**Financial Statement Analysis**

**Learning Problems**

**Answer Keys**

### Financial Statement Analysis at ABC

1.

#### Liquidity

#### Asset Management

Operating cycle =

#### Long-term Debt-Paying Ability

#### Profitability

#### Market Ratios

Retention ratio = 1.00 - .41 = .59

**Appropriate Current Ratio**

1.

Anston 30 – 30 + 10 = 10 days

Rempel 90 – 60 + 30 = 60 days

Daschle 30 – 90 + 0 = -60 days

2.

Anston

Inventory turnover in days

30 = X = 247 inventory

Accounts receivable turnover in days

10 = X = 137 receivables

Accounts payable turnover in days

30 = X = 247 payables

Appropriate current ratio

= = 1.96

Rempel

Inventory turnover in days

90 = X = 986 inventory

Accounts receivable turnover in days

30 = X = 658 receivables

Accounts payable turnover in days

60 = X = 658 payables

Appropriate current ratio

= = 2.73

Daschle

Inventory turnover in days

30 = X = 411 inventory

Accounts payable turnover in days

90 = X = 1,233 payables

Appropriate current ratio

= = .50

**Note:** The turnover ratios are calculated using either the sales or cost of sales to determine the appropriate amount of inventory, accounts receivable, and accounts payable for each company. These amounts are then combined with their desired cash balances to determine the current ratio.

3. The appropriate current ratio will vary by industry depending on its net operating cycle. As the net operating cycle rises so does the appropriate current ratio so a benchmark of 1.5 is not always correct. The benchmark will be below 1.0 if the current assets are small (i.e. high inventory turnover with cash sales only) and accounts payable are large (i.e. generous credit terms from suppliers). Walmart and other major retailers have current ratios of less than 1.0 as they possess these qualities.

**Window Dressing**

1.

Before

Current Ratio = = 1.41

After

Current Ratio = = 1.53

(100,000) (1 - .05) = 95,000

The current ratio is now above the bank loan requirement of 1.50.

**Note:**  If the initial current ratio is above 1.0 and the numerator and denominator are reduced by the same amount, mathematically the ratio will rise. In this case, accounts receivables are sold early, and the proceeds are used to pay down a current liability probably a line of credit. A factor’s fee of 5% is charged which makes “window dressing” costly.

**Year-End Versus Monthly Averages**

1.

Yearly

Inventory turnover in days = = 81.11 days

Accounts receivable turnover in days = = 4.56 days

Total: 85.67 days

Monthly

Inventory turnover in days = = 99.28 days

Accounts receivable turnover in days = = 48.36 days

Total: 147.64 days

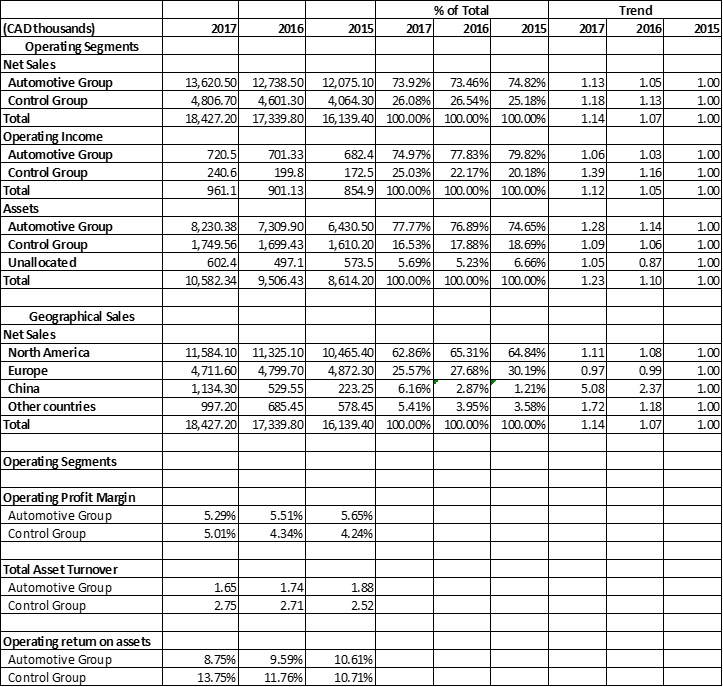
2.

Average monthly data generally provides a more accurate measure of how much inventory or accounts receivable is needed to generate a given amount of sales or cost of sales. This is especially true when the company is seasonal which means it experiences major swings in its inventory and accounts receivable over the year.

If sales are increasing rapidly at a high growth company, then inventory and accounts receivable turnover ratios based on year-end numbers are likely more current and thus more accurate.

**Segmented Reporting at Radisson Electric**

1.



Operating Segments

* Automotive Group is much larger than the Control Group accounting for approximately 74% of all company sales.
* Both the Automotive and Control Groups are growing at a rapid pace but the Control Group is growing faster.
* Both the operating profit margin and total asset turnover are increasing in the Control Group and declining in the Automotive Group.
* Overall, the operating return on assets is increasing in the Control Group and falling in the Automotive Group.

Geographical Sales

* Overall, company sales are growing quickly.
* North American sales are growing at a slower rate than the overall company but still at a strong rate.
* European sales are declining.
* Chinese sales are growing very rapidly as are sales in other smaller markets.

In the future, Radisson is advised to focus on developing the Control Group further along with sales in China and other smaller markets.

