

Integrated Case

4-25

D'Leon Inc., Part II

Financial Statement Analysis

Part I of this case, presented in Chapter 3, discussed the situation of D'Leon Inc., a regional snack foods producer, after an expansion program. D'Leon had increased plant capacity and undertaken a major marketing campaign in an attempt to "go national." Thus far, sales have not been up to the forecasted level, costs have been higher than were projected, and a large loss occurred in 2008 rather than the expected profit. As a result, its managers, directors, and investors are concerned about the firm's survival.

Donna Jamison was brought in as assistant to Fred Campo, D'Leon's chairman, who had the task of getting the company back into a sound financial position. D'Leon's 2007 and 2008 balance sheets and income statements, together with projections for 2009, are given in Tables IC 4-1 and IC 4-2. In addition, Table IC 4-3 gives the company's 2007 and 2008 financial ratios, together with industry average data. The 2009 projected financial statement data represent Jamison's and Campo's best guess for 2009 results, assuming that some new financing is arranged to get the company "over the hump."

Jamison examined monthly data for 2008 (not given in the case), and she detected an improving pattern during the year. Monthly sales were rising, costs were falling, and large losses in the early months had turned to a small profit by December. Thus, the annual data look somewhat worse than final monthly data. Also, it appears to be taking longer for the advertising program to get the message out, for the new sales offices to generate sales, and for the new manufacturing facilities to operate efficiently. In other words, the lags between spending money and deriving

benefits were longer than D'Leon's managers had anticipated. For these reasons, Jamison and Campo see hope for the company—provided it can survive in the short run.

Jamison must prepare an analysis of where the company is now, what it must do to regain its financial health, and what actions should be taken. Your assignment is to help her answer the following questions. Provide clear explanations, not yes or no answers.

Table IC 4-1. Balance Sheets

	<u>2009E</u>	<u>2008</u>	<u>2007</u>
<i>Assets</i>			
Cash	\$ 85,632	\$ 7,282	\$ 57,600
Accounts receivable	878,000	632,160	351,200
Inventories	<u>1,716,480</u>	<u>1,287,360</u>	<u>715,200</u>
Total current assets	\$2,680,112	\$1,926,802	\$1,124,000
Gross fixed assets	1,197,160	1,202,950	491,000
Less accumulated depreciation	<u>380,120</u>	<u>263,160</u>	<u>146,200</u>
Net fixed assets	\$ 817,040	\$ 939,790	\$ 344,800
Total assets	<u>\$3,497,152</u>	<u>\$2,866,592</u>	<u>\$1,468,800</u>
<i>Liabilities and Equity</i>			
Accounts payable	\$ 436,800	\$ 524,160	\$ 145,600
Notes payable	300,000	636,808	200,000
Accruals	<u>408,000</u>	<u>489,600</u>	<u>136,000</u>
Total current liabilities	\$1,144,800	\$1,650,568	\$ 481,600
Long-term debt	400,000	723,432	323,432
Common stock	1,721,176	460,000	460,000
Retained earnings	<u>231,176</u>	<u>32,592</u>	<u>203,768</u>
Total equity	\$1,952,352	\$ 492,592	\$ 663,768
Total liabilities and equity	<u>\$3,497,152</u>	<u>\$2,866,592</u>	<u>\$1,468,800</u>

Note: "E" indicates estimated. The 2009 data are forecasts.

Table IC 4-2. Income Statements

	<u>2009E</u>	<u>2008</u>	<u>2007</u>
Sales	\$7,035,600	\$6,034,000	\$3,432,000
Cost of goods sold	5,875,992	5,528,000	2,864,000
Other expenses	<u>550,000</u>	<u>519,988</u>	<u>358,672</u>
Total operating costs excluding depreciation	<u>\$6,425,992</u>	<u>\$6,047,988</u>	<u>\$3,222,672</u>
EBITDA	\$ 609,608	(\$ 13,988)	\$ 209,328
Depreciation	<u>116,960</u>	<u>116,960</u>	<u>18,900</u>
EBIT	\$ 492,648	(\$ 130,948)	\$ 190,428
Interest expense	<u>70,008</u>	<u>136,012</u>	<u>43,828</u>
EBT	\$ 422,640	(\$ 266,960)	\$ 146,600
Taxes (40%)	<u>169,056</u>	<u>(106,784)^a</u>	<u>58,640</u>
Net income	<u>\$ 253,584</u>	<u>(\$ 160,176)</u>	<u>\$ 87,960</u>
EPS	\$ 1.014	(\$ 1.602)	\$ 0.880
DPS	\$ 0.220	\$ 0.110	\$ 0.220
Book value per share	\$ 7.809	\$ 4.926	\$ 6.638
Stock price	\$ 12.17	\$ 2.25	\$ 8.50
Shares outstanding	250,000	100,000	100,000
Tax rate	40.00%	40.00%	40.00%
Lease payments	40,000	40,000	40,000
Sinking fund payments	0	0	0

Note: "E" indicates estimated. The 2009 data are forecasts.

