

## Calculating Free Cash Flow to the Firm (FCFF)

**Objective:** The objective of this assignment is to apply the concept of Total Cash Flow that you learned in Chapter 10: Making Capital Investment Decisions (RWJ) to a real world company. This assignment should be done after you have finished the assigned homework problems for Chapter 10.

**Company:** Children's Place (Ticker: PLCE, <http://www.childrensplace.com/>). The clothing retailer operates about 560 clothing stores in 47 states, primarily in regional malls and outlet centers. The firm is increasing its store count by about 30% each year, with expansion into Canada. The Children's Place caters to kids from babies to 12 years old with most of its clothing produced by Asian manufacturers. The family of CEO Ezra Dabah owns about 30% of The Children's Place. The company offers interchangeable outfits and accessories in a variety of colors and patterns. The objective of its manufacturing strategy is to create a distinctive coordinated look that is fresh and youthful. The Company introduces a new merchandise line each month. Each line is built around a theme that includes coordinated apparel with matching accessories designed to encourage multiple item purchases and wardrobe building. According to their 10K, they had no long-term debt or capital leases outstanding as of February 2, 2002.



**Competitors:** The GAP (GPS), Gymboree (GYMB), and Toys R US (TOY)

**Assignment:** Download the PLCE data from my website and use the downloaded spreadsheet (PLCE2003) to answer the following questions (all work should be done on this spreadsheet):

1. Using the stores in the "Stores and Location" worksheet, use Excel to draw a map of the **total** number of Children's Place stores in each state. (Hint: Highlight the area that contains all of the states and the number of stores in each state in Excel and then click on the "globe" icon). If you do not see a globe icon on your toolbar, click on the Tools submenu → select Customize ... → click on **I**nsert in the Categories box and in the Commands box, select Map → drag the map icon to the toolbar above.



Although the firm operates in 47 states, where are most of the stores located in terms of region? (Hint: calculate the percentage of stores in each state and then aggregate to region). The intuition underlying this question involves whether the firm can sustain its future growth through domestic expansion in the United States.

2. Imputed Interest on Operating Leases (25 points): Calculate the imputed interest on operating leases for The Children's Place for the trailing twelve months (TTM) ending May 4, 2002. Assume for purposes of this assignment that May 4, 2002 is the date of our analysis. To calculate the imputed interest, first discount the operating lease expense (also known as rental expense) by using the pre-tax cost of debt as the discount rate. Since the rental payments after 2006 (the line item labeled "Thereafter") is the sum of all future lease commitments e.g.  $\text{Rent Thereafter} = \text{Rent}_{2007} + \text{Rent}_{2008} + \dots + \text{Rent}_{20xx}$ , we will use the average lease commitment over the first five years (from Year 2002 to Year 2006) as an approximate annuity in converting the final cumulated amount into annual amounts.



Example: Suppose that a firm has lease commitments of \$294 in Year 1, \$291 in Year 2, \$263 in Year 3, \$245 in Year 4, \$236 in Year 5 and a total of \$2,701 Thereafter. The average rent over this period is \$266  $((294+291+264+245+236)/5)$ . Dividing this average rent into the cumulative

amount of \$2,701 yields a 10 year annuity  $(2701/266 = 10.15$  or 10 years rounded to an integer). This annuity can be considered to have annual lease payments of \$270 a year for 10 years  $(\$2,701/10 = \$270)$  starting in year 6. Consequently, the annual lease payment is approximately \$270 for year 6 through year 15. Once you have calculated the present value of operating leases i.e., long-term debt due to operating leases, multiply this amount by the pre-tax cost of debt<sup>1</sup> (the discount rate) to obtain the imputed interest on operating leases.

Rationale for why we are doing this: Operating lease expenses are really financial expenses, although accounting standards allow these rental expenses to be treated as operating expenses. The debt arising from operating leases is treated as an "off-balance sheet" item. Thus, we will convert operating leases into debt and adjust the operating income accordingly, by adding back the imputed interest expense on this debt.

<sup>1</sup>Please refer to the assumptions page which is the last page of this handout.

3. Operating Cash Flow (35 points): Calculate the operating cash flow for the last twelve months (LTM) or trailing twelve months (TTM). *Intuition:* In the real world, analysts use the most current financial information on a firm. As such, they frequently add together information on the last twelve months (e.g. quarterly sales, expenses, and other “flow” information) if several quarters have past since a firm issued their annual report/10K.

