

# Applied Data Science in Finance 1

## MSc Finance & Big Data

### Assignment

January 4, 2024

## Purpose

The aim of this assignment is to examine, by means of an econometric model, the interaction between oil price and economic variables in France.

## Objectives

During the 3 hours and half given to complete this assignment, you should

- **Data Preprocessing:** Preprocess the data for analysis (Data are available on the platform *Course*)
- **Descriptive Analysis:** Perform a descriptive analysis to identify trends, seasonality, and patterns over the selected time period
- **Methodology:** Specify the steps for empirical modeling and hypothesis testing
- **Results and Discussion:** Present (preliminary) findings, including visualizations and statistical summaries
- **Conclusion:** Summarize key empirical findings and their significance. Highlight practical insights for investors

## Technical Aspects

This is an **individual** assignment and it is worth 20 marks total. A **minimum of 10 marks** is required to pass the assignment.

- The submission deadline is **17:30, Thursday, 4 January 2024**
- Submission should be done via the *Assignment* submission tool in *Courses*
- The submission package must include:
  1. A PDF or Word document containing your empirical analysis.
  2. A R script, which can be run as a separate file with your submission
- If any of the previously listed files is missing, the submission will be declared inadmissible and will not be evaluated
- All submissions may be checked for plagiarism. The School regards plagiarism as a form of academic misconduct, and has very strict rules regarding plagiarism. Where it can be established that individual students are responsible for the plagiarism, those students will be penalized

## Software

You must use R to complete this assignment (and submit your R script as part of the submission process). Comment your code.

**Good luck!!!**