^a The firm had sufficient taxable income in 2006 and 2007 to obtain its full tax refund in 2008.

Table IC 4-3. Ratio Analysis

	<u>2009E</u>	<u>2008</u>	<u>2007</u>	<u>Industry Average</u>
Current		1.2x	2.3x	2.7x
Quick		0.4x	0.8x	1.0x
Inventory turnover		4.7x	4.8x	6.1x
Days sales outstanding (DSO) ^a		38.2	37.4	32.0
Fixed assets turnover		6.4x	10.0x	7.0x
Total assets turnover		2.1x	2.3x	2.6x
Debt ratio		82.8%	54.8%	50.0%
TIE		-1.0x	4.3x	6.2x
Operating margin		-2.2%	5.6%	7.3%
Profit margin		-2.7%	2.6%	3.5%
Basic earning power		-4.6%	13.0%	19.1%
ROA		-5.6%	6.0%	9.1%
ROE		-32.5%	13.3%	18.2%
Price/earnings		-1.4x	9.7x	14.2x
Market/book		0.5x	1.3x	2.4x
Book value per share		\$4.93	\$6.64	n.a.

Note: "E indicates estimated. The 2009 data are forecasts.

^a Calculation is based on a 365-day year.

A. Why are ratios useful? What are the five major categories of ratios?

Answer: [S4-1 through S4-5 provide background information. Then, show S4-6 and S4-7 here.] Ratios are used by managers to help improve the firm's performance, by lenders to help evaluate the firm's likelihood of repaying debts, and by stockholders to help forecast future earnings and dividends. The five major categories of ratios are: liquidity, asset management, debt management, profitability, and market value.

B. Calculate D'Leon's 2009 current and quick ratios based on the projected balance sheet and income statement data. What can

you say about the company's liquidity positions in 2007, 2008, and as projected for 2009? We often think of ratios as being useful (1) to managers to help run the business, (2) to bankers for credit analysis, and (3) to stockholders for stock valuation. Would these different types of analysts have an equal interest in these liquidity ratios?

Answer: [Show S4-8 and S4-9 here.]

$$\begin{aligned}\text{Current ratio}_{09} &= \text{Current assets}/\text{Current liabilities} \\ &= \$2,680,112/\$1,144,800 = 2.34\times.\end{aligned}$$

$$\begin{aligned}\text{Quick ratio}_{09} &= (\text{Current assets} - \text{Inventories})/\text{Current liabilities} \\ &= (\$2,680,112 - \$1,716,480)/\$1,144,800 \\ &= \$963,632/\$1,144,800 = 0.842\times.\end{aligned}$$

The company's current and quick ratios are identical to its 2007 current and quick ratios, and they have improved from their 2008 levels. However, both the current and quick ratios are well below the industry averages.

C. Calculate the 2009 inventory turnover, days sales outstanding (DSO), fixed assets turnover, and total assets turnover. How does D'Leon's utilization of assets stack up against other firms in its industry?

Answer: [Show S4-10 through S4-15 here.]

$$\begin{aligned}\text{Inventory turnover}_{09} &= \text{Sales}/\text{Inventory} \\ &= \$7,035,600/\$1,716,480 = 4.10\times.\end{aligned}$$

$$\begin{aligned}\text{DSO}_{09} &= \text{Receivables}/(\text{Sales}/365) \\ &= \$878,000/(\$7,035,600/365) = 45.55 \text{ days}.\end{aligned}$$

$$\begin{aligned}\text{Fixed assets turnover}_{09} &= \text{Sales}/\text{Net fixed assets} \\ &= \$7,035,600/\$817,040 = 8.61\times.\end{aligned}$$

$$\begin{aligned}\text{Total assets turnover}_{09} &= \text{Sales/Total assets} \\ &= \$7,035,600/\$3,497,152 = 2.01\times.\end{aligned}$$

The firm's inventory turnover and total assets turnover ratios have been steadily declining, while its days sales outstanding has been steadily increasing (which is bad). However, the firm's 2009 total assets turnover ratio is only slightly below the 2008 level. The firm's fixed assets turnover ratio is below its 2007 level; however, it is above the 2008 level.

The firm's inventory turnover and total assets turnover are below the industry average. The firm's days sales outstanding ratio is above the industry average (which is bad); however, the firm's fixed assets turnover is above the industry average. (This might be due to the fact that D'Leon is an older firm than most other firms in the industry, in which case, its fixed assets are older and thus have been depreciated more, or that D'Leon's cost of fixed assets were lower than most firms in the industry.)

