Portfolio Investment and Management – Professional MBA

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Day 2: in-class practice session

Tasks:

- Open the data in the file Data_Day_2.xlsx, which contains monthly returns for several assets
- Focus on two assets: Mkt-RF e SMB. The first is the equity market excess return over the risk-free rate. The second is the return of a strategy that buys small stocks (S) and sells large stocks (B).
- Estimate mean, standard deviation, Sharpe ratio for the two assets and also report their correlation.
- Construct the mean-variance frontier using these two assets, and then plot it on a graph.
- What are – approximately – the weights of the i) minimum variance portfolio ii) max Sharpe ratio portfolio
- Would you invest in portfolios with a lower mean return than that offered by the minimum variance portfolio? Explain.
- Is the standard deviation of the minimum variance portfolio larger/smaller/equal to that of the individual assets Mkt-RF and SMB? Explain.
- What is the optimal share invested in the tangency (risky) portfolio? Hint: use Merton's formula.