Lionel **Sopgoui**

PhD Student in Mathematical Finance : Université Paris Cité - Imperial College London

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Summary

I am an ingenious, curious, and dynamic young person with a passion for Quantitative Finance and Trading. I am constantly looking for new challenges, motivated by self-satisfaction to bring concrete and efficient solutions. I am currently PhD Student, supervised by *Jean-François Chassagneux* at LPSM, Université Paris Cité, *Antoine Jacquier* at Department of Mathematics, Imperal College London, and *Smail Ibbou* at Groupe BPCE. My thesis work revolves around Applications of Probability and Stochastic Control in Economic Modelling, Climate transition risk and Credit Risk. I graduate in September 2024.

Education and Training

Université de Paris - Imperial College London, PhD student in Financial Mathematics	Sep. 2021 - Sep. 2024	*Paris, France*
Ecole Polytechnique - ENSAE Paris, M.S. in Financial Mathematics : Statistics and Finance	Sep. 2019 - Dec. 2020	*Palaiseau, France*
Telecom SudParis, Engineering Degree in Statistical Modelling and Applications	Sep. 2017 - Dec. 2020	*Evry, France*
Lycée Jeanne d'Albret, Preparatory Class for High Scientific School	Sep. 2016 - Jul. 2017	*St Germain, France*
Lycée Jacques Amyot, Preparatory Class for High Scientific School	Sep. 2015 - Jul. 2016	*Melun, France*
National Advanced School of Engineering, Mathematics and Computer Science	Sept. 2012 - July. 2015	*Ydé, Cameroon*

Work Experience

Groupe BPCE — *Paris, France*

Quantitative Risk Researcher — *Mar. 2021 - Ongoing*

- I am conducting research on the projection of portfolio risk measures for very long time horizons with application to climate transition risk.
- I am also incorporating the greenhouse gases costs into economic modelling, firm valuation, real estate, as well as credit risk modelling.

Own Account — *Paris, France*

Quantitative Trader — *Nov. 2021 - Ongoing*

- I am developing trading strategies based on statistical arbitrage on US small and mid-caps, and executing them on Interactive Brokers.
- My strategies are intraday, semi-systematic (Python and IBKR API), and give a triple-digit performance yearly as well as sharpe ratio greater 2.

LexiFi — *Paris, France*

Quantitative Researcher Intern — *May. 2020 - Nov. 2020*

- I have used Deep Learning to predict and rebuild Implied Volatility Surfaces from historical spot and forwards series, for illiquid, proprietary or OTC options.
- I developped a new GAN called CRS GAN to generate Implied Volatility Sufaces, essential for Options Pricing and Portfolio scenario analysis.

Planète-Urgence — *Ebodjé, Cameroon*

Volonteer — *Aug. 2019 - Sep. 2019*

- I learned about Tubè Awù, an Association which takes care of marine biodiversity, especially marine turtles in Central Africa Coast.
- I helped Tubè Awù to improve its visibility and its communication by creating a Website, a Facebook page and a YouTube channel.

BlackRock — *Budapest, Hungary*

Summer Intern — *Jun. 2019 - Aug. 2019*

- I read scientific publications on Natural Language Processing, then on Machine Learning Classification algorithms.
- I built,then proposed to my team a strong financial documents classifier, with an accuracy of 80%, based on a training set of over 4000 features.

Projects

I am implementing Trading Algorithms on Stocks (via IBKR API) and on Cryptos (via Binance API) — *Paris, France*

Personal Project — *Jan. 2020 - Ongoing*

Impact of the carbon price on credit portfolio's loss with stochastic collateral — *Paris, France*

Third PhD project | Université Paris Cité - Imperial College London — *June. 2023 - Aug. 2024*

Bouveret, Géraldine and Chassagneux, Jean-françois and Ibbou, Smail and Jacquier, Antoine and Sopgoui, Lionel, Propagation of a Carbon Price in Credit Portfolio Through Macroeconomic Factors *(July 25, 2023). Available at SSRN:4518564*

Modeling the impact of Climate transition on real estate — *Paris, France*

Second PhD project | Université Paris Cité - Imperial College London — *Jan. 2024 - Aug. 2024*

Sopgoui, Lionel, Modeling the impact of Climate transition on real estate *(August 01, 2024). Available at SSRN:4913777*

Propagation of a Carbon Price in Credit Portfolio Through Macroeconomic Factors — *Paris, France*

First PhD project | Université Paris Cité - Imperial College London — *Sept. 2021- July. 2023*

Sopgoui, Lionel, Impact of the carbon price on credit portfolio's loss with stochastic collateral *(August 12, 2024). Available at SSRN:4922966*

Skills

Key strengths	Team player, Proactive problem solver, Detail oriented, Curiosity, Efficient under pressure, Highly self-disciplined.
Programming skills	Python (advanced), VB.NET (advanced), C++(advanced), J2EE (advanced), Java, Matlab, MySQL, R , SAS
Software & Tools	Tensorflow 2, Keras, LexiFi Apropos, Python Notebook, Visual Studio, Eclipse, Matlab, R Studio, Windows, Linux
Languages	French (Native), English (Advanced), Russian (Basic)

Interests and Activities

Writer	Les Essais de Paukémil (a political philosophy book published in January 2021), and a few articles in Mathematics and Philosophy.
Curious reader	Economy (On the Principles of Political Economy and Taxation), Sociology (Capital & Ideology), History, Philosophy, etc
Regular sportsman	Regular runner, Basketball, Tennis player and supporter.
World Citizen	Travelled to Cameroon, France, Germany, Hungary, Switzerland, Luxembourg. Discovered the world through gastronomy.