

## Built Up Betas and the Cost of Equity

**Objective:** The objective of this assignment is to introduce students to how to calculate beta when a firm is either a private company or a publicly traded company that has been trading only a short time or only infrequently. A secondary goal is to show the impact that leverage (the use of debt) has on risk (beta).

**Company:** Kraft Foods

"The US's #1 food company, Kraft Foods, was spun off by Philip Morris (the world's #1 tobacco firm) in June 2001 in the US's second-largest IPO ever. Kraft Foods operates [Kraft Foods North America](#) and [Kraft Foods International](#). Kraft Foods North America's business includes the world's largest cheese brand (Kraft) and the planet's largest cookie and cracker business (Nabisco). Other brands include Oscar Mayer meats and Post cereals. Kraft Foods International sells Kraft products in 140 countries. Philip Morris retained 84% of Kraft Foods and almost all of the voting rights." (source: <http://www.hoovers.com/>) For the year ended December 31, 2001, the Company's five largest customers accounted for approximately 26% of its operating revenues while its 10 largest customers accounted for approximately 36% of its operating revenues. One customer, Wal-Mart Stores Inc., accounted for approximately 10.1% of operating revenues for 2001. In terms of sales by business segments, snacks account for 30% of sales with beverage, cheese, grocery and convenience meals comprising 19%, 18%, 17%, and 16% of sales respectively. Seven core brands including Kraft, Nabisco, Oscar Mayer, and Post, each generate in excess of \$1 billion in sales (40%).

Filing Date: March 16, 2001

IPO Date: June 13, 2001

Ticker: KFT

Exchange: NYSE

Proposed offer price: \$30-\$31

Actual offer price: \$31

First Day Open: \$31

First Day Close: \$31.25

Shares offered (mil.): 280

Offering amount (mil.): \$8,680

Post-offering shares (mil.): 1730

Underwriters: Credit Suisse First Boston, Salomon Smith Barney, Deutsche Banc Alex Brown, J.P. Morgan Securities, Morgan Stanley Dean Witter, UBS Warburg, BNP Paribas, HSBC Securities, Lehman Brothers, Blaylock & Partners, Dresdner Kleinwort Benson, Prudential Securities, Ramirez & Co., Sanford C. Bernstein, Utendahl Capital Partners LP.



**Competitors (Publicly Traded)<sup>1</sup>:** Campbell Soup (CPB), Con Agra (CGA), Dean Foods (DF), General Mills (GIS), H.J. Heinz (HNZ), Sara Lee (SLE), WM Wrigley (WWY).

**Risk Factors:** According to their prospectus dated 3/16/2001, risks of investing in Kraft Foods includes but is not limited to the fact that

- Large customers: Our 15 largest customers together accounted for approximately 40% of our pro forma revenue in 2000. As the retail grocery trade continues to consolidate and our retail customers grow larger and become more sophisticated, our retail customers demand lower pricing and increased promotional programs.
- Nabisco Acquisition: We have only recently acquired Nabisco and may not be able to successfully integrate its operations
- Corporate control: Because Philip Morris controls substantially all the voting power of our common stock, investors will not be able to affect the outcome of any shareholder vote. Because Philip Morris will control us, conflicts of interest between Philip Morris and us could be resolved in a manner unfavorable to us
- Investor perception: Investor perception of tobacco risk may depress the price of our shares.

Use of IPO proceeds: We will use the net proceeds from this offering to retire a portion of an \$11.0 billion 7.75% note payable to Philip Morris, due in December 2002, incurred in connection with the Nabisco acquisition.

**Assumptions:**

Item	Assumption
Marginal tax rate	40%.
Debt	Use most recent debt outstanding for each firm
Equity	Use market value of equity for each firm
Risk premium ( $R_M - r_F$ )	4.5%
NA	Set NA = 0 in the Financial Statements (Disclosure spreadsheet)

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<sup>1</sup>There is no recent 10Q information Groupe Danone (DA) and Unilever. As such, these firms are excluded from our analysis. We also omitted Hershey (HSY) since it was recently put up for sale.

**Assignment:** Download the KFT data from my website and use the downloaded spreadsheet to answer the following questions (all work should be done on this spreadsheet). Please highlight your answers in **yellow**.

1. Firm Betas (20 points): Calculate the betas for the comparable firms using either the Regression option under Data Analysis in the Excel menu or the slope command.
2. Average Levered Beta and Average Debt/Equity Ratio (20 points): Calculate the average levered beta ( $\beta_L$ ) for the comparable firms. Also calculate the corresponding average debt/equity ratio for the comparable firms. In calculating the debt for each comparable company, use the *most recent* figure given in the spreadsheet for each firm. Assume that the book value of debt equals the market value of debt. Use the market value of equity.
3. Average Unlevered Beta (20 points): Calculate the average unlevered beta ( $\beta_U$ ) given your answer in question 2 above.
4. Estimate the Beta for KFT (20 points): Calculate the levered beta for KFT.
5. Estimate the Cost of Equity for KFT (20 points): Calculate the cost of equity for KFT e.g., the discount rate that shareholders use to discount back the cashflows they receive (dividends, stock buybacks, etc.). Use the 10 year Treasury bond for the riskfree rate.

Please turn in a hard copy of your solutions together with your disk, which shows all work on your spreadsheet. Since this is an individual effort, any student caught cheating will be given an F on this assignment.