SAPM- ECON F412/ FIN F311

Semester-1-2023-24

Assignment on Modern Portfolio Theory (20 marks)

Group size- 8/9 in each group

Submission Date: October 2, 2023

Problem Statement: For a set of securities, generate the efficient frontier and construct the tangency portfolio according to the Markowitz Portfolio Theory.

Objectives

1. Generating a domestic portfolio:
a) Choose n companies from n different industries/sectors (n=group size minus 2) and generate Markowitz's input list.
b) Trace the efficient frontier and find the tangency portfolio after including risk-free asset.
c) Compare the weights of the securities with CAPM weights. Comment on whether the active portfolio is overweight or underweight on any of these securities.
d) Compare the performance of the portfolios generated in (a) and (b) above with respect to the performance of the index (passive portfolio)

2. Generating an international portfolio:
(a) In addition to the n companies, add one international security/ index and one metal/ cryptocurrency/ foreign exchange to the portfolio and repeat steps 1(a) and 1(b).
(b) Compare the performance of this portfolio to the domestic portfolio and also to the index.

Additional information:

Download the financial data for these securities for a calendar year/ financial year.

You may use RBI/ EPWRF to obtain T-bill rates for risk-free rate.

**Deliverables:** Excel files, along with a Word document summarizing the findings and conclusions. Interpret the results. In case of handwritten document, scanned copy of the same can be submitted.

Note:

- 2 marks will be deducted if the name and IDs of students are missing.
- Late submission will entail a penalty of 2 marks
- Only 1 person from the group should submit the assignment on CMS.