

Toy World, Inc.

Early in January 1994, Jack McClintock, president and part owner of Toy World, Inc., was considering a proposal to adopt level monthly production for the coming year. In the past, the company's production schedules had always been highly seasonal, reflecting the seasonality of sales. Mr. McClintock was aware that a marked improvement in production efficiency could result from level production, but he was uncertain what the impact on other phases of the business might be.

Toy World, Inc. was a manufacturer of plastic toys for children. Its product groups included toy cars, trucks, construction equipment, rockets, spaceships and satellites, musical instruments, animals, robots, and action figures. In most of these product categories, the company produced a wide range of designs, colors, and sizes. Dollar sales of a particular product had sometimes varied by 30–35% from one year to the next.

The manufacture of plastic toys was a highly competitive business. The industry was populated by a large number of companies, many of which were short on capital and management talent. Since capital requirements were not large and the technology was relatively simple, it was easy for new competitors to enter the industry. On the other hand, design and price competition was fierce, resulting in short product lives and a relatively high rate of company failures. A company was sometimes able to steal a march on the competition by designing a popular new toy, often of the fad variety. Such items generally commanded very high margins until competitors were able to offer a similar product. For example, Toy World's introduction of a line of superhero action figures in 1991 had contributed importantly to that year's profits. In 1992, however, 11 competitors marketed similar products, and the factory price of the Toy World offering plummeted. In recent years, competitive pressures on smaller firms had also intensified due to an influx of imported toys produced by foreign toy manufacturers with low labor costs.

Company Background

Toy World, Inc. was founded in 1973 by David Dunton after his release from naval service. Before his military service, he had been employed as production manager by a large manufacturer of plastic toys. Mr. Dunton and his former assistant, Jack McClintock, established Toy World, Inc. with their savings in 1973. Originally a partnership, the firm was incorporated in 1974, with Mr. Dunton taking 75% of the capital stock and Mr. Clintock taking 25%. The latter served as production manager, and Mr. Dunton, as president, was responsible for overall direction of the company's affairs. After a series of illnesses, Mr. Dunton's health deteriorated, and he was forced to retire from active participation in the business in 1991. Mr. McClintock assumed the presidency at that time. In 1993, Mr. McClintock hired Dan Hoffman, a recent graduate of a prominent eastern technical institute, as production manager. Mr. Hoffman had worked during summers in the plastics plant of a large diversified chemical company and thus had a basic familiarity with plastics production processes.

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Company Growth

Toy World, Inc. had experienced relatively rapid growth since its founding and had enjoyed profitable operations each year since 1976. Sales had been approximately \$8 million in 1993, and on the strength of a number of promising new products, sales were projected at \$10 million for 1994. Net profits had reached \$270,000 in 1993 and were estimated at \$351,000 in 1994 under seasonal production. Tables A and B present the latest financial statements for the company. The cost of goods sold had averaged 70% of sales in the past and was expected to maintain roughly that proportion in 1994 under seasonal production. In keeping with the company's experience, operating expenses were likely to be incurred evenly throughout each month of 1994 under either seasonal or level production.

Expanding operations had resulted in a somewhat strained working capital position for Toy World, Inc. The year-end cash balance of \$200,000 in 1993 was regarded as the minimum necessary for the operations of the business. The company had periodically borrowed from its primary bank, City Trust Company, on an unsecured line of credit. A loan of \$752,000 was outstanding at the end of 1993. Mr. McClintock had been assured that the bank would be willing to extend a credit line of up to \$2 million in 1994, with the understanding that the loan would be completely repaid and off the books for

TABLE A
Condensed Income
Statements,
1991–1993 (thousands
of dollars)

	1991	1992	1993
Net sales.....	\$5,213	\$6,167	\$7,967
Cost of goods sold.....	3,597	4,440	5,577
Gross profit.....	\$1,616	\$1,727	\$2,390
Operating expenses.....	1,199	1,542	1,912
Interest expense.....	68	75	85
Interest income.....	20	15	16
Profit before taxes.....	\$ 369	\$ 125	\$ 409
Federal income taxes.....	125	43	139
Net profit.....	\$ 244	\$ 82	\$ 270

TABLE B
Balance Sheet at
December 31, 1993
(thousands of dollars)

Cash.....	\$ 200
Accounts receivable.....	2,905
Inventory.....	586
Current assets.....	\$3,691
Plant and equipment, net.....	1,176
Total assets.....	\$4,867
Accounts payable.....	\$ 282
Notes payable, bank.....	752
Accrued taxes ^a	88
Long-term debt, current portion.....	50
Current liabilities.....	\$1,172
Long-term debt.....	400
Shareholders' equity.....	3,295
Total liabilities and shareholders' equity.....	\$4,867

^aThe company was required to make estimated tax payments on the 15th of April, June, September, and December. In 1993 it elected to base its estimated tax payments on the previous year's tax. The balance of \$88,000 was due on March 15, 1994.

at least a 30-day period during the year, and would be secured by the accounts receivable and inventory of Toy World. Interest on the line of credit would be charged at a rate of 9%, and any advances in excess of \$2 million would be subject to further negotiations. Toy World's long-term debt, which had been raised years ago, had a fixed annual rate of interest of 9% and was being amortized by payments of \$25,000 in June and December of each year.

The company's sales were highly seasonal. Over 80% of annual dollar volume was usually sold between August and November. Table C shows sales by month for 1993 and projected monthly sales for 1994. Sales were made mainly to large variety store chains and toy brokers. Although the company quoted terms of net 30 days, most customers took 60 days to pay; however, collection experience had been excellent.

The company's production processes were not complex. Plastic molding powder, the principal raw material, was processed by injection molding presses and formed into the shapes desired. The toy sets were then assembled and packaged in cardboard cartons or plastic bags. Typically, all runs begun were completed on the same day, so that there was virtually no work in process at the end of the day. Purchases on net 30-day terms were made weekly in amounts necessary for estimated production in the coming week. Total purchases in 1994 were forecast at \$3 million. It was the company's policy to retire trade debt promptly as it came due.

Mr. Hoffman, the production manager, believed the company would be able to hold capital expenditures during the next year to an amount equal to depreciation, although he had cautioned that projected volume for 1994 would approach the full capacity of Toy World's equipment.

Toy World Inc.'s practice was to produce in response to customer orders. This meant only a small fraction of capacity was needed to meet demand for the first seven months of the year. Ordinarily, not more than 25–30% of manufacturing capacity was used at any one time during this period. The first sizable orders for the Christmas business arrived around the middle of August. From August to December the workforce was greatly expanded and put on overtime, and all equipment was used 16 hours a day. In 1993 overtime premiums had amounted to \$185,000. Whenever possible, shipments were made on the day an order was produced. Hence, production and sales amounts in each month tended to be equal.

As in the past, pro forma balance sheets and income statements based on an assumption of seasonal production had been prepared for 1994 and were presented to Mr. McClintock for his examination. These appear in Exhibits 1 and 2.

