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Case 36

Garden State Container Corporation

Financial Analysis and Forecasting

Directed

Garden State Container Corporation manufactures boxes and other containers primarily for farm products. More than 85 percent of the company's sales come from the northeastern part of the United States, especially Pennsylvania, New Jersey, New York, and Maryland, although the company's patented egg cartons are distributed throughout the United States. Jim Jackson, the founder and president, recently received a call from Martha Menendez, vice president of Atlantic First National Bank. Menendez told him that a negative report had been generated by the bank's computerized analysis system; the report showed that Garden State's financial position was bad and getting worse.

The bank requires quarterly financial statements from each of its major loan customers. Information from these statements is fed into the computer, which then calculates key ratios for each customer and charts trends in these ratios. The system also compares the statistics for each company with the average ratios of other firms in the same industry and against any protective covenants in the loan agreements. If any ratio is significantly worse than the industry average, reflects a marked adverse trend, or fails to meet contractual requirements, the computer highlights the deficiency.

The latest report on Garden State revealed a number of adverse trends and several potentially serious problems (see Tables 1 through 6 for Garden State's historical financial statements). Particularly disturbing were the 1992 current, quick, and debt ratios, all of which failed to meet the contractual limits of 2.0, 1.0, and 55 percent, respectively. Technically, the bank had a legal right to call all the loans it had extended to Garden State for immediate repayment and, if the loans were not repaid within ten days, to force the company into bankruptcy.

Martha hoped to avoid calling the loans if at all possible, as she knew this would back Garden State into a corner from which it might not be able to emerge. Still, her own bank's examiners had recently become highly sensitive to the issue of problem loans, because the recent spate of bank failures had forced regulators to become more strict in their examination of bank loan portfolios and to demand earlier identification of potential repayment problems.

One measure of the quality of a loan is the Altman Z score, which for Garden State was 3.04 for 1992, slightly below the 3.20 minimum that Martha's bank uses to differentiate strong firms with little likelihood of bankruptcy in the next two years from those deemed likely to go into default. This will put the bank under increased pressure to reclassify Garden State's loans as "problem loans," to set up a reserve to cover potential losses, and to take whatever steps are necessary to reduce the bank's exposure. Setting up the loss reserve would have a negative effect on the bank's profits and reflect badly on Martha's performance.

To keep Garden State's loan from being reclassified as a "problem loan," the Senior Loan Committee will require strong and convincing evidence that the company's present difficulties are

only temporary. Therefore, it must be shown that appropriate actions to overcome the problems have been taken and that the chances of reversing the adverse trends are realistically good. Martha now has the task of collecting the necessary information, evaluating its implications, and preparing a recommendation for action.

The recession that plagued the U.S. economy in the early 1990s caused severe, though hopefully temporary, problems for companies like Garden State. On top of this, disastrous droughts for two straight summers had devastated vegetable crops in the area, leading to a drastic curtailment of demand for produce shipping containers. In light of the softening demand, Garden State had aggressively reduced prices in 1991 and 1992 to stimulate sales. Higher sales, the company believed, would allow it to realize greater economies of scale in production and to ride the learning, or experience, curve down to a lower cost position. Garden State's management had full confidence that normal weather and national economic policies would revive the ailing economy and that the downturn in demand would be only a short-term problem. Consequently, production continued unabated, and inventories increased sharply.

In a further effort to reduce inventory, Garden State relaxed its credit standards in early 1992 and improved its already favorable credit terms. As a result, sales growth did remain high by industry standards through the third quarter of 1992, but not high enough to keep inventories from continuing to rise. Further, the credit policy changes had caused accounts receivable to increase dramatically by late 1992.

To finance its rising inventories and receivables, Garden State turned to the bank for a long-term loan in 1991 and also increased its short-term credit lines in both 1991 and 1992. However, this expanded credit was insufficient to cover the asset expansion, so the company began to delay payments of its accounts payable until the second late notice had been received. Management realized that this was not a particularly wise decision for the long run, but they did not think it would be necessary to follow the policy for very long—the 1992 summer vegetable crop looked like a record breaker, and it was unlikely that a severe drought would again hurt the crop. They also predicted that the national economy would pull out of the weak growth scenario in late 1992. Thus, the company was optimistic that its stable and profitable markets of the past would soon reappear.

