## 3. Diversification, risk, and return

Conrad holds a $\$ 20,000$ portfolio that consists of four stocks. His investment in each stock, as well as each stock's beta, is shown below:

| Stock | Investment | Beta | Standard Deviation |
| :--- | :---: | :---: | :---: |
| Aramis Airlines | $\$ 3,000$ | 0.7 | $30 \%$ |
| Barrington Inc. | $\$ 8,000$ | 1.8 | $52 \%$ |
| Carrow \& Co. | $\$ 5,000$ | 1.3 | $38 \%$ |
| Dartan Enterprise | $\$ 4,000$ | 0.3 | $33 \%$ |

If all the stocks in the portfolio were equally weighted, which of these stocks would have the least amount of stand-alone risk?
warrington Inc.
arrow \& Co.
O Aramis Airlines
() Dartan Enterprise

If all the stocks in Conrad's portfolio were equally weighted, which of these stocks would contribute the least risk to the portfolio?

O Dartan Enterprise
arrow \& Co.

- Aramis Airlines
() Barrington Inc.

The risk-free rate is $5 \%$ and the market risk premium is $6 \%$. What is the portfolio's beta and required return?


Conrad is thinking about reallocating the funds in his portfolio. He plans to sell his stake in Partan Enterprises and put that money into Barrington Inc. Assuming the market is in equilibrium and Conrad changes his portfolio, how much will his portfolio's required return change?

| $\bigcirc 1.56 \%$ |  |
| :--- | :--- |
| $0.84 \%$ |  |
|  | $1.68 \%$ |
|  | $1.80 \%$ |
|  | $1.08 \%$ |

Suppose an analyst believes that the expected return on the portfolio is actually $14.80 \%$. Does this analyst think the portfolio is undervalued, overvalued, or fairly valued?

O Overvalued
O Fairly Valued
O Undervalued