TABLE C
Monthly Sales Data
(thousands of dollars)

	Sales 1993	Projected 1994
January.....	\$ 64	\$ 120
February.....	88	140
March.....	96	160
April.....	88	140
May.....	87	140
June.....	95	140
July.....	96	160
August.....	1,251	1,620
September.....	1,474	1,840
October.....	1,723	2,140
November.....	1,965	2,285
December.....	940	1,115

EXHIBIT 1 Pro Forma Balance Sheets under Seasonal Production, 1994 (thousands of dollars)

Actual Dec. 31, 1993	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Cash ^a	\$ 200	\$ 878	\$ 1,526	\$ 1,253	\$ 915	\$ 696	\$ 527	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
Accounts receivable ^b	2,905	1,060	260	300	280	280	300	1,780	3,460	3,980	4,425	3,400
Inventory ^c	586	586	586	586	586	586	586	586	586	586	586	586
Current assets	\$3,691	\$2,524	\$2,372	\$2,139	\$1,940	\$1,562	\$1,413	\$2,566	\$4,246	\$4,766	\$5,211	\$4,186
Net plant and equipment ^d ..	1,176	1,176	1,176	1,176	1,176	1,176	1,176	1,176	1,176	1,176	1,176	1,176
Total assets	\$4,867	\$3,700	\$3,548	\$3,315	\$3,116	\$2,738	\$2,589	\$3,742	\$5,422	\$5,942	\$6,387	\$5,362
Accounts payable ^e	\$ 282	\$ 36	\$ 42	\$ 48	\$ 42	\$ 42	\$ 48	\$ 486	\$ 552	\$ 642	\$ 686	\$ 334
Notes payable, bank ^f	752	0	0	0	0	0	0	433	1,741	1,745	1,677	942
Accrued taxes ^g	88	31	(23)	(162)	(251)	(394)	(448)	(352)	(271)	(126)	33	40
Long-term debt, current portion	50	50	50	50	50	50	50	50	50	50	50	50
Current liabilities	\$1,172	\$ 117	\$ 69	\$ (64)	\$ (159)	\$ (302)	\$ (350)	\$ 617	\$2,072	\$2,311	\$2,446	\$1,366
Long-term debt ^h	400	400	400	400	400	375	375	375	375	375	375	350
Shareholder's equity	3,295	3,183	3,079	2,979	2,875	2,665	2,564	2,750	2,975	3,256	3,566	3,646
Total liabilities and equity ..	\$4,867	\$3,700	\$3,548	\$3,315	\$3,116	\$2,738	\$2,589	\$3,742	\$5,422	\$5,942	\$6,387	\$5,362

a. Assumed maintenance of minimum \$200,000 balance, includes excess cash in months when company is out of debt.

b. Assumed 60-day collection period.

c. Assumed inventories maintained at December 31, 1993, level for all of 1994.

d. Assumed equipment purchases equal to depreciation expense.

e. Assumed equal to 30% of the current month's sales and related to material purchases of \$3,000,000 for 1994 as against sales of \$10 million. This represents a 30-day payment period. Since inventories are level, purchases will follow seasonal production and sales pattern.

f. Plug figure.

g. Taxes payable on 1993 income are due on March 15, 1994. On April 15, June 15, September 15, and December 15, 1994, payments of 25% each of the estimated tax for 1994 are due. In estimating its tax liability for 1994, the company has the option of using the prior year's tax liability (\$139,000) for its estimate and making any adjusting tax payments in 1995. Alternatively, the company could estimate its 1994 tax liability directly. Toy World planned to use its prior year's tax liability as its estimate and to pay \$35,000 in April, June, September, and December.

h. To be repaid at the rate of \$25,000 each June and December.

EXHIBIT 2 Pro Forma Income Statements under Seasonal Production, 1994 (thousands of dollar)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Net sales	\$ 120	\$ 140	\$ 160	\$ 140	\$ 140	\$ 140	\$ 160	\$1,620	\$1,840	\$2,140	\$2,285	\$1,115	\$10,000
Cost of goods sold ^a	84	98	112	98	98	98	112	1,134	1,288	1,498	1,600	780	7,000
Gross profit	\$ 36	\$ 42	\$ 48	\$ 42	\$ 42	\$ 42	\$ 48	\$ 486	\$ 552	\$ 642	\$ 685	\$ 335	\$ 3,000
Operating expenses ^b	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Interest expense	7	4	4	4	4	4	3	5	12	17	17	14	95
Interest income ^c	2	4	5	4	3	3	2	1	1	1	1	1	28
Profit (loss) before taxes	\$(169)	\$(158)	\$(151)	\$(158)	\$(159)	\$(159)	\$(153)	\$ 282	\$ 341	\$ 426	\$ 469	\$ 122	\$ 533
Income taxes ^d	(57)	(54)	(51)	(54)	(54)	(54)	(52)	96	116	145	159	42	182
Net profit	\$(112)	\$(104)	\$(100)	\$(104)	\$(105)	\$(105)	\$(101)	\$ 186	\$ 225	\$ 281	\$ 310	\$ 80	\$ 351

a. Assumed cost of goods sold equal to 70% sales.

b. Assumed to be same for each month throughout the year.

c. Toy World expected to earn a 4% annualized rate of return on average monthly cash balances.

d. Negative figures are tax credits from operating losses, and reduced accrued taxes shown on balance sheet. The federal tax rate on all earnings was 34%.

The Proposed Change to Level Production

Having experienced one selling season at Toy World, Mr. Hoffman was deeply impressed by the many problems that arose from the company's method of scheduling production. Overtime premiums reduced profits; seasonal expansion and contraction of the workforce resulted in recruiting difficulties and high training and quality-control costs. Machinery stood idle for seven-and-a-half months and then was subjected to heavy use. Accelerated production schedules during the peak season resulted in frequent setup changes on the machinery. Seemingly unavoidable confusion in scheduling runs resulted. Short runs and frequent setup changes caused inefficiencies in assembly and packaging as workers encountered difficulty relearning their operations.

For these reasons, Mr. Hoffman had urged Mr. McClintock to adopt a policy of level monthly production in 1994. He pointed out that estimates of sales volume had usually proved to be reliable in the past. Purchase terms would not be affected by the rescheduling of purchases. The elimination of overtime wage premiums would result in substantial savings, estimated at \$225,000 in 1994. Moreover, Mr. Hoffman firmly believed that significant additional direct labor savings, amounting to about \$265,000, would result from orderly production. But a portion of the savings would be offset by higher storage and handling costs, estimated at \$115,000 annually.

Mr. McClintock speculated on the effect that level production might have on the company's funds requirements in 1994. He assumed that except for profits and fluctuations in the levels of inventories, accounts receivable, and accounts payable, funds inflows and outflows would be approximately in balance. To simplify the problem, Mr. McClintock decided to assume that gross margin percentages would not vary significantly by month under either method of production. That is, cost of goods sold would be 70% of sales in each of the 12 months under seasonal production and would be 65.1% of sales in each of the 12 months under level production. The increased storage and handling costs of \$115,000 would be included in operating expenses.

SureCut Shears, Inc.

On April 28, 1996, Michael Stewart, senior loan officer at the Hudson National Bank of New York, was reviewing the credit file of SureCut Shears, Inc. in preparation for a luncheon meeting with the company's president and treasurer. David Fischer, treasurer of SureCut Shears, had recently informed Mr. Stewart that the company would be unable to liquidate its outstanding seasonal loan as initially anticipated. While agreeing to extend the outstanding \$1.15 million loan, Mr. Stewart had suggested that he would like to stop by and discuss the company's recent progress when he was next in the vicinity of Savannah, Georgia, where SureCut Shears's home plant and offices were located.

SureCut Shears manufactured a complete line of household scissors and industrial shears. Its quality lines were distributed through wholesalers to specialty, hardware, and department stores located throughout the country. Cheaper products were sold directly to large variety chains. Although competition was severe, particularly from overseas companies, SureCut Shears had made profits in every year since 1958. Sales and profits had grown fairly steadily, if not dramatically, throughout the period.

