In this web exercise, we will show how to determine the required rate of return

for a stock using the capital asset pricing model.

**1.** The formula for the capital asset pricing model is:

*Ki* \_ *RF* \_ *bi*(*KM* \_ *RF* ) **(21–7)**

*Ki* is the required rate of return that we are solving for; *RF* is the risk-free

rate; and we shall assume it is 4.6 percent; *bi* is the systematic risk of a stock

that we will estimate; (*KM* \_ *RF*) is the equity risk premium or the amount

the market is assumed to earn over the risk-free rate in the long term. We

will use 6.4 percent in this example.

**2.** Now we are in a position to estimate the beta for a company and compute

*Ki*, the required rate of return.

While Value Line, Bloomberg, and other financial services provide estimates

of beta, they are often very different. In this exercise, we are going to

have you eyeball a value for beta. Go to **finance.yahoo.com**.

**3.** Enter Microsoft (MSFT) in the “Enter System” box and click “Go.”

**4.** Along the left margin, click on “Basic Chart.”

**5.** Then on the “Range” line, click on “5y max.”

**6.** Then on the “Compare” line, select S&P and click “Compare.”

**7.** Eyeball the relative volatility of MSFT to the Standard and Poor Index (SPX)

and estimate a beta (such as 1.1 or 1.3) based on the relative volatility of the

stock versus the index.

**8.** Use this beta and the previously presented information on *RF* and (*KM* \_ *RF* )

to compute *Ki* .

**9.** Follow this procedure for:

*a.* Oracle (ORCL)

*b.* IBM (IBM)

*c.* Philip Morris (Mo)

**10.** What conclusion can you draw between the relationship of beta (*bi* ), a risk

measure, and the required rate of return (*Ki* )?