**5-Way Analysis of ROE at Camden**

2011

**ROA**

2012

**ROA**

1. ROE is down by 2.9% from 2011 to 2012. Why?

* The operating profit margin is unchanged, so ROE is unaffected. The gross profit margin rose substantially due to higher prices, but higher operating expenses including those related to the capital improvement program resulted in no real change to the operating profit margin.
* The lower interest burden ratio caused ROE to fall. More debt was used to finance the capital improvement program raising interest costs. Interest rates may also have risen due to an upturn in the economy causing higher interest rates or greater risk due to excessive borrowing.
* The tax burden ratio did not change due to a stable tax rate, so ROE is unaffected.
* Total asset turnover fell dramatically causing ROE to fall. Higher prices reduced total sales and the capital improvement program increased total assets.
* The higher debt ratio caused the ROE to rise. A greater proportion of debt was used to finance the capital improvement program.

All benefits from higher prices appear to have been lost due to lower turnover and higher costs related to the capital improvement program. The company’s ROA fell by approximately 39% from 11.3% to 6.9%. ROE only fell by 15.1% from 19.2% to 16.3% due to greater borrowing, but the company’s debt ratio now exceeds the industry average placing the company at risk of going bankrupt. Hopefully, sales are just lagging the capital improvement program expenditures and the company will experience significant sales increases in the coming months. Given the large decrease in turnover and the ROA, the company should contemplate returning prices to their previous level and more carefully controlling future capital improvement program costs to reverse their declining profitability.

**5-Way Analysis of ROE at Excel**

1. 2018

**ROA**

2019

**ROA**

1. ROE is up by 7.8% from 2018 to 2019. Why?

* The operating profit margin increased causing the ROE to rise. Both costs of sales and selling and administration as a percentage of sales fell because of the program to increase manufacturing efficiency and lower corporate overhead.
* The higher interest burden ratio caused ROE to rise. There was no change in the borrowing level, so interest rates fell due to an improved credit rating.
* The tax burden ratio increased as the tax rate fell from 25.0% to 21.0% so ROE rose.
* Total asset turnover increased causing ROE to rise. Sales grew at a faster pace than total assets because of the efficiency program.
* The debt ratio was stable, so ROE was unaffected.

The program to boost efficiency and lower overhead was a great success. It resulted in a higher operating profit margin and faster total assets turnover. This combined with lower interest and tax rates lead to a doubling of the ROE. The program should be continued, but it is important to know which components contributed the most to the increase in ROE. In the analysis below, we changed a factor at a time and found the operating profit margin and interest burden ratio were the most important components.

|  |  |  |  |
| --- | --- | --- | --- |
| **ROE Component** | **ROE Before Change** | **ROE After Change** | **Incremental Change** |
| Total asset turnover | 7.9% | 8.1% | .2% |
| Operating profit margin | 8.1% | 12.5% | 4.4% |
| Interest burden ratio | 12.5% | 14.8% | 2.3% |
| Tax burden ratio | 14.8% | 15.6% | 0.8% |
| Debt ratio | 15.6% | 15.7% | .1% |
| Total | | | 7.8% |

**Basic and Diluted Earnings Per Common Share**

1.

Basic EPS = = 1.83

(1,750,000 – 300,000 (4/12) + 100,000 (9/12)) (2) = 3,450,000

**Note:** The company had 1,750,000 shares outstanding at the end of the year, and this included 300,000 shares that were issued on May 1. These shares were not outstanding for the first four months of the year so 4/12th are removed. Also, the 100,000 repurchased on September 30 were not included in the 1,750,000 outstanding shares at year-end but they were outstanding for the first 9 months of the year so 9/12th are added to the 1,750,000 outstanding shares at year-end. Stock splits are always recognized effective the beginning of the year, so the number of shares at year-end is doubled. These adjustments result in a weighted-average number of shares.

Diluted EPS = = 1.63

**Note:** Diluted EPS is a “what-if” analysis that assumes potentially convertible securities are converted to see the effect on EPS. The preferred shares have not been converted, but if they were effective at the beginning of the year, the company would not have had to pay preferred dividends (i.e. 5.50 × 90,000), and the number of shares would rise by the number of preferred shares (i.e. 90,000) times the conversion ratio (i.e. 8). Diluted EPS is lower than basic EPS, so it is disclosed to shareholders.

**Preparing a Cash Flow Statement**

1.

|  |  |  |  |
| --- | --- | --- | --- |
| **Victoria Company**  **Cash Flow Statement**  **For Year Ending December 31, 2019 (CAD thousands)** | | | |
| Operating Activities | | | |
| Net income |  | 153,000 |  |
| Add: Depreciation | 70,000 |  |  |
| Increase in interest payable | 1,000 |  |  |
| Decrease in prepaid expenses | 2,000 |  |  |
| Increase in accounts payable | 10,000 |  |  |
| Increase in income taxes payable | 27,000 |  |  |
| Loss on sale of fixed assets | 2,000 | 112,000 |  |
| Less: Increase in accounts receivable | 8,000 |  |  |
| Increase in inventory | 15,000 |  |  |
| Decrease in accrued liabilities | 3,000 |  |  |
| Gain on sale of investments | 4,000 | 30,000 | 235,000 |
| Investing Activities | | | |
| Sale of plant and equipment1 |  | 53,000 |  |
| Sale of investments2 |  | 14,000 |  |
| Purchase of land |  | (45,000) |  |
| Purchase of plant and equipment3 |  | (180,000) | (158,000) |
| Financing Activities | | | |
| Decrease in line of credit |  | (10,000) |  |
| Retirement of bonds |  | (100,000) |  |
| Issuance of common shares4 |  | 150,000 |  |
| Payment of cash dividends5 |  | (111,000) | (71,000) |
| Increase in cash and cash equivalents |  |  | 6,000 |
| Cash and cash equivalents, January 1, 2019 |  |  | 39,000 |
| Cash and cash equivalents, December 31, 2019 |  |  | 45,000 |

