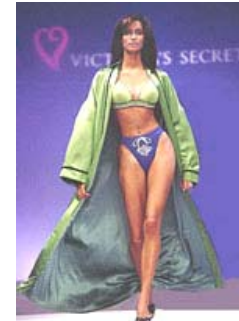


Percentage of Sales Forecasting Method

Objective: The objective of this assignment is to forecast the income statement and balance sheet and future financing requirements using an Excel spreadsheet. The percentage of sales method, which relates various (but not all) financial statement line items as a percentage of net sales, is the technique used.

Company: Limited Brands, Inc. (ticker: LTD) formerly known as The Limited¹, sells women's intimate apparel, personal care products and women's and men's apparel under three primary business segments: Victoria's Secret, Bath & Body Works and the Apparel segment. Merchandise is targeted to appeal to customers in various market segments that have distinctive consumer characteristics. It also owns Henri Bendel, Inc., which operates a single specialty store in New York City that features fashions for sophisticated, higher-income women and Mast Industries, Inc., a contract manufacturer and apparel importer which purchases merchandise on behalf of the Company and certain third parties. Limited Brands is focusing on its star player, Intimate Brands which accounts for more than half of the company's revenue, is known for its



[Victoria's Secret](#) (lingerie stores and catalogs), [Bath & Body Works](#) (personal care product stores), and White Barn Candle Co. (candles and fragrances).

The Company has followed a strategy that reflected a significant emphasis on the disciplined management of investments in inventory and real estate expansion. Additionally, over the last several years, the Company has focused its efforts on streamlining and repositioning its business portfolio by disposing of certain businesses and closing underperforming stores². Along with the proceeds from the disposition of non core assets, these actions

have put the Company in a strong financial position with over \$3 billion of cash at year end and with a focused portfolio of strong consumer brands.

The Company's operations are seasonal in nature and consist of two principal selling seasons: spring (the first and second quarters) and fall (the third and fourth quarters). The fourth quarter, including the holiday season, accounted for approximately one-third of net sales in 2003, 2002 and 2001. Accordingly, cash requirements are

¹In May 2002 the company changed its name to Limited Brands from The Limited.

²In 2001 the company sold its Lane Bryant chain to retail store operator Charming Shoppes. It also spun off its former subsidiaries, [Alliance Data Systems](#) (in which it retained about a 20% stake) and [Galyan's Trading Co.](#) (whose remaining 22% stake it sold off in 2004). In late 2002 it sold off its remaining stake in Lerner New York and in late 2003 sold its Structure label (which it had rebranded as Express Men's) to [Sears, Roebuck and Co.](#) In 2004 it sold off 1.6 million shares of the plus-size [United Retail Group Inc.](#) after a decade of investment. The company in 2004 also laid off 25% of its headquarters workforce.

highest in the third quarter as the Company's inventory builds in advance of the holiday season.

The Company considers the following to be relevant measures of liquidity and capital resources:

Liquidity and Capital Resources	2003	2002	2001
Debt to equity ratio (LT debt/shareholders equity)	12 %	11 %	9 %
Debt to capitalization ratio (LT debt/total capitalization)	11 %	10 %	8 %
Cash flow to capital investment	362 %	260 %	267 %

Competitors: Gap (GPS), Charming Shoppes (CHRS), The Dress Barn (DBRN).

Assignment: Download the spreadsheet for Limited Brands (LTD) and use the data in the workbook together with the assumptions at the end of this case to answer the following questions.

1. Sales Drivers (10 points): According to Limited Brands 10K,

“The Company's operating results are generally impacted by changes in the overall U.S. economy, and therefore, management monitors the retail environment using, among other things, certain key industry performance indicators such as the University of Michigan Consumer Sentiment Index (which measures consumers' views on the future course of the U.S. economy), the National Retail Traffic Index (which measures traffic levels in approximately 190 malls nationwide) and National Retail Sales (which reflects sales volumes of 5,000 businesses as measured by the U.S. Census Bureau). These indices provide insight into consumer spending patterns and shopping behavior in the current retail environment and assist management in assessing the Company's performance as well as the potential impact of industry trends on its future operating results.”

