

Assume you are considering investing \$100,000 in a mix of T-bills which earn a 1% return, Cola-Cola which has an expected return of 12% and a standard deviation of returns of 18%, and Flight Analytics Inc. which has an expected return of 27% and a standard deviation of returns of 39%. Assume that the correlation between Cola-Cola and Flight Analytics is  $-0.2$ .

- Sketch a graph of the possible combinations of expected return and standard deviation that you could achieve if you limit yourself to positions (long or short) in Cola-Cola and Flight Analytics.
- On the same graph you used to answer "a", identify the best portfolio that would allow you to earn 30%. What is the approximate mix of assets in this portfolio? *Approximately:  $X_{FA} = 1.2, X_{CC} = -0.2$*
- On the same graph you used to answer "a" and "b", identify the best portfolio that would allow you to earn 30% if you also allow some sort of position in T-bills.
- Assume that the risk-free rate rises to 10%, but that nothing else changes. Identify your new best portfolio and show how much better or worse off you are in "d" than "c".

*scale: points = ✓*

