Scale
101 = 75
99 = 74
95 = 71
93 = 70
91 = 68
89 = 67
87 = 65
83 = 62
79 = 59
75 = 56
73 = 55
71 = 53
61 = 46
58 = 44
56 = 42

**Quiz A for 9:45 Class: ~~2/18/13~~ 7/24/13** Name Key

Note: Answer parts a, b, and c on the same graph. Be sure to clearly label which parts of your graph answer which parts of the question.

Assume you have $100,000 and are considering buying and/or short-selling shares of Kellogg (K) and Google (GOOG). The expected return on Kellogg is 6% and the standard deviation of returns on Kellogg is 10%. The expected return on Google is 18% and the standard deviation of returns on Google is 32%. You also plan to buy or short-sell 10-year Treasuries which earn 4% per year. The correlation between Kellogg and Google is – 0.3.

a. Assume you want to earn an expected return of 5%. Sketch a graph of the portfolios you could build if you do not buy or short-sell any Treasuries. Identify your specific portfolio.

b. On the same graph you used to answer part a, sketch a graph of the portfolios you could build if you buy or short sell Kellogg, Google, and Treasuries. Identify your portfolio if you still want to earn an expected return of 5%. Show how much better or worse off you are compared to your answer in part (a).

c. Assume the risk-free rate of return falls to 1% and that you still want to earn a 5% return. On the same graph you used to answer (a) and (b), show how much better or worse off you are as a result of the drop in the risk-free rate.

d. How would you construct the portfolio in part (a)…what would be your positions in Kellogg and Google?

e. How would you construct your portfolio in part (b)…what would be your positions in Kellogg, Google, and Treasuries?

f. Would you buy or sell/short-sell Treasuries as a result of the drop in interest rates in part (c)? How would your portfolio weights between Kellogg and Google change as a result of the drop in interest rates in part (c)?

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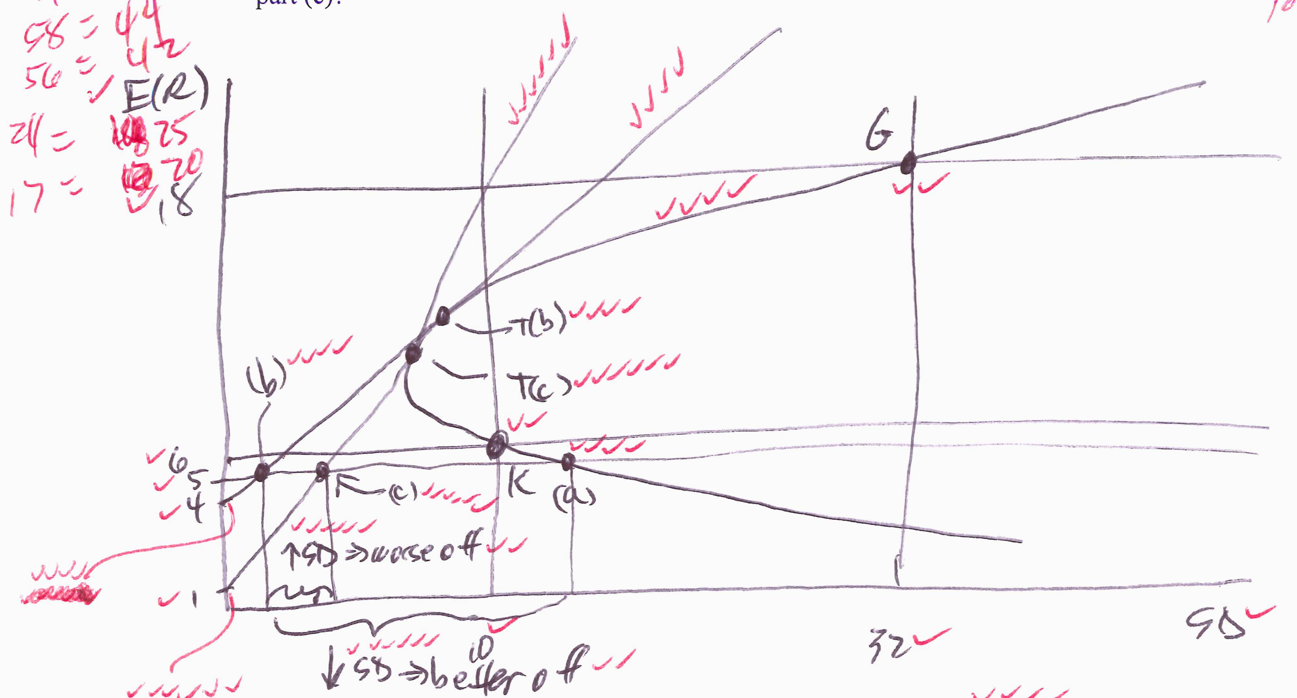


(d) short-sell Google + invest more than $100,000 (>100%) in Kellogg

(e) Mostly Treasuries, long position in both Google + Kellogg

(f) Sell some Treasuries & buy more of tangent portfolio
weight in Kellogg rises + Google falls.