Use the information given in the “Sales & Econ Data (LTD)” worksheet to:

- a. Correlation matrix: Generate a correlation matrix which shows how the change in same store sales for Victoria's Secret, Express, Bath & Bodyworks, the Limited, and Limited Brands are correlated with the stock price of LTD, the change in stock price, the change in retail sales, the change in personal consumption expenditures (PCE) for clothing and shoes, the change in consumer confidence, the ISM index³, and the consumer confidence index. To generate the correlation matrix using Excel, go to **Tools** → **Data Analysis...** → **Correlation**. If the **Data Analysis** option is not shown under the Tools submenu, go to **Tools** → **Add-Ins...** select the **Analysis Toolpak** option and then click on the **OK** button. Discuss whether LTD's stock price co-varies with the change in same store sales of Limited Brand's primary businesses. Which appears to be more important in accounting for the

³The Institute for Supply Management (ISM) index, formerly known as the National Purchasing Managers Association Index, measures purchasing managers' expectations about the future. The ISM index is a composite diffusion index of national manufacturing conditions. Readings above 50 percent indicate an expanding factory sector.

change in same store sales, consumer confidence, the change in consumer confidence, or the expectation of purchasing managers? Please explain e.g. should the Limited Brand look at other economic indicators, if so, why?

- b. Change in Same Store Sales vs. Stock Price: Plot using the change in same store sales for Victoria Secret and Bath & Bodyworks against the stock price of Limited Brands using a Lines on 2 Axes Chart. This charting feature can be accessed by clicking on the chart icon and then clicking on the **Custom Types** tab and scrolling down to the **Lines on 2 Axes** chart option. Does the price of the stock move contemporaneously with the change in same store sales or does it tend to anticipate the change in sales? Please discuss why this is the case.
 - c. Change in Same Store Sales vs. Change in Consumer Confidence: Plot the change in Victoria Secret same store sales relative to the change in consumer confidence. Alternatively, plot the change in Victoria Secret same store sales against the consumer confidence index. Is management's assertion correct that this index provides insight into consumer spending patterns and shopping behavior in the current retail environment and assists management in assessing the Company's performance? Discuss which is a more important driver of the change in same store sales of Victoria Secret, the change in consumer confidence or the level of consumer confidence?
 - d. Change in Same Store Sales vs. Management's Expectations on the Economy: Plot the change in same store sales for Victoria Secret relative to the ISM index using a Lines on 2 Axes Chart. Compare this chart relative to the charts that you created in part c above and discuss which indicator is the most important driver of changes in same store sales for Victoria Secret.
 - e. Predicting the Change in Same Store Sales for Victoria Secret. Generate a prediction equation for the change in same store sales for Victoria Secret using regression analysis. To accomplish this go to **Tools** → **Data Analysis...** → **Regression**. Regress the change in same store sales for Victoria Secret (y-variable or dependent variable) against both the Consumer Confidence Index and the ISM Index (these are the x-variables or the independent variables). How well do these predictor variables account for the variation in the change in same store sales? Are both predictor variables significant from a statistical perspective? If economists expect the January 2005 consumer confidence index to be 103.25 and the ISM index to equal 58.2% what is the predicted change in same store sales for Victoria Secret?
2. Financial Statements for Peer Group (5 points): Using the **2. Peer FinStmt (LTD)** worksheet and the financial statements provided for the competitors of LTD, construct Peer Group aggregates for various line items in income statement and balance sheet by filling in the area **highlighted in yellow**.

3. Margin Analysis (5 points): Using the results that you obtained in the preceding question and the **3. Margin Analysis (LTD)** worksheet, perform a margin analysis e.g., calculate the appropriate ratios for the years given by filling in the area highlighted in yellow for Limited Brands and the Peer Group.