D. Calculate the 2009 debt and times-interest-earned ratios. How does D'Leon compare with the industry with respect to financial leverage? What can you conclude from these ratios?

Answer: [Show S4-16 and S4-17 here.]

$$\begin{aligned}\text{Debt ratio}_{09} &= \text{Total debt/Total assets} \\ &= (\$1,144,800 + \$400,000)/\$3,497,152 = 44.17\%.\end{aligned}$$

$$\text{TIE}_{09} = \text{EBIT/Interest} = \$492,648/\$70,008 = 7.04\times.$$

The firm's debt ratio is much improved from 2008 and 2007, and it is below the industry average (which is good). The firm's TIE ratio is also greatly improved from its 2007 and 2008 levels and is above the industry average.

E. Calculate the 2009 operating margin, profit margin, basic earning power (BEP), return on assets (ROA), and return on equity (ROE). What can you say about these ratios?

Answer: [Show S4-18 through S4-24 here.]

$$\begin{aligned}\text{Operating margin}_{09} &= \text{EBIT/Sales} \\ &= \$492,648/\$7,035,600 = 7.00\%.\end{aligned}$$

$$\begin{aligned}\text{Profit margin}_{09} &= \text{Net income/Sales} \\ &= \$253,584/\$7,035,600 = 3.60\%.\end{aligned}$$

$$\begin{aligned}\text{Basic earning power}_{09} &= \text{EBIT/Total assets} \\ &= \$492,648/\$3,497,152 = 14.09\%.\end{aligned}$$

$$\begin{aligned}\text{ROA}_{09} &= \text{Net income/Total assets} \\ &= \$253,584/\$3,497,152 = 7.25\%.\end{aligned}$$

$$\begin{aligned}\text{ROE}_{09} &= \text{Net income/Common equity} \\ &= \$253,584/\$1,952,352 = 12.99\% \approx 13.0\%.\end{aligned}$$

The firm's operating margin is above 2007 and 2008 levels but slightly below the industry average. The firm's profit margin is above 2007 and 2008 levels and slightly above the industry average. While the firm's basic earning power and ROA ratios are above 2007 and 2008 levels, they are still below the industry averages. The firm's ROE ratio is greatly improved over its 2008 level; however, it is slightly below its 2007 level and still well below the industry average.

F. Calculate the 2009 price/earnings ratio and market/book ratio. Do these ratios indicate that investors are expected to have a high or low opinion of the company?

Answer: [Show S4-25 and S4-26 here.]

$$\begin{aligned}\text{EPS}_{09} &= \text{Net income/Shares outstanding} \\ &= \$253,584/250,000 = \$1.0143.\end{aligned}$$

$$\begin{aligned}\text{Price/Earnings}_{09} &= \text{Price per share/Earnings per share} \\ &= \$12.17/\$1.0143 = 12.0\times.\end{aligned}$$

Check: $\text{Price} = \text{EPS} \times \text{P/E} = \$1.0143(12.0) = \$12.17.$

$$\begin{aligned}\text{BVPS}_{09} &= \text{Common equity/Shares outstanding} \\ &= \$1,952,352/250,000 = \$7.81.\end{aligned}$$

$$\begin{aligned}\text{Market/Book}_{09} &= \text{Market price per share/Book value per share} \\ &= \$12.17/\$7.81 = 1.56\times.\end{aligned}$$

The P/E and M/B ratios are above the 2008 and 2007 levels but below the industry average.

G. Use the DuPont equation to provide a summary and overview of D'Leon's financial condition as projected for 2009. What are the firm's major strengths and weaknesses?

Answer: [Show S4-27 and S4-28 here.]

$$\begin{aligned}\text{DuPont equation} &= \text{Profit margin} \times \text{Total assets turnover} \times \text{Equity multiplier} \\ &= 3.60\% \times 2.01 \times 1/(1 - 0.4417) \\ &= 12.96\% \approx 13.0\%.\end{aligned}$$

Strengths: The firm's fixed assets turnover was above the industry average. However, if the firm's assets were older than other firms in its industry this could possibly account for the higher ratio. (D'Leon's fixed assets would have a lower historical cost and would have been depreciated for longer periods of time.) The firm's profit margin is slightly above the industry average, and its debt ratio has been greatly reduced, so it is now below the

industry average (which is good). This improved profit margin could indicate that the firm has kept operating costs down as well as interest expense (as shown from the reduced debt ratio).

Interest expense is lower because the firm's debt ratio has been reduced, which has improved the firm's TIE ratio so that it is now above the industry average.

