

## Call for Proposals – Fintech Use Cases

Course on Financial Technologies and Central Banking

### Introduction

In March 2018, CEMLA launched the Fintech Forum, with the objective of gathering knowledge and experience of the central banks of the region, international organizations and other relevant institutions, around the new financial technologies and their interaction with the monetary and financial stability mandates.

Within the framework of the Fintech Forum, CEMLA recently presented the initiative to provide capacity building events to test new technologies based on use cases. The objective of the use cases will be to set up a regional innovation hub enabling Latin American and Caribbean central banks to study and test new technologies for their own activities, including: financial stability monitoring, payment systems oversight, market infrastructures functioning, foreign reserves management, among others.

To undertake this initiative, CEMLA will host the Course on Financial Technologies and Central Banking in Mexico City, from 12 to 14 November, 2019.

In this context, **CEMLA calls for proposals of fintech use cases to be developed for this purpose.**

### Application

Proposals should be sent by central bank officials (hereinafter: technicians' teams) to be analyzed and selected by the academic team made of experts from University College London - UCL (hereinafter: academic team). CEMLA will assist the development of all selected use cases.

Once proposals are accepted, the academic team will accompany the technicians' teams to design the approach and methodologies to be used for the development of the use case. Preparatory work of the selected case is expected to occur once technicians' teams are informed of their application, and before the Course on Financial Technologies and Central Banking. Use cases will be studied and discussed during this event.

### Requirements for the proposals

The academic team welcomes different types of projects both addressing current regulatory and central banking functioning challenges, or exploring new challenges and datasets.

1. *Task-oriented projects*: Projects with a specific regulatory question / task technicians' team wishes to address. In this case, the academic team requests a list of expected indications related to<sup>1</sup>:
  - What is the goal of the exercise?

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<sup>1</sup> The academic team will help technicians finding possible ways to tackle the question using the available or provided data. Please note that in some cases the question may not be fully addressed with the available data.

- What are the quantities that will be measured?
  - What is the data you plan to use for the exercise?
2. *Exploration-oriented projects*: Projects in which there is no specific question, but for instance it is desirable to explore the potential use of certain available datasets<sup>2</sup>.
  3. *Available datasets*. For each accepted use case, technicians' teams must ensure that datasets are available, and at least a part of the original dataset, or a simulated one, must be also available for the academic team and for the training sessions of the Course on Financial Technologies and Central Banking, and for its custody in the Fintech Forum.
  4. *Topics*. The academic team has previous experience in the following topics and methodologies. Technicians may feel free to propose, however, another type of project.

<b>Topics</b>	<b>Methodologies</b>	<b>Use Cases (examples)</b>
Complex Systems Systemic Risk	Complex Networks Principal component analysis (PCA) Random matrix theory	Overlapping Portfolios Interbank lending Network filtering and validation
Big Data Analytics Machine Learning	Probabilistic Modelling	Risk Spillover
Artificial Intelligence	Neural Networks	P2P lending
Distributed Systems	Blockchain Technologies	Mortgage market

### Important dates

- **Proposals submission deadline**: 28 June, 2019
- **Notice of accepted proposals**: 26 July, 2019
- **Preparatory work of use cases**: August, September 2019
- **Proof period of use cases**: October, 2019
- **Presentation of use cases**: 12 to 14 November, 2019

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<sup>2</sup> The academic team will help technicians in characterizing the data and shaping possible questions that can be addressed with the data.

## Call for proposal form

Please fill the following form (up to 100 words per question will be enough) and send it to [smartinez@cemla.org](mailto:smartinez@cemla.org) and [mmorales@cemla.org](mailto:mmorales@cemla.org)

**1. What is the regulatory / operational context of the project?**

**2. What is the specific question you wish to address?**

**3. What data do you plan to use?**

*\* Please also provide a description of the format of the data*

**4. Please provide the contact details of the person responsible for this project at your central bank**

*Name and role of the person responsible:*

*Institution:*

*E-mail:*

*Telephone:*

\*Note: For all proposed use cases, it is necessary to specify how the data is structured. Data type: for each quantity in your data set, it is necessary to specify whether it is a continuous (double) variable, a discrete (categorical) variable, a Boolean variable, etc. Data format: indicate if it is .csv, .txt, Matlab workspace, etc. Note that data will have to be cleaned before the course (e.g. no missing values).