4. EVA and Decomposition of ROIC (5 points): Calculate the return on invested capital for LTD and the Peer Group using the **4. ROIC Margin Analysis (LTD)** worksheet. Discuss whether the management of Limited Brands is doing a good job in terms of efficiently and effectively managing their income statement and balance sheet relative to its peers. Since you may want to use this case in the interviewing process, make sure to write the way that analysts write. For a sample of their writing style, please visit Investext by logging on to our NYU Intranet at <http://www.nyu.edu/library/bobst/vbl/>.

5. Where Debt Information is Located in the 10K (5 points): Go to the PWC Edgarscan website (<http://edgarscan.pwcglobal.com/servlets/edgarscan>) and to access information on Limited Brands 10K dated 2004-01-31. Print out the page in the 10K that contains information on Long Term Debt for LTD. The information should match that in your “**Long Term Debt (LTD)**” worksheet.

6. Forecasting Financial Statements (70 points). Using the worksheet labeled “**6. Forecast of Fin Stmt (LTD)**”, please complete the following

- a. Assumption Box and Forecasting Diluted EPS (65 points): Fill in the numbers for 1/31/2004 and also the assumptions (see the last page of this handout for the forecasting assumptions). The area to be filled in is highlighted in yellow. Next, forecast the income statement and balance sheet for 1/31/2005 and 1/31/2006 using the assumptions given in conjunction with the numbers for 1/31/2004 and also the information contained in the “Long Term Debt (LTD)” worksheet. Also assume that Limited Brands will maintain their trailing twelve months (TTM) Debt to Total Capital ratio (assume that this is their target capital structure). After you have finished forecasting net income, calculate the diluted earnings per share (EPS) for LTD. How close are your diluted EPS estimates to those of Wall Street analysts using the “**Analysts Sales & EPS (LTD)**” worksheet? Is it within the Maximum and Minimum range of analysts’ forecasts?
- b. Sensitivity Analysis (5 points): Given your forecasted FY2004 and 2005 diluted EPS, use the Data Table command in Excel to perform EPS sensitivity analysis based on changes in the growth rate in sales. Please round your answer to two decimal places.

Please hand in a hardcopy of your answers together with a disk containing all of your calculations. This is an individual assignment. Anyone caught cheating will be given an automatic F on this project.

Assumptions Used in Forecasting Financial Statements:

Line Item	Assumption
Sales	Use the information in the "Limited Brands (LTD) 10K" worksheet in conjunction with the "Analysts Sales & EPS (LTD)" worksheet to calculate the forecasted growth in sales for 1/31/2005 and 1/31/2006 in the assumption box.
Cost of Goods Sold (COGs) (excluding Depreciation and Amortization)	Use the trailing twelve months (TTM) ratio that you calculate from the "Limited Brands (LTD) 10Q" worksheet. Please note that the COGs reported in the 10Q for LTD <i>includes</i> Depreciation and Amortization.
Selling, General & Admin (SGA)	Use the trailing twelve months (TTM) ratio that you calculate from the "Limited Brands (LTD) 10Q" worksheet.
Depreciation and Amortization	Use the trailing twelve months (TTM) ⁴ ratio that you calculate from the "Limited Brands (LTD) 10Q" worksheet.
Long term debt (all sources)	Use the trailing twelve months (TTM) number for Total debt. Total debt = Notes Payable + Current LT Debt + Current Portion of Capital Leases + Mortgages + Convertible Debt + LT Debt + LT Capital Leases.
Interest rate on existing debt	This is the Interest Expense (TTM)/ST & LT Debt (TTM).
Interest rate on new debt	Interest rate = Treasury bond + default spread; Use the yield on a 10 year Treasury Bond + default spread for Limited Brands based on LTD's bond rating from Moody's and S&P. This information is located in the "TreasuryRates 20050114" and "BondSpreads 20050114" worksheets. Since we assume that LTD's debt has a 10 year maturity, both the Treasury bond and the default spread are for 10 years. Bond spreads are quoted in basis points (100 basis points or bps =1%) over treasuries.
Interest rate on Cash and Marketable Securities	Assume that the interest rate is equal to the current yield on 3-month Treasuries located in the worksheet labeled "TreasuryRates 20050114".

