

HIGH-VOLUME

WORKSHEET 3 OF 9

# Working Capital Ratio Walkthrough

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*Step-by-step calculation of the four ratios that together describe how your working capital moves. Run quarterly, or monthly if CCC has been lengthening.*



Complementary worksheet for  
*Financial Ratio Analysis*  
by Ibrahim Anwar

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## What This Is For

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A structured calculation that converts three balance-sheet inputs into one operational number: how many days of working capital are currently locked inside the business's operational cycle, and what does that translate to in dollars. The Cash Conversion Cycle ( $CCC = DIO + DSO - DPO$ ) is the single ratio that most operators have never calculated, even though every working capital credit application they submit contains all the inputs needed to derive it.

This worksheet exists for the operator who has been told they need more working capital without being shown where it is or how it moves. The answer is almost always visible in DIO, DSO, and DPO separately — and the combined CCC makes the answer concrete. A 22-day reduction in CCC on \$3 million annual revenue frees approximately \$181,000 in working capital without any new credit. That number is not a projection. It is a calculation from data the business already has.

# Benefits

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What you get when you actually run this worksheet on a real situation:

- Translates three abstract ratio calculations into one operational dollar figure: working capital currently locked in the cycle.
- Identifies which of the three components (DIO, DSO, DPO) has the most headroom for improvement in your specific business.
- Provides the concrete basis for a working capital credit application — the cycle length and dollar amount are verifiable from your own records.
- Shows the working capital that would be freed if any single component were shortened by 10 days, without new credit or new revenue.
- Creates the before/after record that demonstrates improvement to a bank or investor in subsequent quarters.

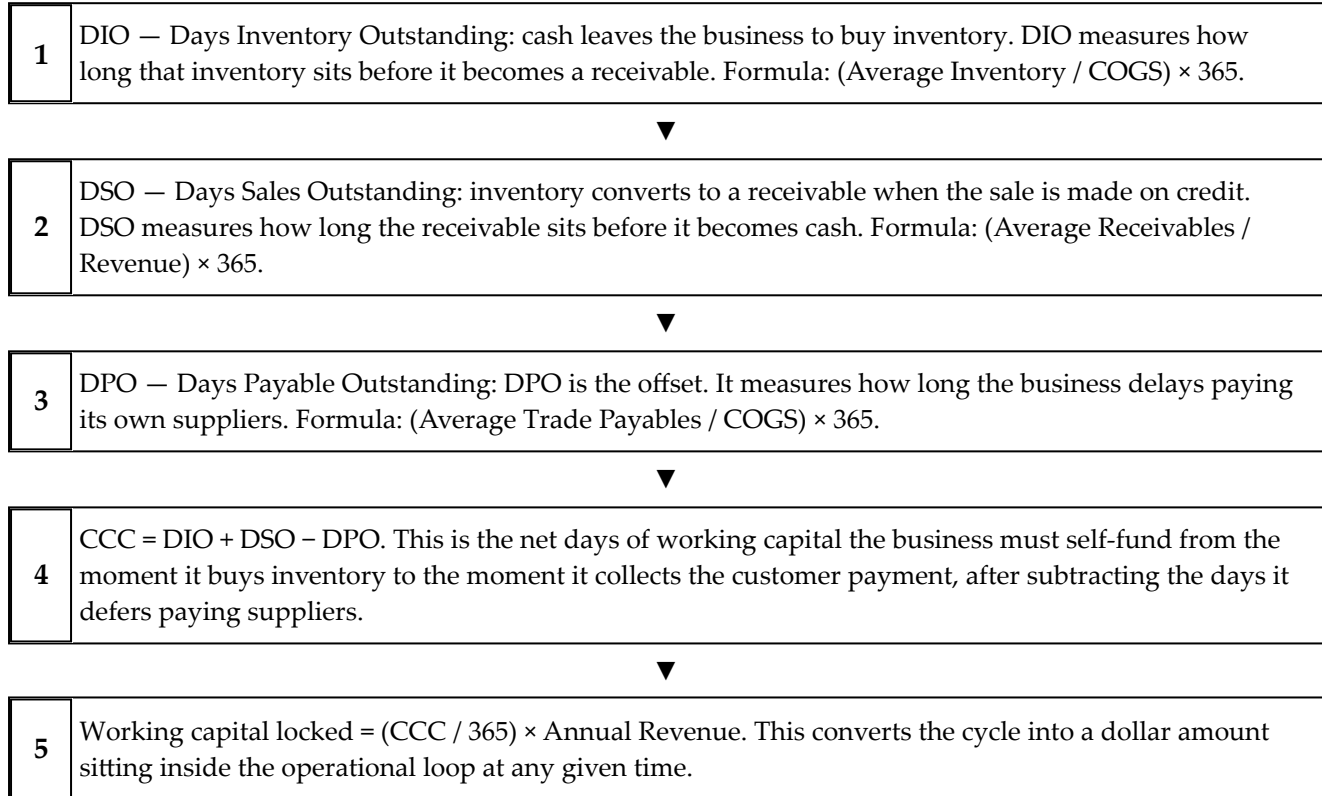
# Framework To Use

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## — CCC Three-Component Chain

$CCC = DIO + DSO - DPO$ . Each component has a different lever and a different intervention logic.