Weaknesses: The firm's current asset ratio is low; most of its asset management ratios are poor (except fixed assets turnover); most of its profitability ratios are low (except profit margin); and its market value ratios are low.

H. Use the following simplified 2009 balance sheet to show, in general terms, how an improvement in the DSO would tend to affect the stock price. For example, if the company could improve its collection procedures and thereby lower its DSO from 45.6 days to the 32-day industry average without affecting sales, how would that change "ripple through" the financial statements (shown in thousands below) and influence the stock price?

Accounts receivable	\$ 878	Debt	\$1,545
Other current assets	1,802		
Net fixed assets	<u>817</u>	Equity	<u>1,952</u>
Total assets	<u>\$3,497</u>	Liabilities plus equity	<u>\$3,497</u>

Answer: [Show S4-29 through S4-32 here.]

$$\text{Sales per day} = \$7,035,600/365 = \$19,275.62.$$

$$\begin{aligned}\text{Accounts receivable under new policy} &= \$19,275.62 \times 32 \text{ days} \\ &= \$616,820.\end{aligned}$$

$$\begin{aligned}\text{Freed cash} &= \text{old A/R} - \text{new A/R} \\ &= \$878,000 - \$616,820 = \$261,180.\end{aligned}$$

Reducing accounts receivable and its DSO will initially show up as an addition to cash. The freed up cash could be used to repurchase stock, expand the business, and reduce debt. All of these actions would likely improve the stock price.

I. Does it appear that inventories could be adjusted? If so, how should that adjustment affect D'Leon's profitability and stock price?

Answer: The inventory turnover ratio is low. It appears that the firm either has excessive inventory or some of the inventory is obsolete. If inventory were reduced, this would improve the current asset ratio, the inventory and total assets turnover, and reduce the debt ratio even further, which should improve the firm's stock price and profitability.

J. In 2008, the company paid its suppliers much later than the due dates; also it was not maintaining financial ratios at levels called for in its bank loan agreements. Therefore, suppliers could cut the company off, and its bank could refuse to renew the loan when it comes due in 90 days. On the basis of data provided, would you, as a credit manager, continue to sell to D'Leon on credit? (You could demand cash on delivery—that is, sell on terms of COD—but that might cause D'Leon to stop buying from your company.) Similarly, if you were the bank loan officer, would you recommend renewing the loan or demand its repayment? Would your actions be influenced if in early 2009 D'Leon showed you its 2009 projections along with proof that it was going to raise more than \$1.2 million of new equity?

Answer: While the firm's ratios based on the projected data appear to be improving, the firm's current asset ratio is low. As a credit manager, you would not continue to extend credit to the firm under its current arrangement, particularly if my firm didn't have any excess capacity. Terms of COD might be a little harsh and might push the firm into bankruptcy. Likewise, if the bank demanded repayment this could also force the firm into bankruptcy.

Creditors' actions would definitely be influenced by an infusion of equity capital in the firm. This would lower the firm's debt ratio and creditors' risk exposure.

K. In hindsight, what should D'Leon have done back in 2007?

Answer: Before the company took on its expansion plans, it should have done an extensive ratio analysis to determine the effects of its proposed expansion on the firm's operations. Had the ratio

analysis been conducted, the company would have “gotten its house in order” before undergoing the expansion.

L. What are some potential problems and limitations of financial ratio analysis?

Answer: [Show S4-33 and S4-34 here.] Some potential problems are listed below:

- 1. Comparison with industry averages is difficult if the firm operates many different divisions.**
- 2. Different operating and accounting practices distort comparisons.**
- 3. Sometimes hard to tell if a ratio is “good” or “bad.”**
- 4. Difficult to tell whether company is, on balance, in a strong or weak position.**
- 5. “Average” performance is not necessarily good.**
- 6. Seasonal factors can distort ratios.**
- 7. “Window dressing” techniques can make statements and ratios look better.**
- 8. Inflation has badly distorted many firms’ balance sheets, so a ratio analysis for one firm over time, or a comparative analysis of firms of different ages, must be interpreted with judgment.**

M. What are some qualitative factors analysts should consider when evaluating a company's likely future financial performance?

Answer: [Show S4-35 here.] Top analysts recognize that certain qualitative factors must be considered when evaluating a company. These factors, as summarized by the American Association of Individual Investors (AAII), are as follows:

- 1. Are the company's revenues tied to one key customer?**
- 2. To what extent are the company's revenues tied to one key product?**
- 3. To what extent does the company rely on a single supplier?**
- 4. What percentage of the company's business is generated overseas?**
- 5. How much competition does the firm face?**
- 6. Is it necessary for the company to continually invest in research and development?**
- 7. Are changes in laws and regulations likely to have important implications for the firm?**