1 (110,000) (.5) - 2,000 = 53,000

2 (25,000 – 15,000) + 4,000 = 14,000

3 (500,000 + 110,000) - 430,000 = 180,000

4 (400,000 – 250,000) = 150,000

5 (91,000 + 153,000) – 133,000 = 111,000

3.

|  |  |  |
| --- | --- | --- |
| Operating Activities |  |  |
| Cash receipts from customers1 | 2,922,000 |  |
| Cash receipts from interest | 2,000 |  |
| Cash paid to suppliers2 | (1,735,000) |  |
| Cash paid to employees3 | (480,000) |  |
| Cash paid for other operating expenses4 | (446,000) |  |
| Cash paid for interest5 | (5,000) |  |
| Cash paid for income taxes6 | (23,000) | 235,000 |

1 (104,000 + 2,930,000 – 112,000)

2 (1,730,000 + (130,000 – 115,000) – (75,000 – 65,000))

3 (430,000 + 50,000)

4 (250,000 + 195,000 - (5,000 – 3,000) + (12,000 – 9,000))

5 (6,000 – (1,000 – 0))

6 (50,000 – (42,000 – 15,000))

### Analyzing a Cash Flow Statement

Accounts receivable have increased significantly contributing to the large reduction in cash. Possible causes include giving more generous credit terms to customers to increase sales or poor accounts receivable management practices.

Inventories have increased significantly contributing to the large reduction in cash. Possible causes include poor inventory management practices, inefficient production methods, and stockpiling parts to guard against industry shortages or an expected strike.

Major acquisitions of land, buildings, and equipment were made to support the company’s rapid growth contributing to the reduction in cash.

Large cash dividends should have been reinvested in the company to finance growth. The owner’s priority should be the financial health of her business.

Bank loans were negotiated to fund the buildup of net working capital and capital acquisitions but this raised the company’s debt ratio to a dangerously high level.

Common shares were issued to fund the buildup of net working capital and capital acquisitions. Continued common share issuances may result in Willobey losing control of the business.

**Cash Flow-Based Financial Ratios**

1.

.00

2.

* Cash flow from operations is harder to manipulate
* Some feel CFO provides a better measure of a company’s financial performance as CFO can be used to pay a company’s bills unlike net income which is an accounting figure determined by arbitrary accounting rules (i.e. “cash is king”)

1. CFO can be increased by:

* Classifying interest paid as a financing activity instead of as an operating activity since it is a cost of raising funds
* Capitalizing any interest paid during the construction of new fixed assets so the cost appears as an investing activity
* Classifying interest or dividends received as an operating activity instead of an investment activity even though it is investment income
* Never classify dividends paid as an operating activity
* “Stretching” accounts payable to defer operating cash outflows
* Reduce inventory purchases to defer operating cash outflows
* Collect accounts receivable early by factoring or offering expensive early payment discounts to increase operating cash inflows

**Financial Statement Analysis at Durable**

1. **Liquidity**

The current ratio is decreasing and well below the industry average. The company is violating its current ratio requirement so its loans could be called.

The cash ratio is decreasing and well below the industry average. The company is nearly bankrupt. Cash declined due to the capital expansion, increased debt servicing costs, inventory buildup, higher costs of sales and operating expenses, lower prices, and generous sales discounts.

**Asset Management**

Inventory turnover in days is increasing and much higher than the industry average due to greater stock requirements in the new stores and the extra time required to build a new customer base.

Customers are being given generous credit terms (i.e. 2/10, net 30) to build demand in the new stores and speed up cash collections. Industry competitors are not offering these expensive terms. The company is lax in collecting within 10 days.

Accounts payable are being stretched beyond the 30 days due to the cash shortage. The company is likely being charged interest on the overdue amounts and could be put on COD or CBD. They are not taking advantage of early payment discounts like their competitors which is very expensive.

The net operating cycle is decreasing and below the industry average. The large increase in inventories has been countered by offering expensive early payment discounts on the accounts receivable and stretching accounts payable. These actions are expensive and could affect the company’s credit rating.

Fixed assets turnover is decreasing and is well below the industry average due to the capital expansion.

**Long-term Debt Paying Ability**

The debt ratio is increasing and is well above the industry average due to the capital expansion. The company is violating the times interest earned requirement so its loan may be called.

**Profitability**

The gross profit margin is decreasing and is well below the industry average due to lower prices, higher costs, and more generous credit terms used to promote sales in the new stores.

The operating profit margin is decreasing and below the industry average due to higher advertising and depreciation costs related to the capital expansion.

The net profit margin is decreasing, well below the industry average, and almost zero down due to higher interest costs. The income tax rate is unchanged.

ROA is decreasing and well below the industry average due to much lower profitability and total asset turnover. ROE is currently less than the ROA so it does not pay to borrow.

