



Dynamic Asset Pricing Theory



University of Tunis, Tunis Business School

Academic Year: 2022-2023

Instructors: Eymen Errais / Bechir Bouzid

Dynamic Asset Pricing Theory

Project

In a group of max 3 students, using the time series of Coinbase Bitcoin Price (Weekly average from 1-1-2021 through from 10-3-2023), you are expected to develop a model to :

1. Predict the weekly average of Coinbase Bitcoin price (in US\$) for the 6 weeks from April 3rd to May 12 and;
2. Model the volatility of its return over the same period.

The final deliverable is expected to be a power point of about 10-12 slides. This PPT should include, about:

- a. 1-2 slides of literature review of modeling Bitcoin price
- b. 2 slides to present your data and the model you are using
- c. 5 slides of an overview of the steps followed to do the data analysis, model building and all statistical diagnostics for the robustness of the model and forecast (i.e., graphs , R code and a brief interpretation of findings from each step). You are expected to develop and test 2 models (with 2-3 different parameter specifications (one with long and one with short process memory) and explain why you are adopting one of them .
- d. 2 slides to present final model, key results and conclusions

Deadline: Project PPT is expected to be submitted no later than **April 14th 2023**.