

IRP 17: Individual Research Project

Topic

Fair Algorithmic Design and Portfolio Optimization under Sustainability Concerns

Involvement

- IRP belongs to WP3 (Explainable and fair AI)
- WP Leader: BFH (Bern)
- Two supervisors from secondments: BIS, and ECB

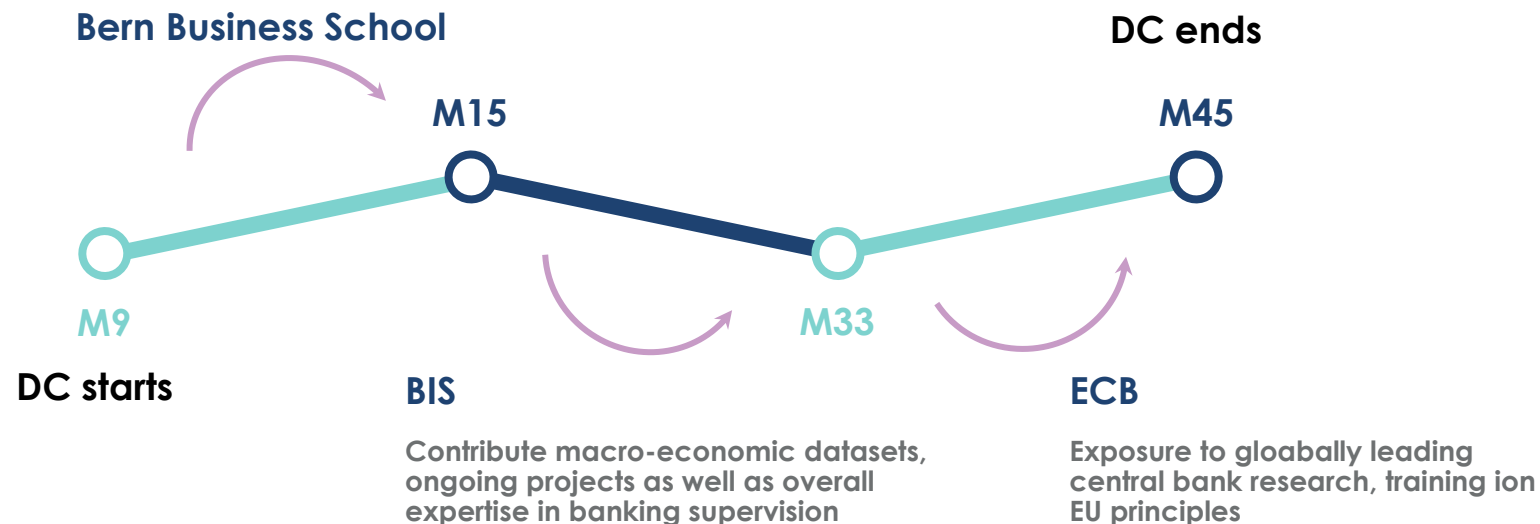
Objectives

The surge in interest in algorithmic fairness and sustainability is present in numerous fields of study, including finance and portfolio management in particular. This project's objective is to **create new portfolio optimization models** that address some of the difficulties associated with **incorporating fairness and sustainability into investment management**. The objective of the project is to increase understanding of the source and **methods for eliminating algorithmic bias** in finance in order to **generate sustainable outcomes**. The project will equip financial institutions with new sustainable and equitable algorithmic solutions to increase customer trust.

Deliverables

The primary anticipated outcome of the project is the **development of new algorithmic solutions for multiple areas of finance**, such as sustainable portfolio management. The project will equip financial institutions with new tools to **comply with EU sustainability regulations**. The subsequent anticipated outcome is the publication of a library containing all **of the designed algorithms in a public repository**. A significant emphasis will be placed on the dissemination of the anticipated results, which will be accomplished through the following channels: at least one publication in prestigious open-access journals and at least three presentations at prestigious conferences and open events. The final outcome of the project will be a comprehensive exchange of knowledge with project partners.

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