**Financial Statement Analysis at Acme Furniture**

1. **Liquidity**

The current and cash ratios are both decreasing and are well below the industry average. Cash is dangerously low, the company is near bankrupt, and a recession began in 2018 so conditions are likely to get worse. Cash has declined due to major capital purchases, a buildup in inventory and accounts receivable, rising costs of sales and operating costs, higher debt servicing costs, and the U.S. expansion. The company is violating its current ratio requirement so its loans may be called.

**Asset Management**

Inventory turnover in days is improving slightly but it is still well above the industry average. The new company must work harder at improving its production methods by introducing measures such as better employee training, more factory automation, and just-in-time inventory and production. The recession likely contributed to the inventory buildup as demand may have slowed before raw materials purchases and finished goods production were adjusted downward.

Accounts receivable turnover in days has increased to above the industry average due to the recession and poor collection practices. Credit terms are net 60.

Accounts payable turnover in days is well above the industry average in each of the last three years, and it is getting worse. The company is missing valuable purchase discounts, maybe put on COD or CBD by its suppliers for taking longer than 60 days to pay and could have its credit rating reduced. It is “stretching” its payables to deal with the cash shortage.

Both fixed asset and total asset turnover are decreasing and well below the industry average. Too many fixed assets were purchased in the last two years and inventory and accounts receivable are not being well managed.

**Long-term Debt Paying Ability**

The fixed charge coverage ratio is decreasing and is now well below the industry average. This is due to much lower operating profits and higher interest and principal payments.

The long-term debt to total capitalization ratio is increasing and well above the industry average. This is due to increased borrowing to fund capital purchases and a large decrease in net income causing slower growth in shareholders’ equity.

The company is violating its fixed burden coverage and long-term debt to total capitalization ratio requirements and may have its loans called.

**Profitability**

The gross profit margin has decreased over the last three years and is now well below the industry average. This is due to higher labour and material costs, poor production methods, and the recession in 2018.

The operating profit margin is falling especially and is well below the industry average. This is due to higher administrative costs and expenses which have gotten worse with the U.S. expansion.

A falling net profit margin and total asset turnover caused the ROA to decline and it is much lower than the industry average. ROA is higher than the ROE in 2018 which means the company is not currently earning more than its cost of borrowing.