### FROM INVENTORY PURCHASE TO CASH RECEIVED – THE OPERATIONAL CYCLE



# How To Use

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Follow these steps in order. Each one builds on the previous.

- 1** Pull the financial statements for the period. You need: opening and closing inventory, COGS for the period, opening and closing accounts receivable, revenue for the period, opening and closing trade payables.
- 2** Calculate Average Inventory:  $(\text{opening} + \text{closing}) / 2$ . Calculate Average Receivables:  $(\text{opening} + \text{closing}) / 2$ . Calculate Average Trade Payables:  $(\text{opening} + \text{closing}) / 2$ .
- 3** Calculate DIO =  $(\text{Average Inventory} / \text{COGS}) \times 365$ . Enter in row 1.
- 4** Calculate DSO =  $(\text{Average Receivables} / \text{Revenue}) \times 365$ . Enter in row 2.
- 5** Calculate DPO =  $(\text{Average Trade Payables} / \text{COGS}) \times 365$ . Enter in row 3.
- 6** Calculate CCC =  $\text{DIO} + \text{DSO} - \text{DPO}$ . Enter in row 4.
- 7** Calculate working capital locked =  $(\text{CCC} / 365) \times \text{Annual Revenue}$ . Enter in row 5. This is the dollar amount currently inside the cycle.
- 8** Compare all five rows against the prior period. Which component changed most? Write one concrete action to move that component by 10 days in the next 12 months. Calculate the working capital freed:  $(10 / 365) \times \text{Annual Revenue}$ .

## Example Use

*A hardware distributor with \$4.2 million annual revenue runs the CCC walkthrough for the first time, using last year's annual financial statements and the comparative prior year.*

From the statements: COGS \$3.1 million, Revenue \$4.2 million.

Average Inventory last year:  $(\$620,000 + \$680,000) / 2 = \$650,000$ .

DIO =  $(\$650,000 / \$3,100,000) \times 365 = 76.5$  days.

Average Receivables:  $(\$290,000 + \$350,000) / 2 = \$320,000$ .

DSO =  $(\$320,000 / \$4,200,000) \times 365 = 27.8$  days.

Average Trade Payables:  $(\$180,000 + \$210,000) / 2 = \$195,000$ .

DPO =  $(\$195,000 / \$3,100,000) \times 365 = 22.9$  days.

CCC =  $76.5 + 27.8 - 22.9 = 81.4$  days.

Working capital locked =  $(81.4 / 365) \times \$4,200,000 = \$936,000$ .

Prior year CCC was 74.1 days. The cycle has lengthened 7.3 days year-on-year.

The owner looks at DIO: 76.5 days is the clear outlier. The hardware sector average DIO from IDX data is approximately 52 days. That is a 24.5-day gap, representing  $(24.5 / 365) \times \$4,200,000 = \$282,000$  in excess working capital locked in slow-moving inventory.

Action: the warehouse team identifies stock held more than 90 days. A clearance cycle targets reducing average inventory by \$85,000 over the next two quarters. If DIO falls from 76.5 to 66.5 days (10 days), working capital freed:  $(10 / 365) \times \$4,200,000 = \$115,000$  — without new credit, without new revenue.

# The Worksheet

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*Tear this out, copy it onto a fresh sheet, or fill it in directly.*

## Working Capital Ratio Walkthrough

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*Step-by-step calculation of the four ratios that together describe how your working capital moves. Run quarterly, or monthly if CCC has been lengthening.*

COMPONENT	FORMULA	INPUTS (YOUR FIGURES)	RESULT	PRIOR PERIOD	CHANGE

## Reflection Prompts

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*After filling in the worksheet on the previous page, work through these.*

1. Row labels: Average Inventory · DIO (days) · Average Receivables · DSO (days) · Average Trade Payables · DPO (days) · CCC (days). Fill inputs from the most recent closed period.  $DIO = (\text{Avg Inventory} / \text{COGS}) \times 365$ .  $DSO = (\text{Avg Receivables} / \text{Revenue}) \times 365$ .  $DPO = (\text{Avg Trade Payables} / \text{COGS}) \times 365$ .  $CCC = DIO + DSO - DPO$ .
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2. Working capital tied up in the cycle:  $(CCC / 365) \times \text{Annual Revenue} = \$\_\_\_$ . Compare to prior period. If CCC has lengthened: by how many days? How much additional working capital is now locked:  $(\text{days lengthened} / 365) \times \text{Annual Revenue} = \$\_\_\_$ ? Is that additional amount more or less than the interest cost of an equivalent working capital credit facility?
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3. Which of the three components (DIO, DSO, DPO) changed most from prior period? Write one concrete action to move that component by 10 days in the next 12 months. Estimate the working capital freed:  $(10 / 365) \times \text{Annual Revenue} = \$\_\_\_$ . Compare that number against the cost of drawing new working capital credit.
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# Tips and Traps

## TIPS

- Use average inputs (opening + closing / 2) for all three components — not period-end figures. Period-end figures produce a seasonally distorted result that cannot be compared across businesses.
- When CCC has lengthened, ask which component moved first — DIO usually moves before DSO in a slowdown because inventory builds before customers start paying late.
- If DPO is already above the industry average, do not push it further to offset a DIO or DSO problem. Suppliers accept extended terms up to a point; beyond that point they respond with higher prices or tighter volume availability.
- Calculate the 10-day improvement scenario even if you are not planning immediate action. It establishes the value of the lever before any conversation with a bank or investor about working capital requirements.