4. Non-cash Working Capital and Change in non-cash Working Capital (15 points): Calculate the non-cash working capital for the current period (4/29/2001). Also calculate the NWC for the prior period (4/30/2000). Calculate the change in non-cash working capital by subtracting  $NWC_{4/29/01} - NWC_{4/30/00}$ . If a line item has an “NA”, set the “NA” equal to zero for purposes of our calculations. Note: In contrast to the income statement, items in the balance sheet are “stock” variables.



5. Free Cash Flow to the Firm (15 points): Calculate the TTM free cash flow to the firm using the results in questions 3 and 4 above and your calculations for capital expenditures for the trailing twelve months.

6. Adjusted Free Cash Flow to the Firm (10 points): Since the collapse of Enron and WorldCom, there has been an accounting proposal to force companies to deduct from earnings the value of stock options granted to executives and employees<sup>2</sup>. In fact, Business Week reported that “Bowing to investor demands for more transparent accounting, Coca-Cola Co. (KO ) on July 14 said it would start expensing options as of this year's fourth quarter. Pushing hard for the change was board member Warren E. Buffett, CEO of Berkshire Hathaway Inc. (BRK.A ), Coke's largest shareholder. The Washington Post Co., where Buffett is also a director, and Bank One quickly followed Coke's lead. And a handful of other blue chips, including Ford (F), H.J. Heinz (HNZ), and Gillette (G)--another Buffett company--said they are considering expensing options like they would for any other compensation cost.”

Using the data contained in the “Stock Options” worksheet of your workbook, calculate the Free Cash Flow to the Firm for the trailing twelve months (TTM) if the value of stock options granted to executives were deducted as an additional expense. Please note that the numbers in this worksheet are total numbers whereas numbers stated elsewhere in the workbook are reported in 000's of dollars. Assume that the level of compensation expense arising from stock options for TTM remains at the 2/2/2002 level. What was the impact of expensing stock options as an additional compensation expense i.e., what percent did it reduce FCFF by?

Please turn in a hard-copy of your work together with a disk containing your spreadsheets. No late work will be accepted. Please put your name on your disk. This is an individual effort. Any student caught cheating will be given an F on this project.

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<sup>2</sup>“Congress sidestepped the issue three times in five months. The Financial Accounting Standards Board (FASB), the group charged with setting accounting rules, didn't want to touch it, either. Even the board of the California Public Employees' Retirement System, the nation's largest public pension fund, shelved a staff recommendation calling on companies to expense options.” ([http://www.businessweek.com/magazine/content/02\\_30/b3793714.htm](http://www.businessweek.com/magazine/content/02_30/b3793714.htm))

**Assumptions:** Use in calculating the Free Cash Flow to the Firm

Line Item	Calculation/Assumption
Pre-tax Cost of Debt	As of July 2002, The Children's place had a synthetic bond rating of AAA based on its interest coverage ratio and also its Altman EM Score. As such, it's pre-tax cost of debt is $.0455 + .0071 = .0526$ or 5.26%
Imputed Interest on Operating Lease	Imputed Interest = PV of Operating Lease * Pre-tax Cost of Debt
Operating Cash Flow	EBITDA + Imputed Interest on Operating leases Adjusted EBITDA - Taxes Operating Cash Flow (OCF)
Non-cash Working Capital (NWC)	Non-cash Current Assets - Non-debt Current Liabilities <sup>3</sup> . Cash includes cash equivalents e.g., cash + marketable securities.
Change in Non-cash Working Capital ( $\Delta$ NWC)	NWC in period T – NWC in period T-1. $\Delta$ NWC = $NWC_T - NWC_{T-1}$ . Here T = 5/4/2002 and T-1 = 5/5/2001.
Capital Expenditures (CapEx)	CapEx in each period is the amount spent per quarter. This is a "flow" item just like items in the income statement.
Free Cash Flow to the Firm (basic definition)	Operating Cash Flow - $\Delta$ NWC – Capital Expenditures (please refer to pages 296-297 of your text.)

\*If a cell in the spreadsheet that you downloaded contains an NA (Not Applicable), assume that NA = zero (0) for purposes of this case study.

<sup>3</sup>This definition of working capital differs from that in your textbook. RWJ define net working capital total current assets – total current liabilities. The current portion of LT debt is excluded in our definition since we will consider it as part of the overall financing and thus we exclude it in NWC to avoid double counting. We also eliminate cash from our definition since we are estimating the effect of changes on cash flows. See Damodaran's Corporate Finance text for a fuller elaboration on this subject.