



Navigating Accounting[®]

Debt and Leases: How Do I Use the Numbers?

Industry Comparisons Exercises Series 01

Capitalizing operating leases; converting inventories from LIFO to FIFO; and analyzing ratios based on the adjusted numbers across industries and time.



Search



This exercise requires you to search for information.

Compute



This exercise requires you to compute information.

Part 1 Question

- Fill in the blank boxes (with red borders) in the five worksheets in the Excel file for this exercise following the guidance below.

Part 1 Guidance

- If you have not already done so, go to NavigatingAccounting.com and click your way to the materials for this exercise:
 - Click “Analyzing Financial Statements Across Time and Industries”
 - Industry Comparisons Exercises: Series 01
 - Click “Exercise 7: Debt, Leases, and Ratio Analyses”
- Download the Excel file.
- ***This Excel file has five worksheets labelled Parts 1a through 1e (see the tabs at the bottom of the workbook). It has 180 red boxes to fill in. As described below, Parts 1c through 1e are based on numbers derived in Parts 1a and 1b. Thus, Parts 1a and 1b must be completed prior to starting Parts 1c through 1e. Accordingly, errors in Parts 1a and 1b will greatly distort the numbers and analyses thereafter.***
- This exercise presumes you have completed enough of the earlier exercises in the Industry Comparisons series to know:
 - How to locate companies’ financial reports and search for information therein.
 - How to convert LIFO-based financial-statement numbers to FIFO. To learn about these conversions, see Exercise 6 in this series.
 - Basic Excel skills discussed in *Using Excel 1: Basics*, which is included in the Videos section of Exercise 1 in this series.
- Here are some new things you will need to know for this exercise and where you can learn about them:
 - What operating and capital leases are, how to account for them, and how to capitalize operating leases onto balance sheets to correct for significant off-balance sheet financing (under simplifying assumptions maintained in this exercise). To learn these things, watch *Capitalizing Operating Leases*, which is included in the Videos section of the materials for this exercise.
 - How to link cells in one Excel worksheet to cells in another worksheet or to distant cells in the same worksheet using Excel’s “New Window” and “Arrange All” features. These skills are particularly useful for this exercise because the Excel file has large data templates in five related worksheets. To learn these skills, watch *Using Excel 2: Linking Cells Across Worksheets*, which is included in the Videos section of the materials for this exercise.
- Here is an overview of the five worksheets within the Excel file and how they are related:
 - **Part 1a:** This Excel worksheet determines the amount to be capitalized at each balance sheet date by computing the present value of the minimum future operating lease commitments on that date. There are 24 such computations: four year ends for six companies. There are three drug store companies (Walgreens, Rite Aid, and CVS Caremark) and three capital goods companies (Caterpillar, John Deere, and CNH Global). You will complete one of these computations: determine the present value of Walgreen’s minimum future operating lease commitments at the end of fiscal 2009. ***Be sure to read the directions and hints at the top of the Part 1a Excel worksheet.***

- **Part 1b:** This Excel worksheet converts Walgreen's balance sheets, income statements, and cash flow statements from LIFO to FIFO. It also capitalizes the operating leases onto the balance sheet at each balance sheet date. Resulting adjusted numbers are determined for four year-end balance sheets and for three annual income statements and cash flow statements. You will determine adjusted numbers for the balance sheet at the end of fiscal 2009 and for the fiscal 2009 income statement and cash flow statement.

The following instructions and assumptions simplify the adjustments considerably. Read them carefully along with the directions and hints at the top of the Part 1b Excel worksheet:

Converting LIFO to FIFO:

- With three exceptions described below, you are only responsible for pretax adjustments.
- The first exception is on the balance sheet: Three balance sheet line items are affected when converting LIFO to FIFO (along with subtotals and totals affected by these items). On the asset side of the balance sheet, inventories increase by the LIFO reserve on the balance sheet date. On the equities side of the balance sheet, we assume a deferred tax liability increases by the LIFO Reserve multiplied by a suitable tax rate and retained earnings increases by the LIFO reserve less the increase to the deferred tax liability. The adjustment to the deferred tax liability is already completed in the worksheet. You are responsible for the adjustments to inventories and retained earnings. The adjustment to the deferred tax liability estimates the taxes the company has deferred by using LIFO rather than FIFO as of the balance sheet date. Using the average tax rate over the four years greatly simplifies the computations. (To be more precise, we should have totalled the tax effects for all years determined by multiplying the tax rate for each year by the change in the LIFO reserve.)
- The second exception is on the income statement: Two income statement line items are affected when converting LIFO to FIFO (along with subtotals and totals affected by these items): cost of sales and tax expense. The tax expense adjustment is already completed on the worksheet. You are responsible for incorporating it into the adjusted net income number.
- The third exception is on the statement of cash flow statement: Three line items are affected when converting LIFO to FIFO: net income, the deferred taxes reconciliation adjustment, and the inventories reconciliation adjustment. The deferred taxes reconciliation adjustment is already converted to FIFO on the worksheet. You are responsible for converting net income and the inventories reconciliation adjustment to FIFO. Hint: Cash from operations is not affected by converting LIFO to FIFO and you already know how net income is affected from converting the income statement.

Capitalizing the Operating Leases:

- We have greatly simplified the process that should be followed when capitalizing the operating leases by ignoring income statement and cash flow statement effects, as discussed briefly in the accompanying video.
- As a result, we only make two balance-sheet adjustments: increase property, plant, and equipment and long-term debt (or capital lease obligations if this line item is reported) by the present value of the minimum operating lease commitments at the balance-sheet date (derived in Part 1a).

- It is possible to include estimates of the income statement and cash flow statement effects and related adjustments to retained earnings and accumulated depreciation on balance sheets. However, the process is rather complicated and its benefits are modest relative to those associated with the adjustments in the worksheet.
- **Part 1c:** This Excel worksheet compares balance sheets, income statements, and cash flow statements reported by the six companies in Part 1a to related statements with adjusted numbers from converting LIFO to FIFO and capitalizing operating leases. It also derives ratios using these reported and adjusted numbers. For each of the six companies, there are balance sheets for four fiscal year-ends and three annual income statements and cash flow statements. You will complete Walgreen's adjusted financial statements and ratios for fiscal 2009. **Be sure to read the directions and hints at the top of the Part 1c Excel worksheet.**
- **Part 1d:** This Excel worksheet derives common size income statements for the adjusted income statements in Part 1c. Common size income statements allow you to analyze the factors that caused net profit margins to change over time. Part 1d derives three years of adjusted common size income statements for each of the six companies in Part 1c. You will complete Walgreen's adjusted common size income statement for fiscal 2009. **Be sure to read the directions and hints at the top of the Part 1d Excel worksheet.**
- **Part 1e:** This Excel worksheet derives common size balance sheets for the adjusted balance sheets in Part 1c. Common size balance sheets allow you to analyze the factors that caused asset turnover to change over time. They also allow you to gain a deeper understanding of the consequences of financial leverage. Part 1e derives adjusted common size balance sheets for four year-ends for each of the six companies in Part 1c. You will complete Walgreen's adjusted common size balance sheet for the end of fiscal 2009. **Be sure to read the directions and hints at the top of the Part 1e Excel worksheet.**

Usage



This exercise helps you learn how accounting reports are used by investors, creditors, and other stakeholders.

Judgement



This exercise helps you learn how to use judgement.

Part 2 Question

- Assess how your analyses of the six companies' financial position and performance is improved by converting LIFO to FIFO and capitalizing operating leases; extend the analyses in previous exercises by identifying and analyzing ratios that explain changes in the DuPont Model factors over the fiscal 2007-2009 period; assess the validity of the assumptions behind the present value computations in Part 1a and discuss ways to improve the assumptions and gauge the sensitivity of your analyses to changing them.

Part 2 Guidance

- Download the Word file template for your Part 2 analyses, which is included in the Exercise Materials section for this exercise.
- **Limit your analyses to:**
 - Information in the Excel's five worksheets in Part 1.
 - Your understanding of the six companies' businesses and the ways they were likely impacted by the recent financial crisis. Your understanding of the companies' businesses should be informed by related excerpts from the Management Discussion and Analysis (MD&A) and can be informed by any other published sources you elect to use and cite.
 - Things you learned about the companies in previous exercises in the Industry Comparisons series and related class discussions.

