Corporate Finance: Cash Conversion Cycle and Financing Strategies

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Measure of Liquidity Based on the Funding Structure of Working Capital Requirement

Liquidity in Euros:

$$\mathbf{NLB = WC - WCR \geq 0}$$

Liquidity in % of Revenues:

$$\frac{NLB}{Revenues} = \frac{WC}{Revenues} - \frac{WCR}{Revenues}$$

And Liquidity Ratio:

$$Liquidity\ ratio = \frac{Working\ Capital}{Working\ Capital\ Requirements}$$

NLB = Net Liquid Balance
WC = Working Capital
WCR = Working Capital Requirements

Session Outline

2.4. Improving liquidity through better management of the operating cycle

2.5. Financing strategies

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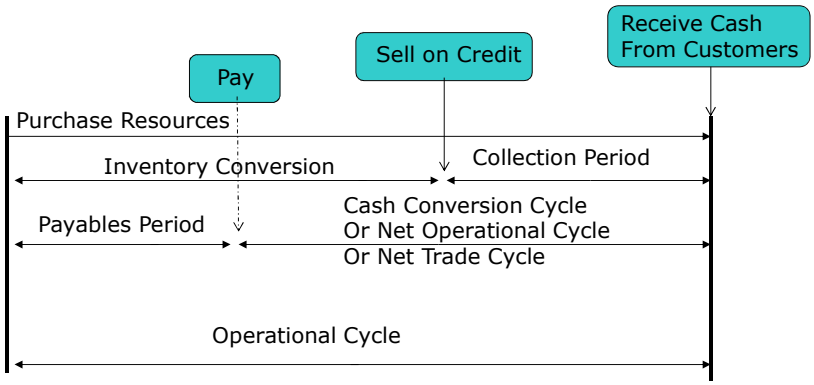
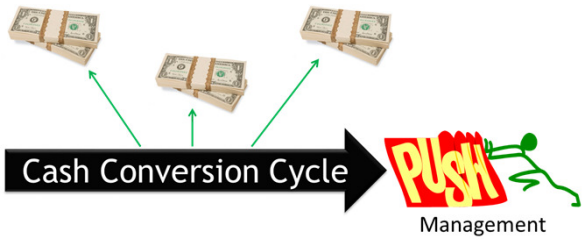
2.4. IMPROVING LIQUIDITY THROUGH BETTER MANAGEMENT OF THE OPERATING CYCLE

Cash Conversion Cycle



Operational Efficiency to Improve Liquidity



$$NLB = WC - WCR \geq 0$$

Traditional Analysis of Cash Conversion Cycle (The core WCR only)

$$+ Days\ in\ Inventory = \frac{Inventory}{Cost\ of\ Goods\ Sold} \times 365$$

$$+ Collection\ Period = \frac{Trade\ Accounts\ Receivables}{Revenues} \times 365$$

$$- Payment\ Period = \frac{Trade\ Accounts\ Payables}{Purchases\ including\ services} \times 365$$

Some authors use 365 days in a year.
Other authors use 360 days

Traditional Cash Conversion Cycle (or Net Trade Cycle) Analysis

Illustration

Selected information from Technology Resources for the end of Year 1:

Sales for Year 1	$360,000
Receivables	40,000
Inventories*	50,000
Accounts payable†	20,000
Cost of goods sold (including depreciation of $30,000)	320,000

*Beginning inventory is $100,000.
†These relate to purchases included in cost of goods sold.

We estimate Technology Resources' purchases per day as:

Ending inventory	$ 50,000
Cost of goods sold	320,000
	370,000
Less: Beginning inventory	(100,000)
Cost of goods purchased and manufactured	270,000
Less: Depreciation in cost of goods sold	(30,000)
Purchases	$240,000

Purchases per day = $240,000/360 = $666.67

Then, the net trade cycle is computed as:

Accounts receivable = $\frac{\$40,000}{\$360,000 \div 360}$ =	40.00 days
Inventories = $\frac{\$50,000}{\$320,000 \div 360}$ =	56.24 days
	96.24 days
Less: Accounts payable = $\frac{\$20,000}{\$240,000 \div 360}$ =	30.00 days
Net trade cycle (days) =	66.24 days

Source: K R Subramanyam and John J Wild (2009), Financial Statements Analysis, 10th Edition