After Martha's telephone call, and the subsequent receipt of a copy of the bank's financial analysis of Garden State, Jim began to realize just how precarious his company's financial position had become. As he started to reflect on what could be done to correct the problems, it suddenly dawned on him that the company was in even more trouble than the bank imagined. Jim had recently signed a firm contract for a plant expansion that would require an additional $12,750,000 of capital during the first quarter of 1993, and he had planned to obtain this money with a short-term loan from the bank to be repaid from profits expected in the last half of 1993 as a result of the expansion. In his view, once the new production facility went on line, the company would be able to increase output in several segments of the shipping container market. It might have been possible to cut back on the expansion plans and to retrench, but because of the signed construction contracts and the cancellation charges that would be imposed if the plans were canceled, Jim correctly regards the $12,750,000 of new capital as being essential for Garden State's very survival.

Jim quickly called his senior management team in for a meeting, explained the situation, and asked for their help in formulating a solution. The group concluded that if the company's current business plan were carried out, Garden State's sales would grow by 10 percent from 1992 to 1993 and by another 15 percent from 1993 to 1994. Further, they concluded that Garden State should reverse its recent policy of aggressive pricing and easy credit, returning to pricing that fully covered costs plus normal profit margins and to standard industry credit practices. These changes should enable the company to reduce the cost of goods sold from over 85 percent of sales in 1992 to about 82.5 percent in 1993 and then to 80 percent in 1994. Similarly, the management group felt that the company could reduce administrative and selling expenses from almost 9 percent of sales in 1992 to 8 percent in 1993 and then to 7.5 percent in 1994. Significant cuts should also be possible in miscellaneous expenses, which should fall from 2.92 percent of 1992 sales to approximately 1.75

percent of sales in 1993 and to 1.25 percent in 1994. These cost reductions represented "trimming the fat," so they were not expected to degrade the quality of the firm's products or the effectiveness of its sales efforts. Further, to appease suppliers, future bills would be paid more promptly, and to convince the bank how serious management is about correcting the company's problems, cash dividends would be eliminated until the firm regains its financial health.

Assume that Jim has hired you as a consultant to first verify the bank's evaluation of the company's current financial situation and then to put together a forecast of Garden State's expected performance for 1993 and 1994. Jim asks you to develop some figures that ignore the possibility of a reduction in the credit lines and that assume the bank will increase the line of credit by the $12,750,000 needed for the expansion and supporting working capital. Also, you and Jim do not expect the level of interest rates to change substantially over the two-year forecast period; however, you both think that the bank will charge 12 percent on both the additional short-term loan, if it is granted, and on the existing short-term loans, if they are extended. The assumed 40 percent combined federal and state tax rate should also hold for two years. Finally, if the bank cooperates, and if Jim is able to turn the company around, the P/E ratio should be 12 in 1993 and should rise to 14 in 1994.

Your first task is to construct a set of pro forma financial statements that Jim and the rest of the Garden State management team can use to assess the company's position and also to convince Martha that her bank's loan is safe, provided the bank will extend the firm's line of credit. Then, you must present your projections, with recommendations for future action, to Garden State's management and to Martha. To prepare for your presentations, answer the following questions, keeping in mind that the Garden State managers and, particularly, Martha and her bosses, could ask you some tough questions about your analysis and recommendations. Put another way, the following questions are designed to help you focus on the issues, but they are not meant to be a complete and exhaustive list of all the relevant points.

QUESTIONS

1. Complete the 1992 columns of Tables 3 through 6, disregarding for now the projected data in the 1993 and 1994 columns. If you are using the Lotus model, use it to complete the tables. Be sure you understand all the numbers, as it would be most embarrassing (and harmful to your career) if you were asked how you got a particular number, and you could not give a meaningful response.

2. Based on the information in the case and on the results of your calculations in Question 1, prepare a list of Garden State's strengths and weaknesses. In essence, you should look at the common-size statements and each group of key ratios (for example, the liquidity ratios) and see what those ratios indicate about the company's operations and financial condition. As a part of your answer, use the extended Du Pont equation to highlight the key relationships.

3. Recognizing that you might want to revise your opinion later, does it appear, based on your analysis to this point, that the bank should lend the requested money to Garden State? Explain.

4. Now complete the tables to develop pro forma financial statements for 1993 and 1994. For these calculations, assume that the bank is willing to maintain the present credit lines and to grant an additional $12,750,000 of short-term credit on January 1, 1993. In the analysis, take account of the amounts of inventory and accounts receivable that would be carried if inventory utilization (based on the cost of goods sold) and days sales outstanding were set at

industry-average levels. Also, assume in your forecast that all of Garden State's plans and predictions concerning sales and expenses materialize and that the firm pays no cash dividends during the forecast period. Finally, in your calculations use the cash and marketable securities account as the residual balancing figure.

