

Quiz #2: 15.535 – Winter 2003

QUESTION 1: Cost of Capital (30 pts)

Krispy Kreme Donuts is a fast growing donut store chain that is seeking to topple *Dunkin Donuts* as the top snackfood store in the U.S. The following questions relate to an analysis of the risk and cost of capital of this company.

(a) *Krispy Kreme's* stock closed yesterday at price of \$30.10 per share. Analysts predict earnings per share for *Krispy Kreme* to be \$0.87 next year. Analysts also predict that earnings will grow for the foreseeable future at a rate of 30% per year. Using a growing perpetuity model, calculate the implied cost of equity capital for *Krispy Kreme*. (You don't need beta here!)

(b) Why might the “growing perpetuity model” used in part (a) overstate the cost of capital for *Krispy Kreme*? If you still used the implied cost of capital method, what changes to the model or different assumptions would you make to obtain a better estimate of *Krispy Kreme's* cost of capital?

Yahoo! Finance reports that the current *Beta* for *Krispy Kreme* is 1.39. However, you re-estimate the CAPM *Beta* using monthly stock returns for the past 12 months and find that the *Beta* is 0.81 with a standard error of 0.55.

(c) Give three reasons why your estimated *Beta* “appears” to be different than the one reported by Yahoo! Finance.

(d) The current yield on long-term government treasuries is 4.9%. What is the estimated cost of capital for *Krispy Kreme* using the CAPM using the estimated $Beta=0.81$? How confident are you of your estimate (You should reply on statistical numbers to comment on this result).

(e) Using the 3-factor model, you estimate *Krispy Kreme's* “Size Beta” to be 0.66 and its “Distress Beta” to be -1.22. What do these coefficients mean? Do they imply a higher or lower cost of capital compared to the CAPM?

QUESTION 2: Accounting Trading Strategies (20 pts)

(a) On March 1, 2003, ten companies in the retail sector announced their financial results for the latest fiscal year. The ROE (=EPS/Book Value per share) for the ten companies ranged from 3% to 21%. Explain how you would implement a trading strategy using the earnings announcement drift anomaly for these companies.

(b) You also ranked the ten retail companies based on their reported Accruals for the latest fiscal year. The ratio of Accruals-to-Total Assets was essentially the same for 8 companies. Of the two remaining companies, one company had very high accruals and the other company had very low accruals. What do you predict the stock returns will be for these two companies over the next 12 months?

(c) When do you expect the abnormal returns for these two companies to occur?

QUESTION 3: Contracting (20 pts)

(a) Describe what is meant by performance pricing in debt contracts.

Rackham Corporation raised \$23 million in early 2002 from private debt placement. In 2002, its debt-to-EBITDA ratio was 3.5. The debt contract stipulated that *Rackham* would have to pay an additional 30 basis points in quarterly interest payments for each additional 0.5 increase in its Debt-to-EBITDA ratio (For example, Debt-to-EBITDA greater than 4.0 would add 30 basis points, Debt-to-EBITDA greater than 4.5 would add 60 basis points, etc.). In early 2003, *Rackham* reported a Debt-to-EBITDA ratio of 3.99.

(b) Why might you be suspicious of potential accounting manipulation at *Rackham* in the current year?

(c) What are the advantages of the **Z-score** over simple financial ratios (such as the current ratio) in predicting the financial health of a firm? Give at least two major advantages.

QUESTION 4: Option Accounting (10 pts)

In his March 4, 2003 opinion editorial column in the Wall Street Journal, Mr T.J. Rodgers (President and CEO of Cypress Semiconductor) concludes that *“We need a pro forma accounting standards board, chartered to specify how to make clear, consistent corrections to the GAAP statements to remove the phony assets from our balance sheets and the unwarranted charges to earnings from our income statements. Alternatively, if FASB would listen to its customers, GAAP could be restored to its pre-2001 level of usefulness, with pooling of interests accounting restored and option accounting left as is.”*

(a) As the CEO of a high technology company whose stock price has dropped by 50% over the past year, what are Mr Rodger’s motives to restore the old M&A accounting standards? (Hint: Consider the implications of SFAS 142 with regard to goodwill.)

(c) Explain why Cypress Semiconductor reported (related to options):

- (i) high GAAP profits in 1999 and 2000 and had effective federal tax rate of only 14%,
- (ii) lower GAAP profits in 2001 and 2002 yet its effective tax rate increased to 27%.