Hudson National Bank had been soliciting the SureCut Shears account for several years prior to early 1995. After several unsuccessful calls, Mr. Stewart finally convinced the officers of SureCut Shears that association with a large New York bank offered several advantages not to be found with local banks. He was particularly pleased with the success of his efforts, because SureCut Shears historically held fairly sizable deposit balances in its principal banks.

The company had sufficient capital to cover its permanent requirements over the immediate future. Its short-term borrowings from banks were typically confined to the period July–December of each year, when additional working capital was needed to support a seasonal sales peak. As a matter of policy, the company attempted to produce at an even rate throughout the year, and this accounted in good part for the sizable need for seasonal funds.

In June 1995, Mr. Fischer arranged a line of credit of \$3.5 million with the Hudson National Bank to cover requirements for the fall. At the time, he anticipated that the loan would be completely paid off by December 1995. He gave Mr. Stewart a pro forma estimate of the company's fund requirements over the coming 12-month period to support his request. (These estimates are shown in Exhibits 1 and 2.) In addition to these requirements, the forecast showed a need for about \$1 million by June 1996. Mr. Fischer attributed this increase in funds requirements (no funds were needed in June 1995) to a plant modernization program. He explained that the program, requiring expenditures of \$6 million, was about half completed and would be finished by August 1995. Efficiencies resulting from the modernization program, once completed, were expected to save about \$900,000 per year before taxes in manufacturing costs.

Mr. Fischer called Mr. Stewart in early September 1995 to let him know that the company would require \$350,000 more than had been initially requested to cover peak seasonal needs. Mr. Fischer explained that the main reason for the larger requirements was higher expenditures for modernization than had initially been estimated. Mr. Stewart informed Mr. Fischer that the bank would be happy to accommodate the additional loan requirements.

EXHIBIT 1 Pro Forma Income Statement, Fiscal 1996 (thousands of dollars)

Actual June 30, 1995	1996												Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
Sales	\$2,100	\$2,700	\$3,300	\$4,500	\$3,900	\$3,300	\$2,100	\$2,100	\$1,800	\$1,500	\$1,200	\$1,500	\$30,000
Cost of goods sold													
Materials and labor	1,260	1,620	1,980	2,700	2,340	1,980	1,260	1,260	1,080	900	720	900	18,000
Overhead (including depreciation \$130) ..	300	300	300	300	300	300	300	300	300	300	300	300	3,600
Gross profit	1,560	1,920	2,280	3,000	2,640	2,280	1,560	1,560	1,380	1,200	1,020	1,200	21,600
Selling and administrative expenses	540	780	1,020	1,500	1,260	1,020	540	540	420	300	180	300	8,400
Profit before taxes	270	270	270	270	270	270	270	270	270	270	270	270	3,240
Taxes	5,254	510	750	1,230	990	750	270	270	150	30	(90)	30	5,160
Profit after taxes	1,891	184	270	443	356	270	97	97	54	11	(32)	11	1,858
Dividends	3,363	326	480	787	634	480	173	173	96	19	(58)	19	3,302
Retained earnings	1,495	0	300	0	0	300	0	0	300	0	0	600	1,500
Cumulative retained earnings	\$ 1,868	\$ 173	\$ 326	\$ 787	\$ 634	\$ 180	\$ 173	\$ 173	\$(204)	\$ 19	\$(58)	\$(581)	\$ 1,802
earnings	—	\$ 499	\$ 679	\$ 1,466	\$ 2,100	\$ 2,280	\$ 2,453	\$ 2,626	\$ 2,422	\$ 2,441	\$ 2,383	\$ 1,802	—

EXHIBIT 2 Pro Forma Balance Sheets, Fiscal 1995 (thousands of dollars)

Actual June 30, 1995	1995												1996			
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	June	June	June	
Cash	\$ 2,121	\$ 736	\$ 736	\$ 736	\$ 736	\$ 1,139	\$ 2,609	\$ 3,179	\$ 2,413	\$ 2,235	\$ 1,759	\$ 727	\$ 727	\$ 727	\$ 727	
Accounts receivable ^a ..	2,084	2,850	4,650	6,150	6,150	5,250	3,750	3,150	2,850	2,400	1,950	2,100	2,100	2,100	2,100	
Inventories	8,106	8,372	7,894	6,758	5,981	5,563	5,862	6,161	6,640	7,298	8,135	8,793	8,793	8,793	8,793	
Current assets	12,311	11,958	13,280	13,644	12,867	11,952	12,221	12,490	11,903	11,933	11,844	11,620	11,620	11,620	11,620	
Net plant	24,564	26,059	27,554	27,554	27,554	27,554	27,554	27,554	27,554	27,554	27,554	27,554	27,554	27,554	27,554	
Total assets	\$36,875	\$38,017	\$40,834	\$41,198	\$40,421	\$39,506	\$39,775	\$40,044	\$39,457	\$39,487	\$39,398	\$39,174	\$39,174	\$39,174	\$39,174	
Banks loans payable ..	0	\$ 2,817	\$ 3,253	\$ 2,392	\$ 628	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	
Accounts payable ^b ..	861	744	777	777	777	777	777	777	777	777	777	777	777	777	777	
Taxes payable ^c	0	80	81	497	833	650	742	834	447	458	427	0	0	0	0	
Misc. other	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	
Current liabilities ..	1,131	2,094	4,381	3,936	2,508	1,697	1,789	1,881	1,494	1,505	1,474	1,128	1,128	1,128	1,128	
Mortgage 8%	11,960	11,960	11,960	11,960	11,960	11,661	11,661	11,661	11,661	11,661	11,661	11,362	11,362	11,362	11,362	
Common stock	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	
Earned surplus	12,284	12,463	12,798	13,802	14,453	14,648	14,825	15,002	14,802	14,821	14,763	14,184	14,184	14,184	14,184	
Total liab., net worth	\$36,875	\$40,352	\$40,834	\$41,198	\$40,421	\$39,506	\$39,775	\$40,044	\$39,457	\$39,487	\$39,398	\$39,174	\$39,174	\$39,174	\$39,174	

a. Assumes collections lag sales by 45 days.

b. Assumes 30-day payment period, in accordance with trade terms.

c. Estimated taxes are paid in four equal installments of \$380,000 each in September, December, March, and June based on pro forma earnings calculated the previous June.

(continued)

	1995					1996						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Raw materials												
Opening balance	\$ 810	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777
Plus: Purchases	744	777	777	777	777	777	777	777	777	777	777	777
Less: Trans. to work in progress	777	777	777	777	777	777	777	777	777	777	777	777
Closing balance	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777	\$ 777
Work in Process												
Opening balance	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110
Plus: Raw materials additions	777	777	777	777	777	777	777	777	777	777	777	777
Plus: Labor additions	778	778	778	778	778	778	778	778	778	778	778	778
Less: Trans. to finished goods	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555
Closing balances	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110	\$3,110
Finished Goods												
Opening balance	\$4,186	\$4,485	\$4,425	\$4,007	\$2,871	\$2,094	\$1,676	\$1,975	\$2,274	\$2,753	\$3,411	\$4,248
Plus: Work in process additions	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555	1,555
Loss: Cost of goods sold	1,256	1,615	1,973	2,691	2,332	1,973	1,256	1,256	1,076	897	718	897
Closing balance	\$4,485	\$4,425	\$4,007	\$2,871	\$2,094	\$1,676	\$1,975	\$2,274	\$2,753	\$3,411	\$4,248	\$4,906
Total closing inventory	\$8,372	\$8,312	\$7,894	\$6,758	\$5,981	\$5,563	\$5,862	\$6,161	\$6,640	\$7,298	\$8,135	\$8,793