In responding to Questions 5 through 8, no Lotus model modifications are required. Answers should be based solely on the data contained in the financial statements developed in response to Question 4.

5. Assume Garden State has determined that its optimal cash balance is 5 percent of sales and that funds in excess of this amount will be invested in marketable securities which, on average, will earn 7 percent interest. Based on your forecasted financial statements, will Garden State be able to invest in marketable securities in 1993 and 1994? If so, what is the amount of excess funds Garden State should invest in marketable securities? Do your financial forecasts reveal any developing conditions that should be corrected?

6. Based on the forecasts developed earlier, would Garden State be able to retire all of the outstanding short-term loans by December 31, 1993?

7. If the bank decides to withdraw the entire line of credit and to demand immediate repayment of the two existing loans (the short-term and long-term loans) extended to Garden State, what alternatives would be available to Garden State?

8. Under what circumstances might the validity of comparative ratio analysis be questionable? Answer this question in general, not just for Garden State, but use Garden State data to illustrate your points.

9. Now revise your pro forma financial statements for 1993 and 1994 assuming the following conditions:
   a. Short-term loans will be repaid when sufficient cash is available to do so without reducing the liquidity of the firm below the minimum requirements set by the bank, and when the company is able to maintain at least the minimum cash balance (5 percent).
   b. When loans are repaid, the repayments will occur at a constant rate throughout the year. Therefore, on average, the amount of short-term loans outstanding will be half of the beginning-of-year amount.
   c. Garden State will reinstate a 25 percent cash dividend in the year that all short-term loans and credit lines have been fully cleaned up (paid in full).

10. It is apparent that Garden State's future (and that of the bank loan) is critically dependent upon the company's performance in 1993 and 1994. Therefore, it would be useful if you could, as part of your consulting report, inform management—and the bank—as to how sensitive the results are to such things as the sales growth rate, the cost of goods sold percentage, and the administrative expense ratio. If the results would still look fairly good even if those factors were not as favorable as initially forecasted, the bank would have greater confidence in extending the requested credit. On the other hand, if even tiny changes in these variables would lead to a continuation of the past downward trend, then the bank should be leery. If you are using the Lotus model, do some sensitivity analyses (using data tables) to shed light on this issue. (Hint: See the bottom part of the model labeled "SENSITIVITY ANALYSES" for some ideas.) If you do not have access to the model, describe how one would go about a sensitivity (or scenario) analysis, but do not quantify your answer.

11. On the basis of your analyses, do you think Martha should recommend that the bank extend the existing short- and long-term loans and grant the additional $12,750,000 loan or that the bank demand immediate repayment of all existing loans? If she does recommend continuing to support the company, what conditions (for example, collateral, guarantees, or other safeguards) might the bank impose to help protect against losses should Garden State's plans go awry?

TABLE 1

Historical and Pro Forma Balance Sheets for Years Ended December 31 (in Thousands of Dollars)

	1990	1991	1992	Proforma 1993	Proforma 1994
Assets:					
Cash and marketable securities	$ 9,930	$ 7,363	$ 6,550	X	X
Accounts receivable	34,196	36,924	58,714	X	X
Inventory	39,791	69,361	97,984	X	X
Current assets	$ 83,888	$113,647	$163,249	X	X
Land, buildings, plant, and equipment	$ 34,634	$ 39,19	$ 44,604	$ 57,036	$58,746
Accumulated depreciation	(5,992)	(9,308)	(13,388)	(18,234)	(21,880)
Net fixed assets	$ 28,642	$ 29,887	$ 31,216	$ 38,802	$36,866
Total assets	$112,530	$143,534	$194,465	$215,375	X
Liabilities and Equity:					
Short-term bank loans	$ 6,376	$ 10,200	$ 36,466	X	X
Accounts payable	13,528	21,012	39,996	31,990	$33,590
Accruals	6,886	10,200	14,662	18,602	23,252
Current liabilities	$ 26,790	$ 41,412	$ 91,124	X	X
Long-term bank loans	$ 13,388	$ 20,082	$20,082	$ 20,082	$20,082
Mortgage	5,738	5,202	4,680	4,208	3,788
Long-term debt	$ 19,126	$ 25,284	$ 24,762	$ 24,290	$23,870
Total liabilities	$ 45,916	$ 66,696	$115,886	X	X
Common stock	$ 46,538	$ 46,538	$ 46,538	$ 46,538	$46,538
Retained earnings	20,076	30,300	32,041	X	X
Total equity	$ 66,614	$ 76,838	$ 78,579	X	X
Total liabilities and equity	$112,530	$143,534	$194,465	X	X