**Financial Statement Analysis at Lamar**

1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ratio Table** | | | | |
|  | **Lamar Swimwear** | | | **Industry Averages** |
|  | **2017** | **2018** | **2019** | **2019** |
| **Liquidity** |  |  |  |  |
| Current ratio | 1.78 | 1.54 | 1.15 | 2.02 |
| Quick ratio | 0.87 | 0.85 | 0.68 | 1.26 |
| Cash ratio | 0.20 | 0.17 | 0.10 | 0.60 |
| **Asset Management** |  |  |  |  |
| Accounts receivable turnover in days | — | 52.20 | 60.25 | 39.00 |
| Inventory turnover in days | — | 86.16 | 76.76 | 71.00 |
| Accounts payable turnover in days | — | 89.50 | 113.54 | 60.00 |
| Cash conversion cycle | — | 48.86 | 23.47 | 50.00 |
| Fixed assets turnover | — | 2.12 | 1.74 | 1.75 |
| Total assets turnover | — | 1.22 | 1.09 | 1.12 |
| **Long-term Debt Paying Ability** |  |  |  |  |
| Debt ratio | 49.58% | 52.12% | 59.23% | 44.00% |
| Long-term debt to total capitalization | 36.95% | 36.00% | 45.12% | 35.65% |
| Times interest earned | 4.57 | 4.13 | 3.06 | 6.61 |
| Fixed burden coverage ratio | 2.75 | 2.64 | 2.27 | 4.73 |
| **Profitability** |  |  |  |  |
| Gross profit margin | 33.33% | 30.67% | 30.13% | 32.00% |
| Operating profit margin | 13.34% | 12.40% | 13.88% | 14.59% |
| Net profit margin | 7.35% | 6.12% | 6.38% | 7.96% |
| Return on assets | — | 9.88% | 10.29% | 11.94% |
| Return on equity | — | 15.28% | 15.93% | 16.01% |
|  |  |  |  |  |
| Growth rate in sales | — | 25.00% | 25.00% | 12.00% |
| Growth rate in EPS | — | 4.08% | 2.94% | 13.30% |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Analysis of ROE** | | | | | | |
| **Year** | **Operating Profit Margin** | **EBT/EBIT** | **NI/EBT** | **Total Assets Turnover** | **Debt Ratio** | **ROE** |
| 2018 | 12.40% | 75.81% | 65.11% | 1.22 | 50.98% | 15.23% |
| 2019 | 13.88% | 67.35% | 68.28% | 1.09 | 56.45% | 15.98% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Income Statement**  **Vertical Analysis (%)** | | | | | |
|  | **2017** | **2018** | **2019** | **2019 Industry Average** |
| Sales | 100.00 | 100.00 | 100.00 | 100.00 |
| Cost of sales | 66.67 | 69.33 | 69.87 | 68.00 |
| Gross profit | 33.33 | 30.67 | 30.13 | 32.00 |
| Selling and administration | 14.99 | 13.27 | 9.32 | 10.51 |
| Depreciation expense | 5.00 | 5.00 | 6.93 | 6.90 |
| Operating profit | 13.34 | 12.40 | 13.88 | 14.59 |
| Interest expense | 2.92 | 3.00 | 4.53 | 2.20 |
| Income before taxes | 10.42 | 9.40 | 9.35 | 12.39 |
| Income taxes | 3.07 | 3.28 | 2.97 | 4.43 |
| Net income | 7.35 | 6.12 | 6.38 | 7.96 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Balance Sheet**  **Vertical Analysis (%)** | | | | |
|  | **2017** | **2018** | **2019** | **2019 Industry Average** |
| Cash and cash equivalents | 2.73 | 2.96 | 1.43 | 5.00 |
| Short-term investments | 1.82 | 1.85 | 1.43 | 5.14 |
| Accounts receivable | 15.45 | 19.19 | 17.14 | 11.09 |
| Inventory | 20.91 | 19.33 | 13.81 | 12.77 |
| Total current assets | 40.91 | 43.33 | 33.81 | 34.00 |
| Plant and equipment, net | 59.09 | 56.67 | 66.19 | 66.00 |
| Total assets | 100.00 | 100.00 | 100.00 | 100.00 |
| Accounts payable | 18.18 | 22.96 | 24.05 | 12.71 |
| Accrued expenses | 1.85 | 2.22 | 1.67 | 1.60 |
| Current portion of long-term debt | 2.91 | 2.96 | 3.57 | 2.55 |
| Total current liabilities | 22.94 | 28.14 | 29.29 | 16.86 |
| Long-term liabilities | 26.64 | 23.97 | 29.95 | 27.14 |
| Shareholders’ equity |  |  |  |  |
| Common shares | 22.73 | 18.52 | 16.19 | 25.00 |
| Retained earnings | 27.69 | 29.37 | 24.57 | 31.00 |
| Total liabilities and equity | 100.00 | 100.00 | 100.00 | 100.00 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Income Statement**  **Horizontal Analysis (%)** | | | | |
|  | **2017** | **2018** | **2019** |
| Sales | 100 | 125 | 156 |
| Cost of sales | 100 | 130 | 164 |
| Gross profit | 100 | 115 | 141 |
| Selling and administration | 100 | 111 | 97 |
| Depreciation expense | 100 | 125 | 217 |
| Operating profit | 100 | 116 | 163 |
| Interest expense | 100 | 129 | 243 |
| Income before taxes | 100 | 113 | 140 |
| Income taxes | 100 | 133 | 151 |
| Net income | 100 | 104 | 136 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Balance Sheet**  **Horizontal Analysis (%)** | | | | |
|  | **2017** | **2018** | **2019** |
| Cash and cash equivalents | 100 | 133 | 100 |
| Short-term investments | 100 | 125 | 150 |
| Accounts Receivable | 100 | 113 | 126 |
| Inventory | 100 | 130 | 158 |
| Total current assets | 100 | 130 | 158 |
| Plant and equipment, net | 100 | 118 | 214 |
| Total assets | 100 | 123 | 191 |
| Accounts payable | 100 | 155 | 253 |
| Accrued expenses | 100 | 147 | 172 |
| Current portion of long-term debt | 100 | 125 | 234 |
| Total current liabilities | 100 | 151 | 244 |
| Long-term liabilities | 100 | 110 | 215 |
| Shareholders’ equity |  |  |  |
| Common shares | 100 | 100 | 136 |
| Retained earnings | 100 | 130 | 169 |
| Total Liabilities and equity | 100 | 123 | 191 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Lamar Swimwear**  **Cash Flow Statement**  **For Year Ending December 31, 2018 (CAD thousands)** | | | |
| **Operations** |  |  |  |
| Net Income |  | 91,800 |  |
| Add: |  |  |  |
| Depreciation | 75,000 |  |  |
| Increase in accounts payable | 110,000 |  |  |
| Increase in accrued expenses | 9,600 | 194,600 |  |
| Less: |  |  |  |
| Increase in accounts receivable | 89,000 |  |  |
| Increase in inventory | 31,000 | 120,000 | 166,400 |
| **Investing** |  |  |  |
| Purchase of plant and equipment |  |  | (190,000) |
| **Financing** |  |  |  |
| Principal payment |  | (35,000) |  |
| Loan |  | 73,600 | 38,600 |
| **Change in cash and cash equivalents** |  |  | 15,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lamar Swimwear**  **Cash Flow Statement**  **For Year Ending December 31, 2019 (CAD thousands)** | | | | |
| **Operations** |  |  |  |
| Net Income |  | 119,700 |  |
| Add: |  |  |  |
| Depreciation | 130,000 |  |  |
| Increase in accounts payable | 195,000 |  |  |
| Increase in accrued expenses | 5,000 | 330,000 |  |
| Less: |  |  |  |
| Increase in accounts receivable | 101,000 |  |  |
| Increase in Inventory | 29,000 | 130,000 | 319,700 |
| **Investing** |  |  |  |
| Purchase of plant and equipment |  |  | (755,000) |
| **Financing** |  |  |  |
| Principal payment |  | (59,000) |  |
| Loan |  | 399,300 |  |
| Issuance of equity |  | 90,000 | 430,300 |
| **Change in cash and cash equivalents** |  |  | (5,000) |

2. **Liquidity**

Lamar Swimwear has a serious liquidity problem, which could result in bankruptcy if preventative measures are not taken. The current, quick, and cash ratios have all been below industry average since the company’s inception and are getting progressively worse. The main cause of this problem is the firm’s rapid growth, which is being financed by “stretching” the accounts payable, drawing down cash balances to dangerously low levels, and increased long-term borrowing resulting in higher interest and principal payments. The liquidity crisis is being made even worse as creditors raise interest rates and limit borrowing in reaction to the higher risk. A high growth rate is normally a good thing, but if it is not managed properly, it can cause serious liquidity problems. If the company wants to continue to grow at a rapid pace, more equity must be issued.

