PART V

1. The Stowe Manufacturing Company's balance sheet and income statement for last year are as follows:

Balance Sheet (in Millions of Dollars)			
Assets		Liabilities and Equity	
Cash and marketable securities	$ 887	Accounts payable	$ 724
Accounts receivable	2,075	Accrued liabilities	
		(salaries and benefits)	332
Inventories*	2,120	Other current liabilities	1,665
Other current assets	300	Total current liabilities	2,721
Total current assets	$5,382	Long-term debt and other liabilities	1,677
Plant and equipment (net)	3,707		296
Other assets	687	Common stock	5,082
Total assets	$9,776	Retained earnings	$5,378
		Total stockholders' equity	$9,776
		Total liabilities and equity	
*Assume that average inventory over the year was $2,120 million, i.e., the same as ending inventory.			

Income Statement (in Millions of Dollars)	
Net sales*	$11,990
Cost of sales	6,946
Selling, general, and administrative expenses	2,394
	581
Other expenses	$ 9,921
Total expenses	2,069
Earnings before taxes	825
Taxes	$ 1,244
Earnings after taxes (net income)	

Determine the length of Stowe's

a. Inventory conversion period.

b. Receivables conversion period.

c. Operating cycle.

d. Payables deferral period.

e. Cash conversion cycle.

2. Piedmont Products Inc. (PPI) has current sales of $60 million. Sales are expected to grow to $80 million nest year. PPI currently has accounts receivable of $9 million, inventories of $15 million, and net fixed assets of $21 million. These assets are expected to grow at the same rate as sales over the next year. Accounts payable are expected to increase from their current level of 15 million to a new level of $19 million next year. PPI wants to increase its cash balance at the end of next year by $3 million over its current cash balance. Earnings after taxed next year are forecasted to be $12 million. PPI plans to pay a $2 million dividend. PPI's marginal tax rate is 40 percent.

How much external financing is required by PPI next year?

3. Use the percentage of sales forecasting method to compute the additional financing needed by Lambrechts Specialty Shops, Inc. (LSS), if sales are expected to increase from a current level of $20 million to a new level of $25 million over the coming year. LSS expects earnings after taxes to equal $1 million over the next year (19X3). LSS intends to pay a $300,000 dividend next year. The current year balance sheet for LSS is as follows:

Lambrechts Specialty Shops, Inc. Balance Sheet as of December 31, 19X2			
Cash	$ 1,000,000	Accounts payable	$ 3,000,000
Accounts receivable	1,500,000	Notes payable	3,000,000
Inventories	6,000,000	Long-term debt	2,000,000
Net fixed assets	3,000,000	Stockholders' equity	3,500,000
Total assets	$11,500,000	Total liabilities and equity	$11,500,000

All assets, except "cash", are expected to vary proportionately with sales. Pf total liabilities and equity, only "accounts payable" is expected to vary proportionately with sales.

4. Exman Company performed a study of its billing and collection procedure and found that an average of 8 days elapses between the time when a customer's payment is received and when the funds become usable by the firm. The firm's annual sales are $540 million.
   a. Assuming that Exman could reduce the time required to process customer payments by

1.5 days, determine the increase in the firm's average cash balance.

b. Assuming that these additional funds could be used to reduce the firm's outstanding bank loans (current interest rate is 8 percent) by an equivalent amount, determine the annual pretax savings in interest expenses.

5. J-Mart, a nationwide department store chain, processes all its credit sales payments at its suburban Detroit headquarters. The firm is considering the implementation of a lockbox collection system with an Atlanta bank to process monthly payments form its southeastern region. Annual credit sales collections from the region are $60 million. The establishment of the lockbox system would reduce mailing, processing, and check-clearing time from 8 days currently to 3.5days, reduce company processing costs by $25,000 per year, and reduce the compensating balance of its Detroit bank by $200,000. The Atlanta bank would not charge any fee for the lockbox service but would require J-Mart to maintain a $500,000 compensating balance. Funds released by the lockbox arrangement could be invested elsewhere in the firm to earn 15 percent before taxes. Determine the following:

   a. The amount of funds released by the lockbox arrangement.
   b. The annual (pretax) earnings on the released funds.
   c. The annual net (pretax) benefits to J-Mart of establishing the lockbox system with the Atlantic bank.

6. Miranda Tool Company sells to retail hardware stores on credit terms of "net 30'. Annual credit sales are $18 million and are spread evenly throughout the year. The company's variable cost ratio is 0.70, and its accounts receivable average $1.9 million. Using this information, determine the following for the company:

   a. Average daily credit sales.
   b. Average collection period.
   c. Average investment in receivables.

7. Plant Nutrients, Inc. (PNI) sells fertilizers and pesticides to various retail hardware and nursery stores on terms of "2/10, net 30". The company currently does not grant credit to retailers with a 3 (fair) or 4 (limited) Dun and Bradstreet Composite Credit Appraisal. An estimated $5,475,000

in additional sales per year could be generated if PNI extended credit to retailers in the “fair” category. The estimated average collection period for these customers is 75days, and the expected bad-debt loss ratio is 5 percent, The company also estimates that an additional inventory investment of $800,000 is required for the anticipated sales increase. Approximately 10 percent of these customers are expected to take the cash discount. PNI’s variable cost ratio is 0.75, and its required pretax rate of return on investments in current assets is 18 percent. Determine the following:

a. Marginal profitability of additional sales.
b. Cost of additional investment in receivables.
c. Additional bad-debt loss.
d. Cost of additional investment in inventory.
e. Net change in pretax profits.

8. Jenkins Supply Corporation sells $120 million of its products to wholesalers on terms of “net 50”. Currently, the form’s average collection period is 65 days. In order to speed up the collection of receivables, Jenkins is considering offering a 1 percent cash discount if customers pay their bills within 15 days. The firm expects 40 percent of its customers to take the discount and its average collection period to decline to 40 days. The firm’s required pretax return on receivables investments is 20 percent. Determine the net effect on Jenkins’ pretax profits of offering a 1 percent cash discount.

9. General Cereal Company purchases various grains (e.g., wheat and corn) that it processes into ready-to eat cereals. Its annual demand for wheat is 250,000 bushels. Assume that demand is uniform throughout the year. The average price of wheat is $3.0625 per bushel (delivered). Annual inventory carrying costs are 16 percent of inventory value. The costs of placing and receiving an order are $98. Assume that inventory replenishment occurs virtually instantaneously. Determine the following:

a. Economic order quantity.
b. Total annual inventory costs of this policy.
c. Optimal ordering frequency.

10. Allstar Shoe Company produces a wide variety of athletic-type shoes for tennis, basketball, and running. Although sales are somewhat seasonal, production is uniform throughout the year. Allstar's production and dales average 1.92 million pairs of shoes per year. The company purchases shoelaces for its entire product line. Shoelaces are brought in lots of 10,000 pairs at a price of $800 per lot. Ordering costs are $20, including the cost of preparing the purchase order and inspecting the shipment when it arrives at the company's warehouse. Annual inventory carrying costs average 15 percent of the inventory value. Assuming that the shoelace manufacture is located nearby and that orders are filled on the same day they are placed (that is, virtually instantaneously), determine the following:

a. The EOQ for shoelaces.

b. The total annual inventory costs of this policy.

c. The frequency with which Allstar should place its orders for shoelaces.