Traditional approach to Inventory Efficiency Management

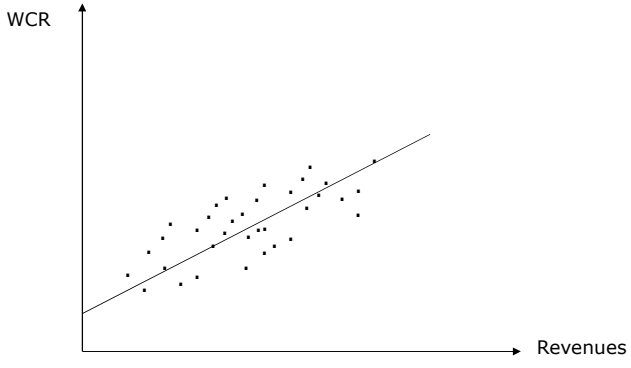
$$Days\ of\ Inventory\ Materials = \frac{Materials\ Inventory}{Materials\ Purchases} \times 365$$

$$Days\ of\ Inventory\ of\ Work\ in\ Progress = \frac{WIP\ Inventory}{Cost\ of\ Production} \times 365$$

$$Days\ of\ Inventory\ Final\ Products = \frac{Final\ Product\ Inventory}{Cost\ of\ Goods\ Sold} \times 365$$

$$Days\ of\ Inventory\ Merchandise = \frac{Merchandise\ Inventory}{Merchandise\ Purchase} \times 365$$

Correlation between WCR and Revenues



Best ratio to analyze efficiency of operational efficiency in managing the cash conversion cycle:

$$Cash\ Conversion\ Cycle\ in\ Days\ of\ Sales = \frac{WCR}{Sales} \times 365$$

Cash Conversion Cycle in Days of Revenues

$$+ Days\ Sales\ in\ Inventory = \frac{Inventory}{Revenues} \times 365$$

$$+ Collection\ Period = \frac{Trade\ Accounts\ Receivables}{Revenues} \times 365$$

$$+ Taxes\ Receivable\ Days\ of\ Sales\ Outstanding = \frac{Taxes\ Receivables}{Revenues} \times 365$$

$$+ Prepaid\ Expenses\ Days\ of\ Sales\ Outsatanding = \frac{Prepaid\ Expenses}{Revenues} \times 365$$

$$- Payment\ Period = \frac{Trade\ Accounts\ Payables}{Revenues} \times 365$$

$$- Taxes\ Payable\ Days\ of\ Sales\ Outstanding = \frac{Taxes\ Payables}{Revenues} \times 365$$

$$- Accrued\ Expenses^{*}\ Days\ of\ Sales\ Outstanding = \frac{Accrued\ Expenses}{Revenues} \times 365$$

* And Deferred Revenues

Cash Conversion Cycle in Days of Revenues

Industry Name	Cash Conversion Cycle in Days of Sales
Real Estate (General/Diversified)	697
Real Estate (Development)	291
Homebuilding	288
R.E.I.T.	158
Aerospace/Defense	113
Chemical (Diversified)	103
Tobacco	102
Semiconductor Equip	96
Drugs (Pharmaceutical)	95
Healthcare Products	93
Apparel	92
Machinery	87
Broadcasting	86
Healthcare Information and Technology	84
Steel	81
Shipbuilding & Marine	78
...	...
Retail (General)	11
Restaurant/Dining	10
Telecom (Wireless)	9
Oil/Gas (Production and Exploration)	8
Retail (Grocery and Food)	7
Air Transport	5
Cable TV	3
Retail (Online)	2
Advertising	-2
Green & Renewable Energy	-3
Telecom. Services	-6
Beverage (Soft)	-17
Computers/Peripherals	-22
Healthcare Support Services	-22
Total Market (without financials)	**36**

- Industry influences the Cash Conversion Cycle
- Within each Industry the Cash Conversion Cycle has a high variance showing that management has a crucial impact in term of efficiency

Source: Value Line as of January 2018

Cash Conversion Cycle and Profitability

- A negative relationship exists between profitability and cash conversion cycle
- Longitudinal analysis shows that the macroeconomic downturn has an impact on the declining level of profitability and the enlargement of cash conversion cycles.
- The trade payables period tends to be negatively related to profitability (Deloof, 2003 for the Belgian firms).
  - We investigated this issue further and found that effectively more highly profitable firms benefit from their ability to pay for their purchases earlier, and consequently exhibit higher percentages of cash-payment discounts.
- The relationship between profitability and cash conversion cycle is not linear. Companies in the 1st lower percentile of profitability exhibit lower net trade cycles, not as a result of their strategy, but because their financial distress makes their suppliers more attentive and control more their level of credit and, also, in extreme cases, may demand cash-payments only.
  - Moreover, as these lower performers are cash hungry, they try to expedite receipts from their clients, offering them attractive discounts for earlier cash-payments.

Source: João Carvalho das Neves and João Valadas, "Operating cash cycle and profitability in small businesses", European Accounting Association Congress, 2005.

