Wall Street meets FinTech to measure the effects of financial regulation and reduce systemic risk in the global derivatives market

Background

- Established in Fall 2016 as a collaboration between the School of Professional Studies, Quaternion Risk Management, and Tullett Prebon Information.
- Currently, individual financial institutions and regulators conduct risk analysis using proprietary models and data protocols absent any agreed upon baseline, best practices, or public scrutiny.
- Without industry standards, shared benchmarks, or means to publicly validate results, the impact of current and proposed policy interventions on systemic risk in the financial system remains uncertain.
- FinTech Lab’s purpose is to explore research applications of open source software tools with a focus on quantifying and reducing systemic counterparty risk within global financial markets.

Mission Statement

Bringing large-scale open source risk models to the public domain will enable a standards-based approach that facilitates research and a greater understanding of the impact that policy levers have on the financial system. Our goals are to:

1. Increase the financial literacy of risk professionals, regulators, and students;
2. Broaden public access to industry-leading quantitative financial models;
3. Improve model performance through intense public scrutiny;
4. Reduce systemic risk by giving smaller, potentially less sophisticated institutions and governments the proper tools to calculate and comprehend their risk exposure;
5. Enable benchmarking and “what-if” scenario analysis on the expected impact of proposed regulation.

Open Source Risk Engine (ORE)

Industry’s first freely available risk analytics engine and visualization tool was released as open source software in October 2016, with origins in the QuantLib community.

ORE provides all necessary elements to price, risk-manage, and calculate regulatory capital metrics for a portfolio of derivatives, fixed income, and cash products.

Dashboard allows users to explore the outputs of ORE with drill-down functionality, trend analysis, and an early warning framework that helps identify risk limit breaches.

Further releases are scheduled semiannually – download the code at www.opensourcerisk.org