

MIT SLOAN SCHOOL OF MANAGEMENT

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E52-435

Finance Theory 15.415
Spring 1999

Assignment 6: Portfolio Choice

Due: April 13 (Tuesday)

Read the HBS Case, “Beta Management Company,” that is included the Readings Package. Table 1 of the case is available in Excel spreadsheet file (Assignment #6 data) from the web address: <http://web.mit.edu/15.415cd>. Please address the following questions in your write-up.

1. Calculate the variability (StD) of the stock returns of California REIT and Brown Group during the last 2 years. How variable are they compared with Vanguard Index 500 Trust. Which stock appears to be riskier?
2. Suppose that Beta’s portfolio position has been 99% of equity funds invested in the index fund (Vanguard) and 1% in individual stock. Calculate the variability of this using each stock in turn. How does each stock affect the variability of the the equity investment, and which stock is riskier? Compare this to your answer to the previous question, and explain your response.
3. Perform a regression of each stock’s monthly return on the Index returns to compute the “beta” for each stock. How does this relate to the situation described in the question above.
4. How might the expected return for each stock relate to its riskiness; that is, which stock should have a higher expected return?