IRP 13: Individual Research Project

Topic

Predicting financial trends using text mining and NLP

Involvement

- IRP belongs to WP1 (Financial Data Space)
- WP Leader: BBU (Cluj)
- Two supervisors from secondments: RAI, and ECB

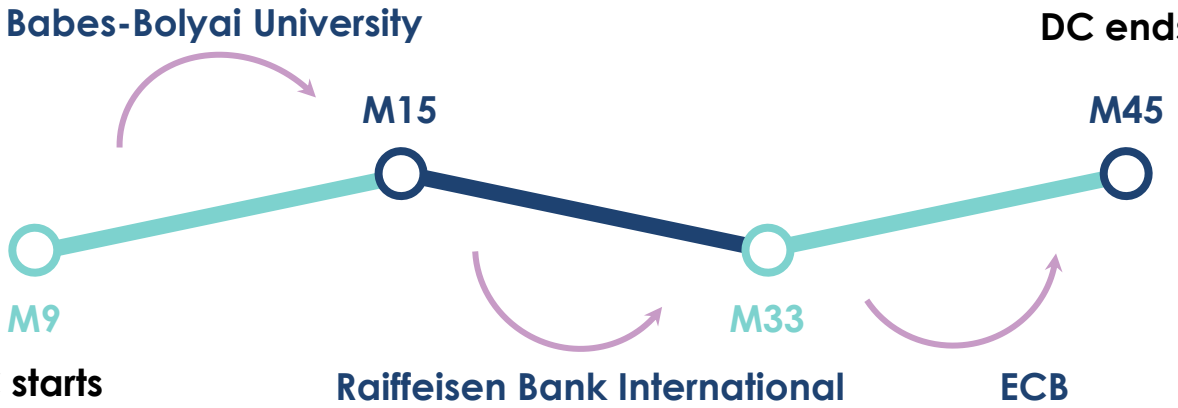
Objectives

The main goal of this doctoral candidate is **to enhance the application of AI-driven natural language processing** (NLP) techniques for forecasting credit risk and detecting financial fraud. This involves analyzing speech text from audit reports, social media, and various other sources. The focus is on predicting non-compliance by interpreting the sentiment in free-text answers from survey participants. Additionally, the project aims to **develop attitudinal indices** derived from free text and **integrate them into behavioral models**. These models, which also consider other qualitative and quantitative elements, will help in assessing the probability of system fraud and determining the risk level associated with accreditation processes.

Deliverables

Constructing **large databases that provide both qualitative and quantitative data** for use in the development of AI algorithms for both public and private. Using text mining and NLP, **evaluate the viability of various models** that could predict the risk of fraudulent behaviour in the financial sector. **Utilisation of these models** in both the public sector (public policy formulation) and the private sector (help banks and FinTechs in credit scoring).

IRP 13 TIMELINE



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