- **Organize your response around the following:**

- (a) **Benefits of adjusting reported numbers—**

Required:

- (i) Identify ratios in the Part 1c worksheet that were significantly affected by converting LIFO to FIFO and/or capitalizing operating leases. In situations where these effects differed significantly for the two industries, briefly explain reasons for the differences in terms of business differences in the industries.
- (ii) Assess the extent to which your analyses of the related companies' financial position and performance improved by using ratios based on adjusted numbers (rather than reported numbers).

- (b) **Extending the DuPont Model analyses—**

Introduction: In this exercise our goal is to continue to develop a foundation for assessing a company's past performance and current financial position that will ultimately help you predict its future financial performance, which is necessary when assessing its value. Still, to focus these assessments and show how they relate to the primary objective of for-profit companies — maximizing shareholder value — we will briefly discuss a widely used model¹ for valuing common stock.

The model states that an investor's assessment of the current value of a company's stock should depend on four factors:

1. The current book value of the company's owners' equity, which is on the current balance sheet and thus does not need to be estimated.
2. The investor's assessment of the expected future growth in the book value of owners' equity for all future reporting periods.
3. The investor's assessment of the expected future returns on owners' equity (ROE) for all future periods.
4. The investor's assessment of the cost of equity capital for all future periods, which is the return the stock market would expect to earn on an equally risky alternative investment to the company's common stock. The higher the risk the market perceives, the higher the cost of equity capital.

Thus, the model states that investors only need to estimate three factors to value a company's common stock: future ROEs, the cost of capital, and the future growth in the book value of owners' equity. The model also has implications for managers: to maximize shareholder value, they must manage growth, profitability (ROE), and risk as effectively as possible.

Forecasting these factors is beyond the scope of this exercise. Here our primary focus is on learning as much as we can about factors that significantly affected past ROEs and on assessing the extent to which these factors are expected to persist in the future.

We have already seen in past exercises that the DuPont Model decomposes ROE into four factors pertaining to qualitatively different aspects of a company's performance: profitability measured by net profit margin, efficiency measured by asset turnover, financial leverage measured by the extent to which assets are financed by equity, and taxes. In this exercise, we extend this analysis by using common size income statements, common size balance sheets, and other ratios to further understand the factors causing changes in profit margins, asset turn-

¹ The residual income valuation model.

over, and financial leverage over time and the extent to which these factors are likely to persist in the future.

Required:

- (i) Identify companies in the Part 1c worksheet where net profit margins based on the adjusted numbers changed significantly over the three years. Use the common size income statements in the Part 1d worksheet to identify significant factors that caused these changes and assess the extent to which these factors are likely to persist in the future. (You may find that management discusses these factors in the MD&A or footnotes.)
 - (ii) Identify companies in the Part 1c worksheet where asset turnover or financial leverage based on the adjusted numbers changed significantly over the three years. Use the “additional ratios” near the bottom of the Part 1c worksheet and the common size balance sheets in the Part 1e worksheet to identify significant factors that likely contributed to these changes and assess the extent to which these factors are likely to persist in the future.
- (c) **Validity of Present Value Assumptions–**

Introduction:

Two assumptions affect the present value computations in Part 1a: the discount rate and the spreading of the “Thereafter” cash flows. This question focuses solely on the discount rate assumption.

The computations in Part 1a use the same 5% discount rate for all companies and years. We used a constant rate because we wanted to be sure everyone knew how to capitalize the operating leases, given a rate. However, the discount rate should reflect the risk that the lessor will not receive the expected benefits associated with the lease: the risk that the lessee will not make the scheduled payments or if the lessee fails to make these payments and must return the leased property to the lessor, the risk that the lessor can’t release the property at payments equal to or greater than the current lease. You will learn about factors that should be considered when determining discount rates if you take finance courses. One of these factors is the interest rate on comparable debt issued by the lessee: debt secured by similar property to the leased property with comparable seniority in the event of bankruptcy.

Required:

- (i) For which of the six companies in this exercise is the 5% discount rate most unrealistic in the sense that the rate should be higher to compensate for additional risk? Substantiate your choice by comparing the interest rates the six companies are charged on comparable secured debt (by analyzing their debt footnotes). If they do not issue secured debt, compare interest rates on unsecured debt.
- (ii) In your opinion, what rate would be more appropriate for the company you identified in (i)?
- (iii) Briefly discuss the extent to which the financial leverage and turnover ratios change when you recompute them using the rate you identified in question (ii). Would your conclusions about the company’s financial position and financial performance change significantly?