⁴We use the trailing twelve month numbers (ttm) in the absence of any information that management provides to analysts in the conference call for the Limited Brands since the ttm reflects our best guess about the future.

Line Item	Assumption
Marginal tax rate	Use the Income Taxes/ Income Before Tax ratio for the trailing twelve months (TTM)
Debt Maturing in fiscal year 2004 and in fiscal year 2005 (\$dollar amount in 000s)	Read the information taken from the Limited Brands 2003 10K contained in the "Long Term Debt (LTD)" worksheet and take a look LTD's 10Q and 10K worksheets to figure out if LTD has any debt maturing in fiscal year 2004 and 2005.
Total Debt/(Total Debt + Shareholder Equity)	Use the ratio for the trailing twelve months (TTM). Assume that this is their target capital structure e.g. that they wish to maintain this ratio at the TTM level. If a firm is at its target ratio, then this assumes that the firm will use the same fixed proportion of debt to equity in financing all of their future projects. For example, if a firm's Debt to Total capital ratio is 2.5%, this means that for each dollar of equity that they use to finance their project, they will use \$.0256 of debt e.g. Debt = (.025/.975)*Equity. ⁵
Cash and marketable securities	Is the " Plug " e.g. the balance sheet item that "closes" the model. In other words, it makes Assets = Liabilities + Equity. To obtain the amount of cash and equivalents (the plug), since Total Assets = Total Liabilities + Equity, it follows that Cash & Marketable Securities = Total Liabilities + Equity - Current Assets (excluding cash & marketable securities) - Net Property, Plant & Equipment - Intangibles - Other Long Term Assets.
Current Assets (excluding cash and marketable securities)	Use the trailing twelve months (TTM) ratio that you calculate from the "Limited Brands (LTD) 10Q" worksheet.
Net Property, Plant & Equipment /Sales	Use the trailing twelve months (TTM) ratio that you calculate from the "Limited Brands (LTD) 10Q" worksheet. ⁶
Intangibles	Use the trailing twelve months (TTM) ratio that you calculate from the "Limited Brands (LTD) 10Q" and assume that it remains constant in forecast period.

⁵ Debt = .025*(Debt + Equity) = .025*Debt + .025*Equity ⇒ Debt - .025*Debt = .025*Equity
⇒ .975*Debt = .025*Equity ⇒ Debt = (.025/.975)*Equity = .0256*Equity

⁶In actual practice, there may be a lag between Net PP&E and Sales depending on the nature of the industry. One way to detect this is by looking at the ratio of contemporaneous and lagged Net PP&E in relation to Sales ratio.

Line Item	Assumption
Other Long Term Assets	Use the number for the trailing twelve months (TTM) and assume that it will remain constant at the TTM level in forecast period. Includes Investments & Advances to Subsidiaries, Other Non-Current Assets, Deferred Charges (that are Assets), as well as Deposits & Other Assets.
Current Liabilities	Use the trailing twelve months (TTM) ratio that you calculate from the "Limited Brands (LTD) 10Q" worksheet. Short term (ST) debt = Notes Payable + Current LT Debt + Current Portion of Capital Leases
Other Long Term Liabilities	Use the number for the trailing twelve months (TTM) and assume that it will remain constant at the TTM level in forecast period. Includes Deferred Charges (in Liabilities section), Other LT Liabilities, and Minority Interest (if any).
Dividend Payout Ratio	Dividend payout ratio = Dividends and other distributions/Net Income. Use the ratio for the trailing twelve months (TTM) and assume that this ratio remains constant at the TTM level in forecast period. What isn't paid out as dividends is added to retained earnings.

Note: If there is a NA in a particular cell of your data spreadsheet, set it equal to zero e.g., NA = 0.