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Raw materials	810	777	777	777	777	777	777	777	777	777	777	777
Work in Process	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110
Finished Goods	4186	4485	4425	4007	2871	2094	1676	1975	2274	2753	3411	4248
Total	8372	8312	7894	6758	5981	5563	5862	6161	6640	7298	8135	8793

EXHIBIT 3 1995-1996 monthly sales and inventory data (percentage of original)

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Raw materials	810	777	777	777	777	777	777	777	777	777	777	777
Work in Process	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110
Finished Goods	4186	4485	4425	4007	2871	2094	1676	1975	2274	2753	3411	4248
Total	8372	8312	7894	6758	5981	5563	5862	6161	6640	7298	8135	8793

EXHIBIT 4 1995-1996 monthly sales and inventory data (percentage of original)

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Raw materials	810	777	777	777	777	777	777	777	777	777	777	777
Work in Process	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110	3110
Finished Goods	4186	4485	4425	4007	2871	2094	1676	1975	2274	2753	3411	4248
Total	8372	8312	7894	6758	5981	5563	5862	6161	6640	7298	8135	8793

In January 1996, Mr. Fischer again contacted Mr. Stewart. He noted that sales had slackened considerably since his previous call. He attributed this decline largely to a retailing downturn then in progress, not to any special conditions affecting his company or the shears industry. Slackening in sales demand had created a need for additional short-term borrowing. Mr. Fischer believed that additional funds would be required until the company could adjust to the new economic conditions. He envisioned that this adjustment would probably not occur until mid-April 1996 or thereabouts. Once more, Mr. Stewart agreed to extend the necessary loan funds to SureCut Shears.

In early April 1996, Mr. Fischer phoned Mr. Stewart a third time to inform him that SureCut Shears would probably not be able to repay its outstanding short-term loan of \$1.14 million before the seasonal upturn in funds requirements in June. Mr. Fischer explained that a further sales decline, occasioned by the retailing recession, was largely responsible for the company's inability to liquidate the loan as anticipated. In reply, Mr. Stewart noted that the bank preferred seasonal loans to be "off the books" for at least two months of the year but saw no reason why he would not be willing to renew SureCut Shear's outstanding loan. He nevertheless thought it advisable to explore whether the inability to repay the seasonal loan in 1996 might be caused by a permanent change in the nature of the company's loan needs, such as might be occasioned by the modernization program. Mr. Stewart consequently suggested a meeting for April 29 to discuss the company's recent progress.

In preparing for this meeting, Mr. Stewart carefully examined the various profit and loss statements and balance sheets that Mr. Fischer had submitted to the bank over the course of the previous nine months. (These data are shown in Exhibits 3 and 4.) He hoped this analysis might uncover the reasons for SureCut Shears's inability to repay its loan in accordance with original statements.

EXHIBIT 3 Income Statements, 1995-1996 (thousands of dollars)

	1995					1996			
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Sales	\$2,070	\$2,605	\$3,080	\$4,066	\$3,373	\$2,799	\$1,758	\$1,738	\$1,498
Cost of goods									
Materials and labor	1,304	1,641	1,940	2,562	2,125	1,763	1,108	1,095	944
Overhead (incl. depreciation \$130)	296	290	340	310	303	288	293	374	323
Gross profit	1,600	1,931	2,280	2,872	2,428	2,051	1,401	1,469	1,267
Selling and administrative expenses	470	674	800	1,194	945	748	357	269	231
Profit before taxes	273	273	293	275	275	269	260	258	358
Taxes	197	401	507	919	670	479	97	11	(27)
Profit after taxes	67	136	172	312	228	163	33	4	(9)
Dividends	130	265	335	607	442	316	64	7	(18)
Retained earnings	\$130	\$265	\$35	\$607	\$442	\$16	\$64	\$7	\$(318)
Cumulative retained earnings	\$130	\$395	\$430	\$1,037	\$1,479	\$1,495	\$1,559	\$1,566	\$1,248

EXHIBIT 4 Balance Sheets, 1995-1996 (thousands of dollars)

	1995					1996				
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Cash	\$2,120	\$957	\$573	\$702	\$696	\$830	\$641	\$1,133	\$1,076	\$688
Accounts receivable	2,084	2,837	3,644	4,395	5,651	5,526	5,573	3,958	3,169	2,867
Inventories	8,106	8,378	8,303	7,963	7,179	6,705	6,502	6,925	7,170	7,374
Current assets	12,310	12,172	12,520	13,060	13,526	13,061	12,716	12,016	11,415	10,929
Net plant	24,564	26,103	27,672	27,848	27,858	27,843	27,855	27,843	27,810	27,812
Total assets	\$36,874	\$38,275	\$40,192	\$40,908	\$41,384	\$40,904	\$40,601	\$39,859	\$39,225	\$38,741
Bank loans payable	\$0	\$1,270	\$2,758	\$3,677	\$3,073	\$1,879	\$2,206	\$1,303	\$706	\$1,148
Accounts payable	861	789	774	843	876	834	684	699	658	514
Taxes payable	0	67	204	(64)	290	552	306	357	360	(92)
Misc. other	269	275	317	284	290	275	269	266	260	258
Current liabilities	1,130	2,401	4,053	4,740	4,529	3,540	3,465	2,625	1,984	1,828
Mortgage 8%	11,960	11,960	11,960	11,960	11,960	11,960	11,661	11,661	11,661	11,661
Common stock	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500	11,500
Earned surplus	12,284	12,414	12,679	12,708	13,395	13,904	13,975	14,073	14,080	13,752
Total liab., net worth	\$36,874	\$38,275	\$40,192	\$40,908	\$41,384	\$40,904	\$40,601	\$39,859	\$39,225	\$38,741

(continued)

	1995					1996			
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Raw Materials									
Opening balances	\$ 810	\$ 814	\$ 757	\$ 760	\$ 793	\$ 823	\$ 778	\$ 762	\$ 753
Plus: Purchases	787	777	837	867	802	688	690	652	518
Less: Trans. to work in process	783	834	834	834	772	733	706	661	601
Closing balance	\$ 814	\$ 757	\$ 760	\$ 793	\$ 823	\$ 778	\$ 762	\$ 753	\$ 670
Work in Process									
Opening balance	\$3,110	\$3,131	\$3,196	\$3,221	\$3,224	\$3,139	\$3,037	\$2,953	\$2,781
Plus: Raw materials additions	783	834	834	834	772	733	706	661	601
Plus: Labor additions	789	789	772	789	748	789	789	688	646
Less: Trans. to finished goods	1,551	1,558	1,581	1,620	1,605	1,624	1,579	1,521	1,495
Closing balance	\$3,131	\$3,196	\$3,221	\$3,224	\$3,139	\$3,037	\$2,953	\$2,781	\$2,533
Finished Goods									
Opening balance	\$4,186	\$4,433	\$4,350	\$3,982	\$3,162	\$2,743	\$2,687	\$3,210	\$3,636
Plus: Work in process additions	1,551	1,558	1,581	1,620	1,605	1,624	1,579	1,521	1,495
Less: Cost of goods sold	1,304	1,641	1,949	2,440	2,024	1,680	1,056	1,095	960
Closing balance	\$4,433	\$4,350	\$3,982	\$3,162	\$2,743	\$2,687	\$3,210	\$3,636	\$4,171
Total closing inventory	\$8,378	\$8,303	\$7,963	\$7,179	\$6,705	\$6,502	\$6,925	\$7,170	\$7,374

Dell's Working Capital

Dell Computer Corporation had reported impressive growth for fiscal year 1996 with its sales up 52% over the prior year. Industry analysts anticipated the personal computer market to grow 20% annually over the next three years, and Michael Dell expected that his company, with its build-to-order manufacturing system, would continue its double-digit growth. Although Dell Computer had financed its recent growth internally, management needed a plan for financing the future growth.

