10. Operating Strategies. Cash Management. Credit Policy

Problem 49

During 2005 Myears Oil Co. has annual sales of $2 920,000. Its average levels of accounts receivable, inventory, and accounts payable are as follows:

Accounts receivable	$ 208,000
Inventory	56,000
Accounts payable	112,000

(a) Assuming a 365-day year, what are average daily sales?
(b) How many days of sales are represented by accounts receivable?
(c) How many days of sales are represented by inventory?
(d) How many days of sales are represented by accounts payable?
(e) What is the net cash conversion cycle?

Solution

(a) The average sales per day is 2 920 : 365 = $8,000 .
(b) The accounts receivable conversion period is 208 : 8 = 26 days.
(c) The inventory conversion period is 56 : 8 = 7 days.
(d) The payables deferral period is 112 : 8 = 14 days.
(e) The net cash conversion cycle is 26 + 7- 14 = 19 days.

Problem 50

You are required to improve the cash management of the company. You easily determine that the firm makes 25,0 million in credit purchases. You find out that the firm always pays its bills as soon as they are received.
This practice results in the firm's paying its payables 20 days before they are due. If the firm paid its payables only when due and the available cash released was invested in marketable securities earning 10%, what would be the net value added for equityholders.

Solution

	25,0	credit purchases
:	360	days
	0,069	per day
x	20	days
	1,389	permanent increase in cash
x	10%	
	0,139	annual increase in earnings
:	10%	
	1,389	NPV, net benefit

Problem 51

John Hook, manager of New Testko, has some extra space in one store and is trying to decide between opening a bicycles or a computer parts.
The relevant data is as follows:

	bicycles	computer parts	
Average age of inventory	60	45	days
Average collection period	10	15	days
Bad-debt loss	2%	1%	
Annual sales	300 000	450 000	
Operating cost as a percentage of sales	0,25	0,5	

John Hook estimates that any investment in current assets has an opportunity cost of 10%.

(a) What is the average level of inventory for each plan measured in sales dollars? Measured in terms of cost-of-goods-sold dollars ?
(b) What is the average level of accounts receivable for each plan ?
(c) What is the cost of the required increase in current assets for each plan ?
(d) What is the bad-debt expense for each plan ?
(e) What is the gross profit (sales - cost of goods sold) for each plan ?
(f) What plan should John Hook choose?
(g) Which plan should John Hook choose if the opportunity cost of investing in current assets is only 5%?

Solution

			bicycles	computer parts
(a)	Average inventories			
	measured in sales terms		50 000	56 250
	measured in COGS terms		12 500	28 125
(b)	A/R		8 333	18 750
(c)	Cost =	opp.cost * (I + A/R measured in COGS)		
	for	10%	2 083	4 688
		5%	1 042	2 344
(d)	Bad debt expense		6 000	4 500
(e)	Gross profit		225 000	225 000
(f)	NPV = (Gross profit - Bad debt expense - Cost)/opp. cost			
			2 169 167	2 158 125
			Choose bicycles	

Problem 52

CRJ Corporation, plans to liberalize its credit policy by extending its current 18-day credit period to 60 days. The company expects that this will increase its current sales (all credit) of $200,000 by 50%. Unfortunately, however, bad debts are also expected to rise to 5% up from the current level of 2% of total sales. The company's operating cost of 80% of sales and its credit collection costs of $5,000 are expected to remain the same. The company is in the 20% tax bracket, and it requires all investments to return 12%. Would you advise the company to go ahead with the liberalization plan ? Why ? Exactly how much richer or poorer will the company be if it relaxes its credit policy ?

Solution

	Proposed	Current	Change in Cash Flows
Revenues	300 000	200 000	100 000
Operating Costs	240 000	160 000	80 000
Bad debts	15 000	4 000	11 000
Coll costs	5 000	5 000	0
CFBT	40 000	31 000	9 000
Taxes	8 000	6 200	1 800
CFAT	32 000	24 800	7 200
A/R	50 000	10 000	40 000

Change in the firm's market value

NPV = 60 000 -40 000 = 20 000

Adopt the liberalization plan if NPV>0

Problem 53

Ronald Smith, is the credit manager for the Orange Clothing Stores.
The stores currently under Ronald Smith's responsibility have annual credit sales of $60 million. Operating costs total 90% of sales. The average collection period is 40 days, and bad-debt losses total 5% of sales.
The Grant Corporation, has guaranteed that it can reduce the average collection period to 20 days, and the bad-debt loss to 2,0% of sales.
However, Ronald Smith estimates that the changes necessary to implement the proposal will reduce annual credit sales to $30 million. Any reduction in current assets will allow to lower liabilities by the same amount.
The estimated cost of short-term credit is 5%. Grant Corporation will charge an annual fee of $10,000 for its service. Ronald Smith will figure the marginal benefits and costs of hiring Grant Corporation before making final decision. Assume Grant Corporation is hired.
(a) What will be the marginal savings from the reduced bad-debt loses ?
(b) What will be the marginal savings from the reduced investment in accounts receivable ?
(c) What will be the marginal expense of lost sales ?
(d) What should Ronald Smith do ?

Solution

	Current	Proposed	Change in Cash Flows
Revenues	60,000	30,000	-30,000
Operating Costs	54,000	27,000	-27,000
Bad debts	3,000	0,600	-2,400
Coll costs			
Annual fee		0,010	
CFBT	3,000	2,390	-0,600
Taxes			
CFAT	3,000	2,390	-0,610
A/R	6,667	1,667	-5,000

Change in the firm's market value

NPV = -12,200 + 5,000 = -7,200

Reject the plan if NPV<0