BANCO DE ESPAÑA
Eurosistema

CEMLA
CENTRO DE ESTUDIOS MONETARIOS LATINOAMERICANOS

Experts Meeting on Big Data applications and Data Analytics in central banking

Madrid, 1st, 2nd and 3rd of June 2022

Location: Digital-Webex format
Language: Spanish (simultaneous translation into English)
Time: Mexico City local time

Wednesday, 1st of June

08:45 – 09:00 **Opening**
CEMLA - Banco de España

Session 1: Applications of Data Science in statistical output and quality control

Chair: Nicolás Forteza (Banco de España)

09:00 – 09:25 **Invoice Text Classification and Aggregate Price Indices**

- *Dagoberto Quevedo y Matías Pizarro. Banco Central de Chile*

09:25 – 09:50 **Creation of Unit Value Indices for goods trading in Mexico**

- *Pedro Ortiz. Banco de México*

09:50 – 10:15 **Creation of a Data Base with sustainability indices (ESG) drawn from accountability report of non-financial companies**

- *Natividad Pérez. Banco de España*

10:15 - 10:45 **Questions and answers**

10:45 – 11:00 **Break**

Session 2: Applications of natural language processing techniques

Chair: Rodolfo Ostolaza (CEMLA)

11:00 – 11:25 **Predicting financial instability by using Twitter**

- *María Victoria Landaberry. Banco Central del Uruguay*

11:25 – 11:50 **Twitter-Based Economic Policy Uncertainty Index for Chile**

- *J. Sebastián Becerra. Banco Central de Chile*

11:50 – 12:15 **Use of unstructured data deriving from surveys for monetary policy analysis**

- *Andrea Barón. Banco Central del Uruguay*

12:15 - 12:45 **Questions and answers**

Thursday, 2nd of June

<u>Session 3: Economic forecast (*nowcast*) with Data Science techniques</u>

Chair: Sandra García Uribe (Banco de España)

09:00 – 09:25 **Nowcasting of economic dynamic in the Dominican Republic: approach based on large datasets and machine learning techniques**

- *Lisette J. Santana Jiménez (ponente) y Juan Salvador Quiñonez Wu. Banco Central de la República Dominicana*

09:25 – 09:50 **Sentiment indices estimated on the basis of regional economies report and associated with the relevant economic activity indices in Mexico: 2015-2020**

- *Leonardo Torre. Banco de México*

09:50 – 10:15 **Conflict, social unrest and policy uncertainty measures are useful for macroeconomic forecasting**

- *Marina Diakonova. Banco de España*

10:15 – 10:45 **Questions and answers**

10:45 – 11:00 **Break**

<u>Session 3 (follow-up): Economic review (*nowcast*) with Data Science techniques</u>

11:00 – 11:25 **Application of web scraping techniques for wage increases forecasting**

- *Mario Izquierdo. Banco de España*

11:25 – 11:50 **Monitoring of labor demand through job advertisements in web portals**

- *Katherine Jara y Benjamín Vásquez. Banco Central de Chile*

11:50 - 12:15 **Use of Central Balance Sheet Office data with machine learning models**

- *José Luis Herrera. Banco de España*

12:15 – 12:45 **Questions and answers**

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Friday, 3rd of June

Session 4: Other applications (RegTech, SupTech, geospatial datasets, cash)

Chair: Bruno Coutinho (Banco de España)

09:00 – 09:25 **Data Analytics applied to cash**

- *Beatriz García Bardera y Eduardo Kropnick. Banco de España*

09:25 – 09:50 **Climate change impact on economic activity in the Dominican Republic: a description based on geospatial datasets and machine learning models**

- *Lisette J. Santana Jiménez y Juan Salvador Quiñonez Wu. Banco Central de la República Dominicana.*

09:50 – 10:15 **Monitoring informal sector evolution from the space: a local approach 2013-2020**

- *Irving Llamosas. Banco de México*

10:15 – 10:40 **Bitcoin price drivers: An analysis of machine learning models and interpretability techniques**

- *José Manuel Carbó. Banco de España*

10:40 – 11:15 **Questions and answers**

11:15 – 11:30 **Clausure**