Notes:

a. 7,000,000 shares of common stock were outstanding throughout the period 1990 through 1992.
b. Market price of shares: 1990–$17.78; 1991–$9.70; 1992–$3.74.
c. Price/earnings (P/E) ratios: 1990–6.29; 1991–4.98; 1992–11.28. The 1992 P/E ratio is high because of the depressed earnings that year.
d. Assume that all changes in interest-bearing loans and gross fixed assets occur at the start of the relevant years.
e. The mortgage loan is secured by a first-mortgage bond on land and buildings.

TABLE 2

Historical and Pro Forma Income Statements for Years Ended December 31 (Thousands of Dollars)

	1990	1991	1992	Pro Forma 1993	Pro Forma 1994
Net sales	$350,546	$378,549	$401,251	$441,376	$507,583
Cost of goods sold	282,252	311,110	342,016	364,135	X
Gross profit	$ 68,294	$ 67,439	$ 59,235	$ 77,241	$101,517
Administration and selling expenses	$ 25,580	$ 30,690	$ 33,762	X	X
Depreciation	3,188	3,316	4,080	4,846	3,646
Miscellaneous expenses	4,054	7,114	11,450	X	6,345
Total operating expenses	$ 32,822	$ 41,120	$ 49,292	X	X
EBIT	$ 35,472	$ 26,319	$ 9,943	$ 29,361	X
Interest on short-term loans	$ 638	$ 1,122	$ 3,647	$ 5,906	$ 5,906
Interest on long-term loans	1,339	2,008	2,008	1,912	1,912
Interest on mortgage	516	468	421	379	341
Total interest	$ 2,493	$ 3,598	$ 6,076	$ 8,197	$ 8,159
Before-tax earnings	$ 32,979	$ 22,721	$ 3,867	X	$ 45,298
Taxes	13,192	9,088	1,547	X	18,119
Net income	$ 19,787	$ 13,632	$ 2,320	X	X
Dividends on stock	4,947	3,408	580	0	X
Additions to retained earnings	$ 14,841	$ 10,224	$ 1,740	X	X

Notes:

a. Earnings per share (EPS): 1990–$2.69; 1991–$1.81; 1992–$0.22.

b. Interest rates on borrowed funds:
   Short-term loan: 1990–10%; 1991–11%; 1992–10%.
   Long-term loan: 10% for each year.
   Mortgage: 9% for each year.

c. For purposes of this case, assume that expenses other than depreciation and interest are totally variable with sales.

TABLE 3

Common-Size Balance Sheets
for Years Ended December 31

	1990	1991	1992
Assets:			
Cash and marketable securities	8.82%	5.13%	3.37%
Accounts receivable	30.39	25.72	X
Inventory	35.36	48.32	50.39
Current assets	74.55%	79.18%	X
Land, buildings, plant, and equipment	30.78%	27.31%	X
Accumulated depreciation	(5.32)	(6.48)	(6.88)
Net fixed assets	25.45%	20.82%	16.05%
Total assets	100.00%	100.00%	100.00%
Liabilities and Equities:			
Short-term bank loans	5.67%	7.11%	18.75%
Accounts payable	12.02	14.64	20.57
Accruals	6.12	7.11	7.54
Current liabilities	23.81%	28.85%	46.86%
Long-term bank loans	11.90%	13.99%	X
Mortgage	5.10	3.62	2.41
Long-term debt	17.00%	17.62%	
Total liabilities	40.80%	46.47%	59.59%
Common stock	41.36%	32.42%	23.93%
Retained earnings	17.84	21.11	X
Total equity	59.20%	53.53%	40.41%
Total liabilities and equity	100.00%	100.00%	100.00%

Note: Rounding differences occur in this table.