Further contributing to Lamar’s liquidity crisis is its poor accounts receivable management, which slows cash collections. The accounts receivable turnover in days is well above the industry average and is getting worse. Slow collections and high bad debts are a major problem in the swimsuit industry because of the large number of small, poorly capitalized retailers. Even the industry average accounts receivable turnover in days is above the standard credit terms of net 30, although this could simply be due to companies requiring the cheque in the mail by the due date and not in hand.

Inventory turnover in days is also above the industry average, but not by a substantial amount, and there has been definite improvement since 2018.

**Asset Management**

Lamar’s poor accounts receivable management could be improved by:

* Locked boxes or EFTS payment
* More thorough credit investigations (references and credit bureau checks)
* Swift follow up on overdue accounts (letter, phone, collection agency)
* Interest on overdue balances
* Faster billing (if the bill gets out faster, the net 30 period starts sooner)

There is a possibility that Lamar’s high growth rate was not due to a superior product line, but because they extended trade credit to retailers that other swimsuit manufacturers had refused. Being more selective in granting credit may not only help solve Lamar’s liquidity and asset management problems but may also reduce the growth rate to a more manageable level.

As mentioned, Lamar’s inventory turnover in days has been improving, but it is still slightly higher than the industry average. This could be due to Lamar charging a premium price compared to its competitors. Perhaps it is finding that it can generate more revenue by charging a slightly higher price despite lower turnover. Still, Lamar should investigate measures to improve inventory turnover further such as JIT production, expanding the breadth and depth of the product line, and improving customer service. Alternatively, the problem could simply be that Lamar is “sitting on” unsold stock from the previous summer season at year-end in December. The company might consider moving unwanted items by selling them to off-price stores.

Lamar’s fixed asset turnover was well above the industry average in 2018 but fell to slightly below the industry average in 2019. This was due to the major capital purchases in 1999. It appears that the company has not had enough time to fully utilize these new facilities. As demand grows in the future, fixed asset utilization should return to its superior level. Ed Lamar has also been very conscious of keeping overhead expenses to a minimum since beginning operations.

**Long-term Debt-Paying Ability**

Lamar Swimwear’s use of financial leverage has become excessive. Although its leverage ratios in 2017 approximated the industry average, they have since grown to dangerously high levels. The company’s vendors have already warned them to pay their accounts payable more promptly and their bankers have raised interest rates to reflect the added risk. COD and CBD status and being cut off at the banks are very real possibilities.

Lamar’s problem with financial leverage is caused by an actual growth rate that exceeds prudent levels. As a result, the company has stretched its payables and borrowed long-term instead of issuing more equity. This problem has been made worse by below-average profitability, which has resulted in weaker coverage ratios.

Lamar Swimwear must issue more equity. If the loss of control is a concern to Ed Lamar, then he must cut back on expansion to improve the company’s liquidity and long-term debt-paying positions. Some equity was issued in 2019, but it was not enough. This is possibly why Ed Lamar has approached Bob Atkins as a potential investor.

**Profitability**

Lamar’s gross profit margin is below the industry average and is getting worse. Excessive scrap contributed to a higher cost of sales in 2019, but this was countered partially by the premium prices it was able to charge. Due to the popularity of its product line, Lamar might experiment with raising its prices even further in hopes of increasing the gross profit margin. It might also consider:

* Overseas sourcing of materials and manufacturing to reduce costs
* Greater use of quantity discounts and competitive bidding when purchasing materials
* Self-directed work teams and improved quality control procedures
* JIT inventory and production management
* Automation of the production process

The operating margin is still slightly below the industry average, but there was a dramatic reduction in selling and administration as a percentage of sales in the last year. Economies of scale and Mr. Lamar’s frugal nature were likely the main causes. Others may have included:

* Downsizing of the staff
* Freezing/cutting wages and benefits
* Reducing commission rates and expense allowances
* Computerizing office operations
* Cutting the advertising and promotional budget
* Moving the office or factory to a lower rent area

Depreciation expense was up as a percentage of sales, but this should decrease as the new facilities are better utilized in the future.

Interest expense was also up to over twice the industry average due to the company’s overuse of financial leverage and the higher interest rates being charged. Income taxes as a percent of sales have also fallen primarily due to tax credits earned on asset purchases. Improved tax planning or lower tax rates could also be factors.

Overall, Lamar’s ROA and ROE are below industry average despite much heavier reliance on financial leverage than the industry. A significant drop in asset turnover contributed to its below-average ROA and the higher interest rates charged reduced the benefits of financial leverage. The spread between the ROA and ROE was smaller.

**Recommendation**

Lamar Swimwear is a fast-growing company with a popular product line. It has the potential to become quite profitable if management executes effective pricing and cost management strategies. This rapid growth is causing serious liquidity problems though. With a prudent sustainable growth rate that falls well short of its actual growth rate, Lamar has chosen to meet its growth potential by increasing its use of financial leverage to an intolerable level. The company must issue more equity than it has or slow growth to a safer level.

