Value at Risk and implementing stress tests. (Implementation of different methods and interpretation of results)

# Conference and seminar organization

2019-2020 Dauphine Decision, Interaction and Markets (DIM) Seminar, Co-organiser.

2019 Dauphine Doctoral Workshop in Economics, Co-organiser.

2013 Corporate Forum of Tunisia Polytechnic School, Member of the Organisation Committee.

### Skills

Operating Windows, Linux

system

Programming C, Java, Python, HTML/CSS, Pascal

language

Office MS Office, Latex

Math Code Maple, Matlab, Dynare, R, Stata, SAS, Eviews

## Other information

Date of birth: 7<sup>th</sup> december 1991. Citizenships: France and Tunisia.

Languages: French and Arabic (native)

English (fluent) and Spanish (beginner).

#### References

### Sidartha Gordon

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# Sylvain Benoit

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#### Mahmoud Sami Nabi

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