Empirical Finance

1. **The CAPM.**

    (a) State the main testable implications of the CAPM in the Sharpe (1964) and Lintner (1965) version.

    (b) Which ones among these testable implications extend to the case of multi-factor models, when the factors are returns.

    (c) Describe two different testing approaches to CAPM. Cite two published papers in which the two approaches are adopted. Briefly describe the results of these two papers relatively to CAPM.

2. **The Fama and French (1993) three-factor model.**

    (a) Briefly describe the background that brought to the development of the three-factor model by Fama and French (1993). In other words, talk about the CAPM anomalies.

    (b) Briefly describe the construction (i.e., the 'building blocks') of the three-factor model.

    (c) Summarize the empirical results obtained by Fama and French (1993) relatively to the three-factor model. What is the Gibbons, Ross and Shanken (1989) statistic? (do not derive it, just briefly describe it). Is the three factor model rejected, or not rejected, by the GRS in Fama and French's (1993) paper?

    (d) Do you think the three-factor model represents a "fishing licence", or is there an economic justification behind it? What are the possible economic intuitions behind the model?

    (e) Daniel and Titman (1997) criticize the idea that Fama and French's HML and SMB factor represent true risk factors. Briefly report Daniel and Titman's (1997) criticism to Fama and French (1993). What evidence do Daniel and Titman bring to reject the risk based interpretation.