

Cash Cycle / Cash Conversion Period

Problem 2:

MAX Company, a producer of paper dinnerware, has annual sales \$10 million and a cost of goods sold of 75% of sales. MAX has an average age of inventory of 60 days, an average collection period 40 days, and an average payment period of 35 days.

Find - Cash that MAX needs to use in cash conversion cycle

Sol: From that we have:

$$\begin{aligned} \text{Sale} &= 10 \\ \text{COGS} &= 7.5 \end{aligned}$$

$$\begin{aligned} (1) \text{ Cash investment in inventory} & 1.23288 \\ (2) \text{ Cash investment in A/R} & 1.09589 \\ (3) \text{ Cash investment in A/P} & 0.71918 \end{aligned}$$

Cash required to support cash conversion cycle = (1) + (2) – (3) = 1.60959 Million

- If MAX could reduce average collection period by 5 days

Sol: From this case, it turns out that:

$$\begin{aligned} \text{Sale} &= 10 \\ \text{COGS} &= 7.5 \end{aligned}$$

$$\begin{aligned} (1) \text{ Cash investment in inventory} & 1.23288 \\ (2) \text{ Cash investment in A/R} & 0.95890 \\ (3) \text{ Cash investment in A/P} & 0.71918 \end{aligned}$$

Cash required to support cash conversion cycle = (1) + (2) – (3) = 1.47260 Million

Problem 4:

Garrett Industries turns over its inventory 6 times each year; it has an average collection period of 45 days and an average payment period of 30 days. The firm's annual operating-cycle investment is \$3 million. Assume a 360-day year.

- a) Calculate firm's operating cycle, cash conversion cycle, its daily cash operating expenditure, and the amount of resources needed to support its cash conversion cycle.

Sol:

Operating cycle	= 60 + 45 days = 105 days
Cash conversion cycle	= 60 + 45 – 30 days = 75 days
Daily cash	= 3 million / 105 days = 28,571.4286
Minimum cash required	= 28,571.4286 x 75 days = 2,142,857.1429

- b) Find the firm's cash conversion cycle and resource investment requirement if it makes the following changes simultaneously.

- (1) Shortens the average age of inventory by 5 days.
- (2) Speeds the collection of accounts receivable by an average 10 days.
- (3) Extends the average payment period by 10 days.

Sol:

Cash conversion cycle	= 55 + 35 – 40 days = 50 days
Minimum cash required	= 28,571.4286 x 50 days = 1,666,666.6667

- c) Discuss possible management that might be able to reduce the cash conversion cycle.

Sol:

From cash cycle = Inventory days + A/R days – A/P days, the possible ways to reduce the cash cycle is to:

- (1) Shorten inventory days
- (2) Speed up collection days or A/R days
- (3) Delay payment period or A/P days