TABLE 4

Common-Size Income Statements
for Years Ended December 31

	1990	1991	1992
Net sales	100.00%	100.00%	100.00%
Cost of goods sold	80.52	82.18	X
Gross profit	19.48%	17.82%	14.76%
Administrative and selling expenses	7.30%	8.11%	8.41%
Depreciation	0.91	0.88	X
Miscellaneous expenses	1.16	1.88	2.85
Total operating expenses	9.36%	10.86%	2.28%
EBIT	10.12%	6.95%	2.48%
Interest on short-term loans	0.18%	0.30%	X
Interest on long-term loans	0.38	0.53	X
Interest on mortgage	0.15	0.12	0.10
Total interest	0.71%	0.95%	1.51%
Before-tax earnings	9.41%	6.00%	0.96%
Taxes	3.76	2.40	X
Net income	5.64%	3.60%	0.58%
Dividends on stock	1.41%	0.90%	0.14%
Additions to retained earnings	4.23%	2.70%	0.43%

TABLE 5

Statement of Cash Flows
for Years Ended December 31
(in Thousands of Dollars)

	1991	1992
Cash Flow from Operations:		
Sales	$378,549	$401,251
Increase in receivables	(2,728)	X
Cash sales	$375,821	$379,461
Cost of goods sold	(311,110)	(342,016)
Increase in inventories	(29,570)	(28,623)
Increase in accts payable	7,484	18,984
Increase in accruals	3,314	X
Cash cost of goods	($329,882)	X
Cash margin	$45,939	X
Administrative and selling expenses	(30,690)	($33,762)
Miscellaneous expenses	(7,114)	(11,450)
Taxes	(9,088)	(1,547)
Net Cash Flow from operations	($953)	X
Cash Flow from Fixed Asset Investment:		
Investment in fixed assets	($4,561)	($5,409)
Cash Flow from Financing Activities:		
Increase in short-term debt	$3,824	$26,266
Increase in long-term debt	6,694	X
Repayment of mortgage	(536)	(522)
Interest expense	(3,598)	(6,076)
Common dividends	(3,408)	(580)
Net Cash Flow from financing activities	$2,976	$19,088
Increase (decrease) in cash and marketable securities	($2,539)	X

TABLE 6

Historical and Pro Forma Ratio Analysis for Years Ended December 31

	1990	1991	1992	Pro Forma 1993	Pro Forma 1994	Industry Average
Liquidity Ratios:						
Current ratio	3.13	2.74	X	X	X	2.50
Quick ratio	1.65	1.07	0.72	1.13	X	1.00
Leverage Ratios:						
Debt ratio	40.80%	46.47%	X	X	52.31%	50.00%
TIE coverage	14.23	7.31	1.64	X	6.55	7.70
Asset Managment Ratios:						
Inventory turnover (cost)[a]	7.09	4.49	3.49	5.70	5.70	5.70
Inventory turnover (sale)[b]	8.81	5.46	4.10	X	X	7.00
Fixed asset turnover	12.24	12.67	12.85	11.38	13.77	12.00
Total asset turnover	3.12	2.64	X	2.05	X	3.00
Days sale outstanding (ACP)[c]	35.12	35.11	52.68	X	32.00	32.00
Profitability Ratios:						
Profit margin	5.64%	3.60%	0.58%	X	X	2.90%
Gross profit margin	19.48%	17.82%	14.76%	17.50%	20.00%	18.00%
Return on total assets	17.58%	9.50%	X	5.90%	10.94%	8.80%
ROE	29.70%	17.74%	2.95%	X	X	17.50%
Other Ratios						
Altman Z score[d]	6.64	4.75	X	3.95	5.42	4.65
Payout ratio	25.00%	25.00%	25.00%	0.00%	X	20.00%

Notes:

a. Uses cost of goods sold as the numerator.

b. Uses net sales as the numerator.

c. Assume a 360-day year.

d. Altman's function is calculated as

$$Z = 0.012X_1 + 0.014X_2 + 0.033X_3 + 0.006X_4 + 0.999X_5$$

Here,

X_1 = net working capital/total assets

X_2 = retained earnings/total assets

X_3 = EBIT/total assets

X_4 = market value of common and preferred stock/book value of all debt

X_5 = sales/total assets.

The "Altman Z score" range of 1.81–2.99 represents the so-called "zone of ignorance." Note that the first four variables are expressed as percentages. Refer to Chapter 26 of Eugene F. Brigham and Louis C. Gapenski, Intermediate Financial Management, Fourth Edition (Fort Worth: Dryden Press, 1993), for details.

e. Year-end balance-sheet values were used throughout in the computation of ratios embodying balance-sheet items.

f. Assume constant industry-average ratios throughout the period 1990 through 1994.