

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: PEETS COFFEE & TEA INC (<http://www.peets.com/>)

"Peet's Coffee & Tea enjoys the daily grind. With more than 50 specialty coffee stores in four states (mainly in Northern California), Peet's offers java lovers more than 30 types coffee and nearly 20 blends. Its teas run the spectrum from India black to herbal blends. The stores also offer items such as biscotti, mugs, and equipment. In addition, Peet's sells products through its Web site (<http://www.peets.com>) and through retail grocery stores (about 15% of sales). The company was founded in 1966 by Alfred Peet; Starbucks co-founders Gerald Baldwin and Gordon Bowker bought the company in 1984. In 1987 they sold Starbucks but retained the Peet's chain. Baldwin, now chairman of the company, owns 31% of Peet's." (source: <http://www.hoovers.com/>)



Filing Date: October 13, 2000

Proposed offer price: \$10.00 to \$14.00

Shares offered (mil.): 3.3

Offering amount (mil.): \$39.6

Post-offering shares (mil.): 8.0

Underwriters: W.R. Hambrecht & Company, Pacific Growth Equities

Competitors: BAB Holdings (INCU), Diedrich Coffee (DDRX), Einstein/Noah Bagel Corp (ENBXQ), Farmer Brothers (FARM), Green Mountain Coffee (GMCR), New World Coffee (NWCI), Panera Bread (PNRA), and Starbucks (SBUX),

Assumptions:

Item	Assumption
Marginal tax rate	38%
Capital Structure for Peet	See last page for capitalization of Peets
Debt	Use most recent debt outstanding for each firm
Equity	Use market value of equity for each firm
Risk premium ($R_M - r_F$)	Calculate this using data provided
NA	Set NA = 0 in the Financial Statements (Disclosure spreadsheet)

Assignment: Download the PEET data from my website and use the downloaded spreadsheet to answer the following questions (all work should be done on this spreadsheet):

1. Firm Betas (15 points): Calculate the betas for the comparable firms using either the Regression option under Data Analysis in the Excel menu or the linest command. In doing the regressions, the column labeled SPX = S&P500.

2. Average Levered Beta and Average Debt/Equity Ratio (15 points): Calculate the average levered beta (β_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 (β_U) given your answer in question 2 above.

4. Estimate the Beta for PEET (20 points): Calculate the levered beta for PEET, the private firm that has recently filed for an initial public offering (IPO), using their proforma numbers. (**Hint:** Ask yourself what is the correct numbers to use in PEET's proforma statement for debt and equity?)

5. Estimate the Market Risk Premium (20 points): Calculate the arithmetic average for stocks (S&P500), treasury bills, and treasury bonds over the periods from 1928-1999, 1962-1999, and 1990-1999. Next, calculate the geometric average for stocks (S&P500), treasury bills, and treasury bonds over the periods from 1928-1999, 1962-1999, and 1990-1999. Calculate the risk premium using treasury bills and also treasury bonds as the riskfree rate based on arithmetic averages. Do the same risk premium calculations based on geometric averages. (**Hint:** Use the Average function and Geomean function. Before using the Geomean function, you must first transform the given returns e.g., let the $R = 1 + \text{return}$ to avoid an error sign #NUM in taking the nth root of a negative product). Round your answers to 4 decimal places.

Year	Arithmetic Average			Risk Premium	
	Stocks	Tbills	Tbonds	Stocks - Tbills	Stocks - Tbonds
1928-1999					
1962-1999					
1990-1999					
Year	Geometric Average			Risk Premium	
	Stocks	Tbills	Tbonds	Stocks - Tbills	Stocks - Tbonds
1928-1999					
1962-1999					
1990-1999					

6. Estimate the Cost of Equity for PEET (10 points): Calculate the cost of equity for PEET e.g., the discount rate that shareholders use to discount back the cashflows they receive (dividends, stock buybacks, etc.). Use the current 10 year Treasury bond for the riskfree rate (located in Treasury rate worksheet). Use the risk premium that you calculated in question 5 based on the geometric average from 1928-1999 (this is highlighted in green in the preceding table).





CAPITALIZATION OF PEETS

The following table shows, as of July 2, 2000, our cash and cash equivalents, short term debt, and capitalization, both actual and as adjusted. The adjustment gives effect to:

- The conversion of all outstanding shares of our Series A preferred stock into an estimated 942,612 shares of common stock upon the closing of this offering;
- The sale of the shares of common stock by us in this offering at the assumed initial public offering price of \$12.00 per share, after deducting the estimated underwriting discounts and commissions and offering expenses, and the repayment of certain indebtedness with the proceeds from this offering; and
- The replacement of our old credit facility with a new term loan and revolving credit facility on September 1, 2000.

	July 2, 2000	
	Actual	Pro Forma
	-----	-----
	(in thousands, except share data)	
Cash and cash equivalents.....	\$ 1,216	\$16,813
	=====	=====
Short term debt:		
Short term borrowings.....	\$ 9,017	
Current maturities of long term debt.....	2,820	\$ 1,400
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Total short term debt.....	\$11,837	\$ 1,400
	=====	=====
Long term debt, excluding current maturities.....	\$ 6,066	\$ 5,600
Shareholders' equity:		
Preferred stock, no par value; authorized 10,000,000 shares; issued and outstanding 942,612 shares of Series A (assuming two-for-one stock split), liquidation preference of 4,828.....	\$ 4,537	
Common stock, no par value; authorized 50,000,000 shares; issued and outstanding: (assuming two-for-one stock split): actual, 4,515,124; pro forma, 7,957,736.....	8,069	\$39,106
Accumulated deficit.....	(3,790)	(3,790)
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Total shareholders' equity.....	8,816	35,316
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Total capitalization.....	\$14,882	\$40,916
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