Asset utilization ratios: number of days in cash cycle.

Inventory Turnover

\[ \frac{\text{COGS}}{\text{Inventory}} = \frac{\text{COGS}}{\text{Inv.}} = \text{"how many times did we run inventory down to zero and then immediately restock?"} \]

\[ \frac{\text{COGS}}{\text{Inv.}} \text{ ← Inv. on shelves on last day} \]

\[ \frac{\text{COGS}}{\text{Inv.}} \text{ ← Inv. we sold during year} \]

* As long as we are not running out of stock and foregoing sales, the higher this ratio is the better.

Example: \[ \frac{\text{COGS}}{\text{Inv.}} = \frac{5000}{1000} = \frac{\$5 \text{ COGS}}{\$1 \text{ Inv.}} \]

Days' sales in inventory

\[ \frac{365 \text{ days}}{\text{COGS/Inv.}} = \text{"how long it took us to sell one load of inventory!"} \]

Example: \[ \frac{365}{5} = 73 \text{ days} \]

Days to sell inventory

Days to collect AR

Receivables Turnover

\[ \frac{\text{Net sales}}{\text{Accounts Receivables}} = \frac{\text{Sales}}{\text{AR}} = \text{"how many times did we collect all AR & then loan it out again per year."} \]

Example: \[ \frac{\text{Sales}}{\text{AR}} = \frac{\$10,000}{1000} = 10 \text{ times} \]

Days sales in Receivables

\[ \frac{365 \text{ days}}{\text{Sales/AR}} = \text{"Average time to collect AR,"} \]

Example: \[ \frac{365 \text{ days}}{10} = 36.5 \text{ days} \]

Payables Turnover

Days to Pay Bills

\[ \frac{\text{COGS}}{\text{Accounts Payable}} = \frac{\text{COGS}}{\text{AP}} \]

Example: \[ \frac{\text{COGS}}{\text{AP}} = \frac{5000}{800} = 6.25 \]

\[ \frac{365 \text{ days}}{\text{COGS/AP}} = \frac{365 \text{ days}}{6.25} = 58.4 \text{ days to pay bills} \]

Operating cycle = Days to sell inventory + Days to collect AR

\[ = 73 + 36.5 = 109.5 \]

Cash cycle = Operating cycle - Days to Pay Bills

\[ = 109.5 - 52 = 57.5 \]
Operating cycle in days = 73 + 36.5 = 109.5 days

Cash cycle in days = 109.5 - 58.4 = 51.1 days