## TRAPS

- Targeting DIO reduction to a level that creates stockout risk. A hardware distributor with long supplier lead times cannot safely carry the same DIO as a fresh-food distributor. Know the minimum viable stock level before setting a DIO target.
- Treating CCC as a one-time calculation for a specific purpose. Its value is in the trend — a business that runs it for three consecutive years has a trend story; one that runs it once has a snapshot.
- Calculating CCC without checking whether the inputs are comparable across periods. An accounting treatment change (FIFO to weighted average inventory) changes average inventory without any operational change — note it, do not ignore it.

# Appendixes

## Appendix A – CCC Calculation Sheet (Copy-Paste Ready)

Opening Inventory : \$ \_\_\_\_\_  
 Closing Inventory : \$ \_\_\_\_\_  
 Average Inventory : (Opening + Closing) / 2 = \$ \_\_\_\_\_  
 COGS : \$ \_\_\_\_\_  
 DIO : (Avg Inventory / COGS) × 365 = \_\_\_ days  
  
 Opening Receivables : \$ \_\_\_\_\_  
 Closing Receivables : \$ \_\_\_\_\_  
 Average Receivables : (Opening + Closing) / 2 = \$ \_\_\_\_\_  
 Revenue : \$ \_\_\_\_\_  
 DSO : (Avg Receivables / Revenue) × 365 = \_\_\_ days  
  
 Opening Trade Payables : \$ \_\_\_\_\_  
 Closing Trade Payables : \$ \_\_\_\_\_  
 Average Trade Payables : (Opening + Closing) / 2 = \$ \_\_\_\_\_  
 DPO : (Avg Trade Payables / COGS) × 365 = \_\_\_ days  
  
 CCC : DIO + DSO - DPO = \_\_\_ days  
 Working capital locked : (CCC / 365) × Annual Revenue = \$ \_\_\_\_\_

If CCC shortened by 10 days, working capital freed:

(10 / 365) × Annual Revenue = \$ \_\_\_\_\_

## Appendix B – CCC Industry Reference Ranges (Distribution)

Fresh food / perishables distribution : target CCC < 25 days (product cycle short)  
 Consumer goods / FMCG distribution : typical CCC 30-50 days  
 Hardware / building materials : typical CCC 55-80 days  
 Industrial equipment / spare parts : typical CCC 70-100 days  
 Medical / pharmaceutical distribution : typical CCC 45-70 days

Note: DPO norms vary significantly by supplier negotiating power.  
 A business with DPO below 20 days in any distribution sector has  
 unused supplier negotiating headroom worth calculating before  
 applying for working capital credit.



WHERE THIS WORKSHEET COMES FROM

## Financial Ratio Analysis

*Read Your Own Financial Statements Before the Bank Reads Them for You*

by Ibrahim Anwar

This worksheet is one of nine in the *Financial Ratio Analysis* companion worksheet pack. The full pack is grouped into three categories: high-volume worksheets you can run weekly, niche-search worksheets for rare but high-value situations, and specific-case worksheets that walk you through a single concrete scenario.

Every framework, decision filter, and figure used in these worksheets is drawn from the chapters of the source book. The book sets the diagnosis, the worksheets give you the form to act on it.

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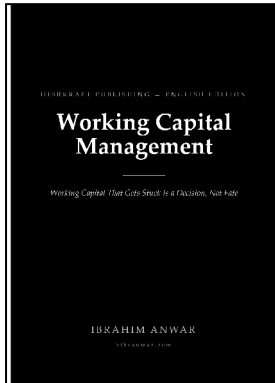
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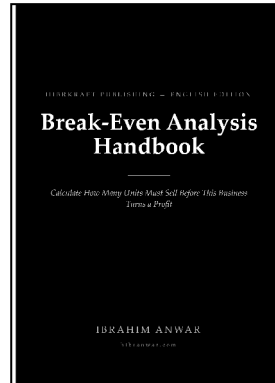
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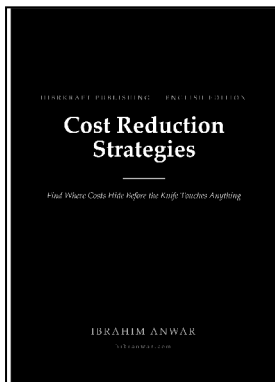
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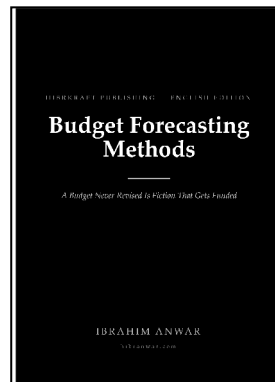
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