Potential investors must decide whether Ed Lamar can make these changes. He has a reputation of being quite stubborn and autocratic and thus unlikely to accept input from other investors on how to deal with this growth versus liquidity dilemma. He is also unlikely to tolerate losing control of the company he founded.

It is recommended that Bob Adkins only invest if Ed Lamar agrees in writing to make the necessary changes. If he is not willing, it is suggested that Mr. Adkins wait and possibly invest later. If Mr. Lamar does not make the needed changes, he will be even more desperate for help later on. He should also be offering better financial terms and be much more open to advice at that time.

**Financial Statement Analysis at The RV Store**

1.

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| --- | --- | --- | --- | --- |
| **Financial Ratios** | **2010** | **2011** | **2012** | **Industry Average** |
| Current ratio | 2.56 | 2.02 | 1.22 | 1.67 |
| Cash ratio | 0.28 | 0.16 | 0.02 | 0.16 |
| Inventory turnover in days | 117 | 127 | 229 | 172 |
| A/R turnover in days | 6 | 8 | 11 | 5 |
| A/P turnover in days | 10 | 10 | 35 | 10 |
| Net operating cycle | 113 | 125 | 206 | 168 |
| Fixed assets turnover | 8.72 | 8.72 | 2.95 | 3.89 |
| Total assets turnover | 2.40 | 2.26 | 1.21 | 1.65 |
| Debt ratio | 47.78% | 54.25% | 77.95% | 57.31% |
| Long-term debt to total capitalization | 28.68% | 29.23% | 58.83% | 36.33% |
| Times interest earned | 6.30 | 5.94 | 1.02 | 6.73 |
| Gross profit margin | 23.52% | 22.39% | 30.00% | 37.93% |
| Operating profit margin | 7.64% | 6.82% | 3.56% | 12.76% |
| Net profit margin | 3.86% | 3.40% | 0.05% | 6.52% |
| Return on assets | 11.02% | 9.26% | 2.58% | 12.64% |
| Return on equity | 17.75% | 16.84% | 0.26% | 25.20% |

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| --- | --- | --- | --- |
| **Income Statement**  **For Year Ending December 31** | | | |
|  | **2010** | **2011** | **2012** |
| Sales | 100.00% | 100.00% | 100.00% |
| Cost of sales | 76.48% | 77.61% | 70.00% |
| Gross profit | 23.52% | 22.39% | 30.00% |
| Depreciation | .48% | .49% | 1.44% |
| Other operating expenses | 15.41% | 15.07% | 25.00% |
| EBIT | 7.64% | 6.82% | 3.56% |
| Interest | 1.21% | 1.15% | 3.48% |
| EBT | 6.43% | 5.67% | 0.08% |
| Income taxes | 2.57% | 2.27% | 0.03% |
| Net Income | 3.86% | 3.40% | 0.05% |

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| --- | --- | --- | --- |
| **Balance Sheet**  **As of December 31** | | | |
|  | **2010** | **2011** | **2012** |
| Cash and cash equivalents | 7.88% | 6.03% | .99% |
| Accounts receivable | 3.95% | 4.86% | 3.81% |
| Inventories | 58.75% | 61.01% | 53.20% |
| Prepaid expenses | 1.85% | 2.16% | .99% |
| Total current assets | 72.43% | 74.06% | 59.00% |
| Property, plant, and equipment | 28.71% | 27.90% | 43.69% |
| Less: Accumulative depreciation | 1.15% | 1.95% | 2.69% |
| Net property, plant and equipment | 27.57% | 25.94% | 41.00% |
| Total assets | 100.00% | 100.00% | 100.00% |
| Accounts payable | 5.00% | 4.86% | 8.10% |
| Other payables | 5.36% | 5.78% | 9.75% |
| Line of credit | 16.42% | 24.71% | 28.59% |
| Current portion of long-term debt | 1.48% | 1.26% | 1.97% |
| Total current liabilities | 28.27% | 36.61% | 48.41% |
| Long-term debt | 19.51% | 17.64% | 29.54% |
| Shareholders’ equity | 52.22% | 45.75% | 22.05% |
| Total liabilities and equity | 100.00% | 100.00% | 100.00% |

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| --- | --- | --- | --- |
| **Income Statement**  **For the Year Ending December 31** | | | |
|  | **2010** | **2011** | **2012** |
| Sales | 100.00 | 129.17 | 143.81 |
| Cost of sales | 100.00 | 131.09 | 131.63 |
| Gross profit | 100.00 | 122.93 | 183.41 |
| Depreciation | 100.00 | 133.33 | 434.41 |
| Other operating expenses | 100.00 | 126.333 | 233.33 |
| EBIT | 100.00 | 115.40 | 66.98 |
| Interest expense | 100.00 | 122.46 | 412.80 |
| EBT | 100.00 | 114.07 | 1.74 |
| Income taxes | 100.00 | 114.07 | 1.74 |
| Net Income | 100.00 | 114.07 | 1.74 |