Company Background

Dell Computer Corporation was founded in 1984 by then nineteen-year-old Michael Dell. The company designed, manufactured, sold, and serviced high performance personal computers (PCs) compatible with industry standards. Initially, the company purchased IBM compatible personal computers, upgraded them, then sold the upgraded PCs directly to businesses by mail order. Subsequently, Dell began to market and sell its own brand personal computer, taking orders over a toll free telephone line, and shipping directly to customers.

Selling directly to customers was Dell's core strategy. Sales were primarily generated through advertising in computer trade magazines and, eventually, in a catalog. Dell combined this low cost sales/distribution model with a production cycle that began after the company received a customer's order. This build-to-order model enabled Dell to deliver a customized order within a few days, something its competitors could not do. Dell was also the first in the industry to provide toll-free telephone and on-site technical support in an effort to differentiate itself in customer service.

Dell's Inventory Management

Dell built computer systems *after* the company received the customer's order. In contrast, the industry leaders built to forecast and maintained sizeable finished goods inventory in their stock or at their channel partners. Dell's build-to-order manufacturing process yielded low finished goods inventory balances. By the mid-1990s Dell's work-in-process (WIP) and finished goods inventory as a percent of total inventory ranged from 10% to 20%. This contrasted sharply with the industry leaders, such as Compaq, Apple, and IBM, whose WIP and finished goods inventory typically ranged from 50% to 70% of total inventory, not including inventory held by their resellers.

Dell maintained an inventory of components. The cost of individual components, such as processor chips, comprised about 80% of the cost of a PC. As new technology

Professor Richard S. Ruback and Research Associate Aldo Sesia prepared this case from published sources as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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TABLE A
Days Supply of
Inventory (DSI)^a

	1993 ^b	1994 ^b	1995 ^b
Dell Computer	55	33	32
Apple Computer	52	85	54
Compaq Computer	72	60	73
IBM	64	57	48

Source: Dell Computer Corporation Fiscal 1993–1995 Annual Reports; casewriter estimates from Apple Computer, Compaq Computer, and IBM Fiscal 1992–1994 Annual Reports

^aDSI = (Net Ending Inventory)/(Quarterly COGS/90 Days)

^bDell's fiscal calendar ends in January; Apple's in September; Compaq and IBM's in December. The DSI for 1995 represents Dell's DSI for the quarter ended on 1/29/95, Apple's on 9/30/94, and Compaq's and IBM's on 12/31/94.

replaced old, the prices of components fell by an average of 30% a year.¹ Dell ordered components based on sales forecasts. Components were sourced from about 80 suppliers in the mid-1990s—down from a high of 200 or more. Dell issued “releases” for a certain amount of product from a supplier's inventory on a regular basis, depending upon the forecast.² Suppliers, many of whom had warehouses close to Dell's Austin, Texas, and Ireland plants, delivered parts to Dell, often on a daily basis.

As Michael Dell explained, “Other companies had to maintain high levels of inventory to stock reseller and retail channels. Because we built only what our customers wanted when they wanted it, we didn't have a lot of inventory taking up space and soaking up capital.”³ As such, Dell's supply of inventory was significantly lower than its competitors, providing a competitive advantage.

September 1990–August 1993

In 1990, Dell had only 1% of the U.S. PC market share.⁴ Michael Dell anticipated that the fragmented PC industry was ready for a consolidation and that Dell was too small to survive a consolidation. At the time Michael Dell explained, “I realized we had to decide whether we should stay the size we were—and face the consequences—or go for big time growth. . . . Obviously, we went for growth—in one big leap.”⁵

On September 10, 1990, in an attempt to capture sales from small businesses and first time consumers, Dell announced it was breaking from its direct-only business model and would begin to sell its PCs⁶ through CompUSA (formerly SoftWarehouse Superstores). Over the next two and a half years, Dell expanded this indirect distribution channel by adding other mass market retailers (i.e., Staples, Inc.) and marketing its Precision line exclusively through Price Club. Additionally the company continued aggressive pursuit of foreign markets, relying on resellers to distribute Dell product when timing limitations or infrastructure obstacles complicated direct distribution. Annual sales increased by 268% within two years, compared to industry growth of 5%, and moved Dell into the top five in worldwide market share.⁷ Exhibit 1 details sales growth for Dell and the PC industry.

¹Anon, “Selling PCs like Bananas,” *The Economist*; London, October 5, 1996, p. 63.

²Clare Goldsberry, “Computer Makers May Overcome JIT Troubles,” *Plastics News*, August 15, 1994, p. 20.

³Michael Dell with Catherine Fredman, “Direct from Dell, Strategies That Revolutionized an Industry,” 1999, p. 22.

⁴Jan Rivkin and Michael Porter, “Matching Dell,” HBS case 799-158, June 6, 1999, p. 15.

⁵Michael Dell with Catherine Fredman, “Direct from DELL, Strategies That Revolutionized an Industry,” 1999, p. 43.

⁶Systems sold through the retail channel were limited to certain predetermined configurations and were not customized.

⁷Jan Rivkin and Michael Porter, “Matching Dell,” HBS Case 799-158, June 6, 1999, p. 15.

EXHIBIT 1
Dell's Annual
Worldwide Sales
Dollar Growth versus
Industry

Calendar Year	Dell ^a	Industry
1991	63%	-2%
1992	126%	7%
1993	43%	15%
1994	21%	37%
1995	52%	31%

Source: Dell Computer Corporation Fiscal 1996 Annual Report; casewriter estimates from industry market share data from International Data Corporation

^aDell's fiscal year closes in alignment to calendar year stated

In August 1993, Dell reported a \$76 million loss for the second quarter of 1993, its first loss. The loss was tied to \$71 million in charges relating to the sell-off of excess inventory and the cost of scrapping a disappointing notebook computer line.⁸ The company also took restructuring charges to consolidate European operations that had become redundant and inefficient. Dell's profit margin fell to 2% for the first quarter, ending May 2, 1993—well below the company's target of 5% that they had achieved or exceeded for 11 consecutive quarters. With \$32 million in cash and cash equivalents, analysts thought Dell had enough cash and credit to last at least another year, but many wondered if the company had the resources to keep pace should the battle for market share intensify.⁹

Like many companies, we were always focused on our profit and loss statement. But cash flow was not a regularly discussed topic. It was as if we were driving along, watching only the speedometer, when in fact we were running out of gas.¹⁰

September 1993–January 1996

Dell shifted its focus from exclusively growth to liquidity, profitability, and growth. It adopted company-wide metrics around the new focus, requiring each business unit to provide detailed profit and loss statements. In July 1994, less than a year after shifting the company's focus, Dell exited the low margin indirect retail channel where, CFO Tom Meredith noted, “We were losing our shirts.”¹¹ Late in 1995, Dell instituted goals on ROIC (Return on Invested Capital) and CCC (Cash Conversion Cycle). Exhibit 2 presents Dell's CCC performance. The company took measures to improve its internal systems for forecasting, reporting, and inventory control. A new vendor certification program was put in place, reducing the number of suppliers, ensuring component quality, and improving delivery performance. Dell also brought in seasoned managers to lead the company during its next stage.

