Assignment_2b

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1 Introduction

- **cash-to-cash cycle (CCC)** measures the time it takes for a company to convert its investments in inventory and other resources into cash flows from sales. It comprises the following components:
- **Days Inventory Outstanding (DIO):** The average number of days that a company holds inventory before selling it.
- **Days Sales Outstanding (DSO):** The average number of days it takes to collect payment after a sale has been made.
- **Days Payable Outstanding (DPO):** The average number of days a company takes to pay its suppliers.

Calculation Formulas

$$
\begin{aligned}
&\text{DIO} = \left(\frac{\text{Average Inventory}}{\text{Cost of Goods Sold}}\right) \times 365 \\
&\text{DSO} = \left(\frac{\text{Average Accounts Receivable}}{\text{Net Sales}}\right) \times 365 \\
&\text{DPO} = \left(\frac{\text{Average Accounts Payable}}{\text{Cost of Goods Sold}}\right) \times 365 \\
&\text{CCC} = \text{DIO} + \text{DSO} - \text{DPO}
\end{aligned}
$$

Walmart's Cash-to-Cash Cycle Calculation

1.1 Walmart's Cash-to-Cash Cycle Calculation:

Days Inventory Outstanding (DIO):

Average Inventory (2023): $\frac{63{,}843+56{,}481}{2} = 60,162$

Cost of Goods Sold (2023): \$466,549 million

DIO $= \left(\frac{60{,}162}{466{,}549}\right) \times 365 = 47.07$ days

Days Sales Outstanding (DSO)

Average Accounts Receivable (2023): $\frac{3{,}519+3{,}094}{2} = 3,307$

Net Sales (2023): \$611,289 million

DSO $= \left(\frac{3{,}307}{611{,}289}\right) \times 365 = 1.97$ days

Days Payable Outstanding (DPO)

Average Accounts Payable (2023): $\frac{50{,}257+46{,}092}{2} = 48,175$

Cost of Goods Sold (2023): \$466,549 million

DPO $= \left(\frac{48{,}175}{466{,}549}\right) \times 365 = 37.69$ days

Cash-to-Cash Cycle (CCC)

CCC $= 47.07 + 1.97 - 37.69 = 11.35$ days

1.2 Costco's Cash-to-Cash Cycle Calculation

Days Inventory Outstanding (DIO)

Average Inventory (2023): $\frac{17{,}907+16{,}651}{2} = 17,279$

Cost of Goods Sold (2023): \$212,586 million

DIO $= \left(\frac{17{,}279}{212{,}586}\right) \times 365 = 29.70$ days

Days Sales Outstanding (DSO)

Average Accounts Receivable (2023): $\frac{2{,}241+2{,}285}{2} = 2,263$

Net Sales (2023): \$237,710 million

DSO $= \left(\frac{2{,}263}{237{,}710}\right) \times 365 = 3.47$ days

Days Payable Outstanding (DPO)

Average Accounts Payable (2023): $\frac{14{,}838+14{,}903}{2} = 14,871$

Cost of Goods Sold (2023): $212,586 million

DPO = $\left(\frac{14{,}871}{212{,}586}\right) \times 365 = 25.52$ days

Cash-to-Cash Cycle (CCC)

C2C = $29.70 + 3.47 - 25.52 = 7.65$ days

1.3 Comparison:

Walmart: 11.35 days

Costco: 7.65 days

1.4 Conclusion:

Costco has a shorter cash-to-cash cycle (7.65 days) compared to Walmart (11.35 days), indicating Costco converts its inventory and resources into cash more quickly than Walmart. This efficiency could be attributed to Costco's business model of rapid inventory turnover and efficient inventory management.