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| --- | --- | --- | --- |
| **Balance Sheet**  **As of December 31** | | | |
|  | **2010** | **2011** | **2012** |
| Cash | 100.00 | 105.02 | 36.05 |
| Accounts receivable | 100.00 | 168.75 | 275.00 |
| Inventories | 100.00 | 142.53 | 258.57 |
| Prepaid expenses | 100.00 | 160.00 | 153.33 |
| Total current assets | 100.00 | 140.32 | 232.57 |
| Property, plant, and equipment | 100.00 | 133.33 | 434.41 |
| Less: Accumulative depreciation | 100.00 | 233.33 | 667.74 |
| Net property, plant, and equipment | 100.00 | 129.17 | 424.69 |
| Total assets | 100.00 | 137.25 | 285.53 |
| Accounts payable | 100.00 | 133.33 | 462.22 |
| Other payables | 100.00 | 148.09 | 519.50 |
| Line of credit | 100.00 | 206.48 | 497.03 |
| Current portion of long-term debt | 100.00 | 116.67 | 379.17 |
| Total current liabilities | 100.00 | 177.76 | 488.95 |
| Long-term debt | 100.00 | 124.05 | 432.28 |
| Shareholders’ equity | 100.00 | 120.25 | 120.56 |
| Total liabilities and equity | 100.00 | 137.25 | 285.53 |

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| --- | --- | --- | --- | --- | --- | --- |
| **5-Way Analysis of ROE** | | | | | | |
|  | **EBIT/Sales** | **EBT/EBIT** | **NI/EBT** | **Total Asset Turnover** | **Debt Ratio** | **ROE** |
| **2010** | 7.64% | 0.84% | 0.60% | 2.40% | 47.78% | 17.75% |
| **2011** | 6.82% | 0.83% | 0.60% | 2.26% | 54.25% | 16.84% |
| **2012** | 3.56% | 0.02% | 0.60% | 1.21% | 77.95% | 0.26% |

2.

**Liquidity**

The current ratio is decreasing and is well below the industry average. The company is violating its current ratio requirement so its loans may be called.

The cash ratio is decreasing and is well below the industry average. It has fallen to a very low level and the company risks going bankrupt. Cash was depleted due to an imprudent capital expansion and excessive inventory purchases and operating expenses. Accounts payable are being “stretched” to generate needed cash which further reduced the cash ratio. A possible recession will likely mean even worse problems next year.

**Asset Management**

Inventory turnover in days is increasing and is well above the industry average for other high-end RV retailers. The large increase in this ratio in 2012 was due to a change in business strategy to sell high-margin, new units to wealthier clients. Excessive stock, strong competition from dealers in Kelowna and the Lower Mainland, construction interruptions during the year, a non-commissioned sales staff with little incentive to sell, and confusion by customers about the RV Store’s new target market are the likely causes.

Accounts receivable turnover in days is above the industry average due to lax practices when selling sales contracts to the factor.

Early payment discounts are no longer being taken advantage of on the accounts payable which is quite expensive. Accounts payable are being “stretched” beyond the stated collection period of net 30, which could hurt the company’s credit rating and caused them to be placed on COD or CBD.

Fixed asset turnover is below the industry average as a result of the imprudent expansion of the sales facility including five service bays that are underutilized. Sales are also expanding slowly as it takes time to develop a new clientele. Recession worries and competition from other retailers in Kelowna and the Lower Mainland is also a problem.

**Long-term Debt-Paying Ability**

Long-term debt to total capitalization is increasing and well above the industry average. Funds are being used to finance the capital expansion and the inventory build-up. Greatly reduced profitability and higher interest expenses put the company in violation of its times interest earned ratio requirement so its loans may be called.

**Profitability**

The gross profit margin is below the industry average for other high-end retailers. This is likely due to competitive pressures and the need to offer sales discounts to move excessive stock and counter fears about a future recession. Also, the average income of customers in Kamloops is lower than Kelowna and the Lower Mainland.

Operating expenses are higher than the industry average due to high fixed salaries for the sales staff, upkeep costs for the overly luxurious sales facility, idle service bays, and increased promotional costs.

ROA is decreasing and is well below the industry average due to very low profitability and total asset turnover. The new marketing strategy of selling higher-margin products to wealthier clients seems to be failing. ROE is lower than ROA which indicates it currently does not pay for the company to borrow.

**Recommendations**

The RV Store is facing a serious financial crisis as it is violating its loan conditions and quickly exhausting its cash reserves. The company must immediately meet with its lenders to discuss an action plan. They will likely call their loans given Cardosa’s poor management and the prospect of a recession next year. Also, loan collateral (i.e. inventory and fixed assets) is sufficient to cover most of what is owed now so lenders may choose to get their money before the collateral deteriorates further in value. If they are still willing to extend credit, the company must quickly reduce inventory to the industry average and use the proceeds to begin paying down debt. Sales contracts need to be processed more quickly. RV suppliers must be paid on time so the company is not placed on COD or CBD as under these terms the company would be unable to buy stock. Suppliers should be approached about providing extended credit terms for a limited period while the company recovers. Operating costs must be reduced as much as possible while ensuring enough is spent on advertising to reach its new target market. The company should focus more on selling used RVs given their expertise, customer relationships, lower incomes in the Kamloops market, and the possible recession. Salespeople should be placed on straight commission to provide greater incentives and reduce fixed operating costs. Leasing out the five service bays to an approved contractor should be investigated. This would provide needed revenue and avoid high machinery and shop tool costs. Other sources of revenue such as RV storage and short-term rentals should also be explored.