These changes, combined with Dell's re-entry into the notebook market, and its rapid introduction of computer systems based on Intel Corporation's new Pentium microprocessor chip, fueled the company's recovery. Dell's direct contact with customers helped it anticipate demand for newly developed Pentium-based systems and its low inventory of 386 and 486 technology made it less costly to move quickly to the new technology. Dell beat the competition to the marketplace with Pentium-based products and was the first in the

⁸Kyle Pope, “Dell Computer Posts Loss for Quarter, Backs Away from Forecast of Rebound,” *Wall Street Journal*, August 18, 1993, p. B6.

⁹Peter Burrows and Stephanie Anderson Forest, “Dell Computer Goes into the Shop,” *Business Week*, July 1993, p. 38.

¹⁰Michael Dell with Catherine Fredman, “Direct from DELL, Strategies That Revolutionized an Industry,” 1999, p. 47.

¹¹Rahul Jacob, “The Resurrection of Michael Dell,” *Fortune*, September 18, 1995, p. 117.

EXHIBIT 2
Working Capital
Financial Ratios
for Dell

	DSI ^a	DSO ^b	DPO ^c	CCC ^d
Q193	40	54	46	48
Q293	44	51	55	40
Q393	47	52	51	48
Q493	55	54	53	56
Q194	55	58	56	57
Q294	41	53	43	51
Q394	33	53	45	41
Q494	33	50	42	41
Q195	32	53	45	40
Q295	35	49	44	40
Q395	35	50	46	39
Q495	32	47	44	35
Q196	34	47	42	39
Q296	36	50	43	43
Q396	37	49	43	43
Q496	31	42	33	40

^aDSI (Days Sales of Inventory) = Net Inventory / (Quarterly COGS/90)

^bDSO (Days Sales Outstanding) = Net Accounts Receivables / (Quarterly Sales/90)

^cDPO (Days Payables Outstanding) = Accounts Payables / (Quarterly COGS/90)

^dCCC (Cash Conversion Cycle) = DSI + DSO - DPO

industry to achieve volume production of systems with the 120 mhz Pentium processor.¹² Exhibit 3 presents Dell's percent of computer system sales by processor type.

In July 1995, Dell became the first manufacturer to convert its entire major product line to the Pentium technology.¹³ By that time, in less than two years, the Pentium chip was at 133 MHz—the ninth upgrade. Dell was able to offer faster systems at the same price that rivals were marketing older Pentium technology. Because of its low finished goods inventory, Dell didn't have to dismantle PCs to replace the microprocessor when Intel Corporation discovered its Pentium chip was flawed in 1994. It was able to quickly manufacture systems with the "updated" Pentium chip, while others (i.e., Compaq) were still selling flawed systems from inventory. In a similar vein, Dell was able to begin shipping its Dell Dimension systems equipped with Microsoft Corporation's new Windows 95 operating system on August 25, 1995—the very day Microsoft launched the product. As a direct marketer, Dell was able to bring new component technology to the market within an average of 35 days—a third of the time it took competitors to move a new product through indirect channels.¹⁴

The Future

For its 1996 fiscal year, ended January 31, 1996, Dell reported revenue of \$5.3 billion with net income of \$272 million, or 5.1% of sales. Revenue was up 52% over the prior year compared with an industry increase of 31%. Exhibits 4 and 5 present Dell's Income Statement and Balance Sheet, respectively. Though favorable, the 1996 results suffered somewhat from component shortages. Michael Dell predicted the company's growth rate for the next year would again outpace the industry's growth.

¹²Anon, "Dell First to Ship Systems with New Pentium Processor," *PR Newswire*, April 19, 1995.

¹³Anon, "Dell Taking Orders for Factory-Installed Windows 95 on Dell Dimension Desktop PCs," *PR Newswire*, August 2, 1995.

¹⁴Judy Ward, "Runaway Horse: Michael Dell Wants to Rein In Growth: Shareholders Want Whip," *Financial World*, October 24, 1995, p. 36.

EXHIBIT 3
Percent of Dell
Computer Systems
Sales by
Microprocessor

Computer Systems	FY94	FY95	FY96
386 models	7%	0%	0%
486 models	92%	71%	25%
Pentium models	1%	29%	75%

Source: Dell Computer Corporation Fiscal 1994-96 Annual Reports

EXHIBIT 4
Profit and Loss
Statements for Dell
Computer
Corporation
(millions of dollars)

Fiscal Year	1996	1995	1994	1993	1992
Sales	\$5,296	\$3,475	\$2,873	\$2,014	\$890
Cost of Sales	4,229	2,737	2,440	1,565	608
Gross Margin	1,067	738	433	449	282
Operating Expenses	690	489	472	310	215
Operating Income	377	249	(39)	139	67
Financing & Other	6	(36)	0	4	7
Income					
Income Taxes	111	64	(3)	41	23
Net Profit	272	149	(36)	102	51

Source: Dell Computer Corporation Fiscal 1996 Annual Report

EXHIBIT 5
Balance Sheets for
Dell Computer
Corporation (millions
of dollars)

	Year Ended		
	January 28, 1996	January 29, 1995	January 30, 1994
Current Assets:			
Cash	55	43	3
Short Term Investments	591	484	334
Accounts Receivables, net	726	538	411
Inventories	429	293	220
Other	156	112	80
Total Current Assets	1,957	1,470	1,048
Property, Plant & Equipment, net	179	117	87
Other	12	7	5
Total Assets	2,148	1,594	1,140
Current Liabilities:			
Accounts Payable	466	403	NA
Accrued and Other Liabilities	473	349	NA
Total Current Liabilities	939	752	538
Long Term Debt	113	113	100
Other Liabilities	123	77	31
Total Liabilities	1,175	942	669
Stockholders' Equity:			
Preferred Stock (Note a)	6	120	NA
Common Stock (Note a)	430	242	NA
Retained Earnings	570	311	NA
Other	(33)	(21)	NA
Total Stockholders' Equity	973	652	471
	2,148	1,594	1,140

^a1,190,000 shares of preferred stock converted to common stock in fiscal year 1996.

Hampton Machine Tool Company

On September 14, 1979, Jerry Eckwood, vice president of the St. Louis National Bank, was considering a loan request from a customer located in a nearby city. The company, Hampton Machine Tool Company, had requested renewal of an existing \$1 million loan originally due to be repaid on September 30. In addition to the renewal of the existing loan, Hampton was asking for an additional loan of \$350,000 for planned equipment purchases in October. Under the terms of the company's request, both loans, totaling \$1.35 million, would be repayable at the end of 1979.

Since its establishment in 1915, Hampton Machine Tool Company had successfully weathered the severe cyclical fluctuations characteristic of the machine tool manufacturing business. In the most recent cycle Hampton had experienced record production and profitability during the mid- and late-1960s. Because Hampton's major customers included the military aircraft manufacturers and automobile manufacturers in the St. Louis area, the company's success in the 1960s reflected a strong automobile market and the heavy defense spending associated with the Vietnam War. Hampton rode the 1960s boom into the early 1970s. Hampton, along with the rest of the capital goods industry, experienced a severe decline in sales and profitability in the mid-1970s. Precipitous declines in the production of automobiles in St. Louis facilities reflected the 1973 oil embargo, subsequent increases in the price of gasoline, and the 1974-1975 recession. Massive reductions in defense spending in the post-Vietnam War period had a severe adverse impact on Hampton's other major customer segment, military aircraft manufacturers. Hampton's sales had bottomed out in the mid-1970s, and the several years prior to 1978 had seen a steady rebuilding of sales. Hampton's recovery was due primarily to three factors. First, military aircraft sales had increased substantially, reflecting both an expanding export market and a more benign domestic market. Second, though the automobile manufacturers in the area were not expanding, this segment of Hampton's market had at least stabilized. Finally, the adverse economic conditions in the mid-1970s had taken their toll in the regional capital goods industry. Consequently, Hampton's market share increased as many thinly capitalized competitors had been forced out of the industry. Hampton's recovery had suffered a mild setback, as 1978 sales were far below capacity. However, with a substantial backlog of firm sales orders, Hampton entered 1979 expecting its first year of capacity sales since 1972.

Hampton's conservative financial policies had contributed to its survival and success in the volatile capital goods industry. The company had traditionally maintained a strong working capital position as a buffer against economic uncertainty. As a result, the company had no debt on its balance sheet during the 10 years prior to December 1978. In a meeting in early December 1978, Benjamin G. Cowins, president of Hampton, requested the initial loan of \$1 million to facilitate purchasing the stock of several dissident shareholders. While Hampton had some cash in excess of that required for normal operations, excess cash was not sufficient to effect the stock redemption. Therefore, Mr. Cowins had asked Mr. Eckwood for a loan from the St. Louis National Bank. The loan of \$1 million was to be taken down at the end of December 1978. Hampton would make monthly interest payments at an interest rate of 1½% per month (approximately 18% on an annual basis) on the principal, which would be due at the end of September 1979. In support of this request, Mr. Cowins had submitted a forecast of

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EXHIBIT 1
Shipments at Selling
Price (thousands
of dollars)

		As Forecast Dec. 1978	Actual	As Forecast Sept. 1979
1979	January	\$1,302	\$ 861	
	February	1,872	672	
	March	1,635	1,866	
	April	1,053	1,566	
	May	1,293	873	
	June	1,479	1,620	
	July	1,488	723	
	August	1,797	507	
	Eight months total	\$11,919	\$8,688	
	September	\$ 1,299		\$2,163
	October	1,347		1,505
	November	1,311		1,604
	December	2,298		2,265

monthly shipments for 1979 (see Exhibit 1), a balance sheet dated November 30, 1978 (first column of Exhibit 2), and documentation of Hampton's backlog of sales orders. Mr. Eckwood felt at the time that the documentation provided by Mr. Cowins was sufficient to support favorable action on the request. Furthermore, Hampton had traditionally kept its ample cash balances on deposit at the St. Louis National Bank, and the bank's management knew Mr. Cowins well. Mr. Cowins, then 58 years old, had succeeded his father-in-law as president of Hampton in 1963. He was widely respected in the business community as an energetic and successful executive. In mid-December 1978, Mr. Eckwood had approved the loan to Hampton.

Hampton took down the loan at the end of December 1978. The proceeds of the loan plus \$2 million in excess cash were used immediately to repurchase 75,000 shares of Hampton's \$10 par value stock from several dissident shareholders at an aggregate cost of \$3 million.

After the loan was made, Mr. Cowins regularly sent the bank profit and loss statements and balance sheets documenting Hampton's financial condition. In preparing his analysis of Mr. Cowins's request, Mr. Eckwood focused on the documents presented in Exhibits 1, 2, and 3. In examining Hampton's financial statements, Mr. Eckwood recalled that Hampton's selling terms were 30 days net. Occasionally, a customer placing a large order would make an advance payment to help Hampton finance the construction of the machines ordered. Because Hampton's products were largely made to order, the construction period involved five to six months for some of the larger, more complex types of machines. Upon completion and shipment of orders against which advances had been paid, Hampton deducted the amount of the advance from the amount billed to the customer. Also, Mr. Eckwood understood that the company purchased its materials on terms of net 30 days.

In a letter to Mr. Eckwood, Mr. Cowins had made his request for the extension of the existing Hampton note until the end of the year plus an additional loan of \$350,000 to finance equipment purchases. The additional loan would be needed by the end of October and would be payable at the end of the year, with monthly interest payments remaining 1½% of principal. In his letter, Mr. Cowins commented at some length on the company's financial condition, the reasons for the shortfall of actual from projected 1979 shipments, and Hampton's substantial backlog of firm sales orders. In addition, Mr. Cowins stated that he expected to be able to repay both loans in full by December 31, 1979. Mr. Cowins's letter is presented in full as Exhibit 4. Although Hampton would not need the additional \$350,000 loan until the end of October, the maturity date of the existing note was fast approaching. Therefore, Mr. Eckwood needed to decide upon a response to Mr. Cowins's request.

EXHIBIT 2
Balance Sheets, 1978–1979 (thousands of dollars)

	1978		1979			
	Nov.	Dec.	Mar.	June	July	Aug.
Cash	\$2,520	\$ 491	\$ 505	\$1,152	\$1,678	\$1,559
Accounts receivable, net	1,245	1,863	1,971	1,893	1,269	684
Inventories	2,601	2,478	3,474	3,276	3,624	4,764
Current assets	6,366	4,832	5,950	6,321	6,571	7,007
Gross fixed assets	4,010	4,010	4,010	4,010	4,010	4,010
Accumulated depreciation	2,998	3,010	3,040	3,070	3,080	3,090
Net fixed assets	1,012	1,000	970	940	930	920
Prepaid expenses	62	40	39	24	24	42
Total assets	\$7,740	\$5,872	\$6,959	\$7,285	\$7,525	\$7,969
Notes payable, bank	—	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Accounts payable	\$348	371	681	399	621	948
Accruals	561	777	849	678	585	552
Taxes payable ^a	150	74	373	354	407	479
Customer advance payments	840	1,040	1,040	1,566	1,566	1,566
Current liabilities	1,899	3,262	3,943	3,997	4,179	4,545
Common stock (\$10 par value)	1,178	428	428	428	428	428
Surplus	4,363	2,182	2,588	2,860	2,918	2,996
Net worth	5,541	2,610	3,016	3,288	3,346	3,424
Total liabilities and net worth	\$7,440	\$5,872	\$6,959	\$7,285	\$7,525	\$7,969

a. Tax payments in 1979 include \$75,000 due March 15 on underpayment of 1978 taxes and four equal payments of \$181,000 due on the 15th of April, June, September, and December for estimated 1979 tax liability, with any underpayment of 1979 taxes due March 15, 1980.

Income Statements, 1978-1979 (thousands of dollars)

	Fiscal Year Ending 12/31/78	1979												Eight Months Ending 8/31/79
		Dec. 1978	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.				
Net sales	\$7,854	\$1,551	\$861	\$672	\$1,866	\$1,566	\$873	\$1,620	\$723	\$507	\$8,688			
Cost of Sales ^a	5,052	1,122	474	369	1,362	1,137	567	1,197	510	276	5,892			
Gross profit	2,802	429	387	303	504	429	306	423	213	231	2,796			
Selling and administrative expenses	1,296	248	103	61	205	172	96	130	87	66	920			
Interest expense	—	—	15	15	15	15	15	15	15	15	120			
Net income before taxes	1,506	181	269	227	284	242	195	278	111	150	1,756			
Income taxes	723	87	129	109	136	116	94	133	53	72	842			
Net income	\$ 783	\$ 94	\$ 140	\$ 118	\$ 148	\$ 126	\$ 101	\$ 145	\$ 58	\$ 78	\$ 914			
Dividends	\$ 50	\$ 25	—	—	—	—	—	\$ 100	—	—	\$ 100			

a. Includes depreciation charges of \$150,000 in 1978, \$12,000 in December 1978, and \$10,000 per month in 1979.

EXHIBIT 4

HAMPTON MACHINE TOOL COMPANY

East St. Louis, Illinois

September 12, 1979

Mr. Jerry Eckwood
Vice President
St. Louis National Bank
St. Louis, Missouri

Dear Mr. Eckwood:

I enclose the company's August 31 financial statements. While these statements show our cash balance as \$1,559,000, you will note we have an obligation to a customer for cash advances of \$1,566,000, and we expect to ship this order over the next three months. With respect to our note for \$1,000,000 due September 30, we request that you renew it until the end of 1979. We also wish to borrow an additional \$350,000 to be available at the end of October to be repaid by the end of the year with interest at the rate of 1½% per month on the principal. This additional loan is required to purchase certain needed equipment. At the end of the year, as you can see for yourself, we expect to be able to have enough cash on hand to retire our obligations in full.

For the past month or more we have been producing at capacity and expect to continue at this rate through the end of the year and beyond. On August 31, our backlog of unfilled orders amounted to about \$16,500,000—approximately 90% of annual capacity. I should stress that these are firm orders from respected customers.

Despite our backlog, our shipment schedule has been upset, particularly the last several months, because we have had to wait on our suppliers for shipment of electronic control mechanisms. On August 31, we had seven machines with an accumulated cost of about \$1,320,000 completed except for the installation of these electronic components. The components were finally received last week and will enable us to complete a number of machines in the next few weeks. After this imminent reduction in work in progress of about \$1,320,000, the remainder of our work-in-progress inventories will probably remain stable for the foreseeable future because of our capacity rate of production.

We bought raw materials beyond our immediate needs in July and August to be assured of completing our orders scheduled to be shipped by the end of the year. We have accumulated about \$420,000 worth of scarcer components above our normal raw materials inventories. The extra \$420,000 will be used up by the end of the year, bringing our raw materials inventories back to normal levels for capacity production. Because we bought ahead this way, we expect to cut raw materials purchases to about \$600,000 a month in each of the four remaining months of 1979.

Our finished goods inventories are, of course, negligible at all times since we ship machines within a day of completion.

Our revised shipment estimates (at selling price) are as follows:

September	\$2,163,000
October	1,505,000
November	1,604,000
December	2,265,000
	<u>\$7,537,000</u>

EXHIBIT 4
(concluded)

The shipment estimates include the \$2,100,000 order for the General Aircraft Corporation. We are now scheduled to ship against this order as follows: September, \$840,000; October, \$840,000; November, \$420,000. Since we obtained a \$1,566,000 advance from General Aircraft on this order, we will be due nothing on these shipments until their \$1,566,000 credit with us is exhausted.

You will note the decline in our accrued expenses. As I mentioned to you last month when you visited us, we have been paying off commissions due to our three principal sales people (who are also large stockholders in the company). Last year when we needed funds to redeem part of our capital stock, these people agreed to defer their commissions until the funds could be more easily spared. In August, we paid off the last of these back commissions. This has been the principal cause of the decline in accruals, which, like prepaid expenses, normally do not change much from month to month. Assuming accruals will stay about the same as on August 31, our monthly outlay for all expenses other than interest and raw materials purchases should be around \$400,000 per month.

Due to poor economic conditions and our desire to conserve cash, we have spent very little on new equipment in the last several years, and this has contributed somewhat to the difficulties we have had in maintaining production at a capacity rate this year. We feel that we should not further postpone replacing certain essential equipment if we are to avoid a possible major breakdown at an inconvenient time. Therefore, we think it necessary to purchase additional equipment costing \$350,000 in October to maintain production efficiency. The proceeds from the additional loan we have requested will be used at the end of October to pay for this equipment. This equipment has an estimated life of eight years, an estimated net salvage value of zero, and the \$350,000 purchase price will be depreciated on a straight-line basis.

Our tax people tell us that the equipment will qualify for a 10% investment tax credit (ITC). However, the tax savings of \$35,000 will not affect our scheduled tax payments this year. We are scheduled to pay \$181,000 in taxes on September 15 and to make another payment of the same amount on December 15. As I understand it, the ITC savings of \$35,000 will reduce both our tax liability and the taxes payable on our balance sheet as well as increase reported earnings. However, the cash-flow impact of this savings will not be felt until March 1980 when we make our final settlement with the government on 1979 taxes.

Despite temporary bottlenecks that reduced shipments, our profits for the year to date have been quite satisfactory. With raw materials and components supply assured and the efficiency provided by the new equipment we plan to purchase, we feel confident we can meet our shipment forecasts for the rest of the year. Furthermore, the business that we expect to ship in the next four months is on our books on profitable terms. While our profit, as you know, varies with the item involved, our engineering estimates indicate that we expect to earn a profit before taxes and interest of about 23% of sales on these shipments. Even after taking into account our tax rate of 48% and the interest we must pay on our notes, 1979 looks like a very good year. Because of these good results and in view of our conservative dividend policy during the last several years of economic uncertainty, we plan to pay a dividend to our stockholders. Our dividend disbursements in 1979 have continued to be quite modest, and we want to be sure that those stockholders who stood by us last December have no cause to regret their action. Under the circumstances, we feel that a dividend of \$150,000 payable in December is the least we can do in view of our high earnings and our stockholders' patient support.

If there is anything further you need to know, please do not hesitate to write or phone.

Sincerely yours,
(Signed) B. G. Cowins
President

Debt Policy and Long-Term Capital Structure, Long-Term Financing, and Risk Management

Part 2

looked back on two decades of turbulence in the firm's operations. Difficulties in the 1970s and the mega-merger with Conoco had led the company to abandon its long-held policy of an all-equity capital structure. Following the Conoco acquisition in 1981, Du Pont's ratio of debt to total capital had peaked at 42%—the highest in the firm's history. The rapid escalation in financial leverage had cost Du Pont its cherished AAA bond rating. Du Pont had not regained the top rating despite a reduction in debt to 36% of capital by the end of 1982.

The operations of Du Pont had changed dramatically in the past 20 years. With the task of digesting Conoco under way, management faced an important financial policy decision—determining a capital structure policy appropriate for Du Pont in the 1980s. This decision would have implications for Du Pont's financial performance and possibly for its competitive position as well.

E. I. du Pont de Nemours and Company was founded in 1802 to manufacture gunpowder. By 1900, Du Pont had begun to expand rapidly through research and acquisitions. A technological leader in chemicals and fibers, the firm grew to be the largest U.S. chemical manufacturer. At the end of 1980, the firm ranked fifteenth on the Fortune 500 list of U.S. industrials. The 1981 merger with Conoco, Inc., a major oil company, elevated Du Pont to seventh place on the list of U.S. industrials.

Capital Structure Policy, 1965-1982

Historically, Du Pont had been well known for its policy of extreme financial conservatism. The company's low debt ratio was feasible in part because of its success in its product markets. Du Pont's high level of profitability allowed it to finance its needs through internally generated funds (see Exhibits 1 and 2 for selected financial data). In fact, financial leverage was actually negative between 1965 and 1970, since Du Pont's cash balance exceeded its total debt. Du Pont's conservative use of debt combined with its profitability and technological leadership in the chemical industry had made the company one of the few AAA-rated manufacturers. Du Pont's low-debt policy maximized its financial flexibility and insulated its operations from financing constraints.

In the late 1960s, competitive conditions in Du Pont's fibers and plastics businesses began to exert pressure on the firm's financial policy. Between 1965 and 1970, increases in industry capacity outstripped demand growth, resulting in substantial price declines.