Questions

- Is the management of the cash conversion cycle efficient?
  - Benchmarking with peers?
  - Is possible to improve?
  - Which areas?
  - What possible actions?

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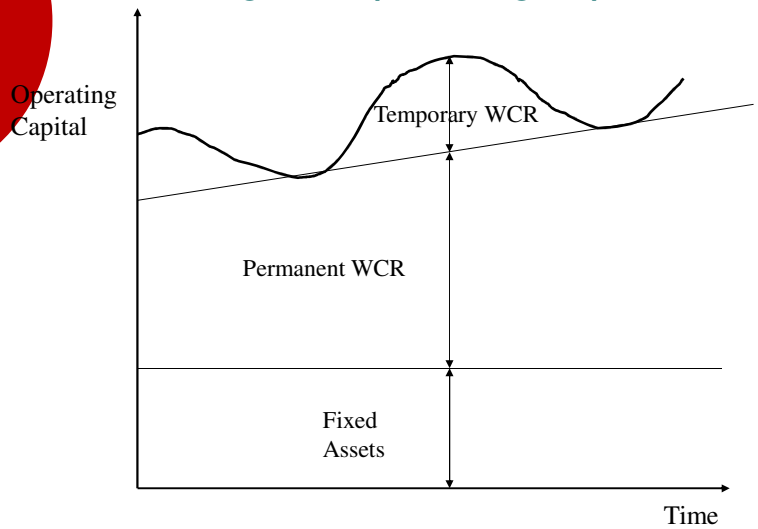
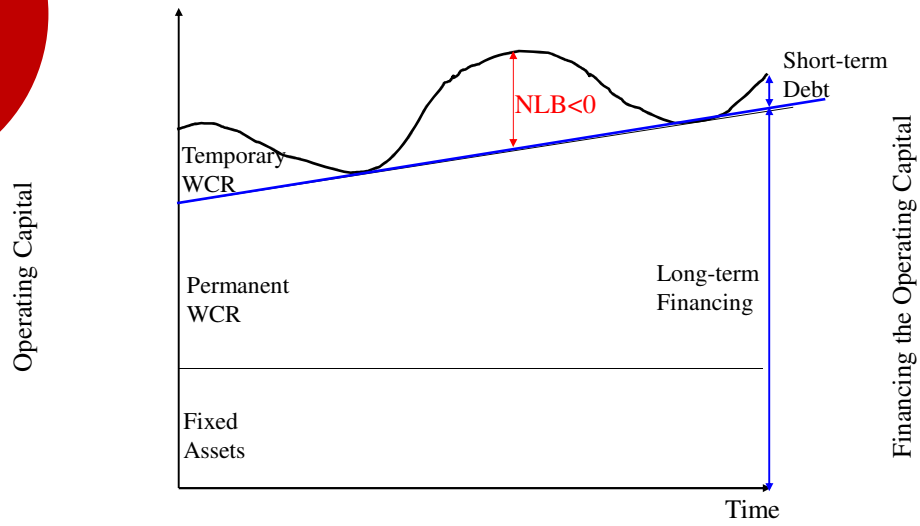
Financing Strategy

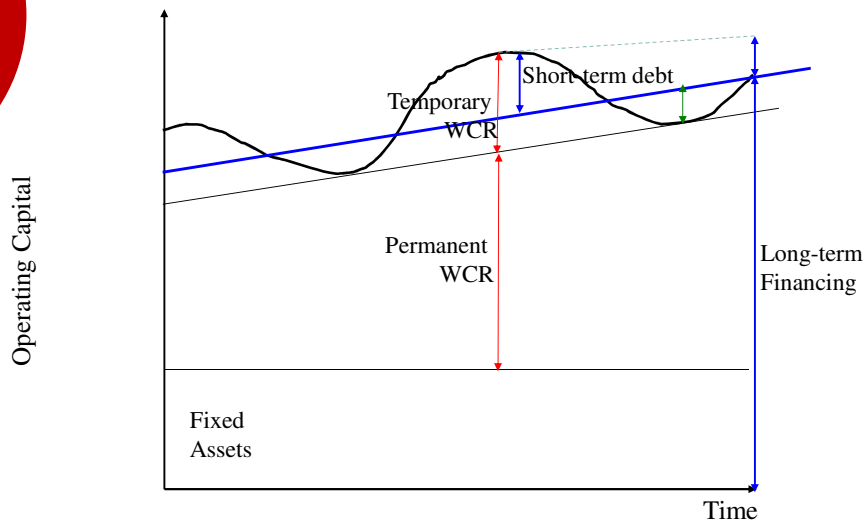
Financing the operating capital



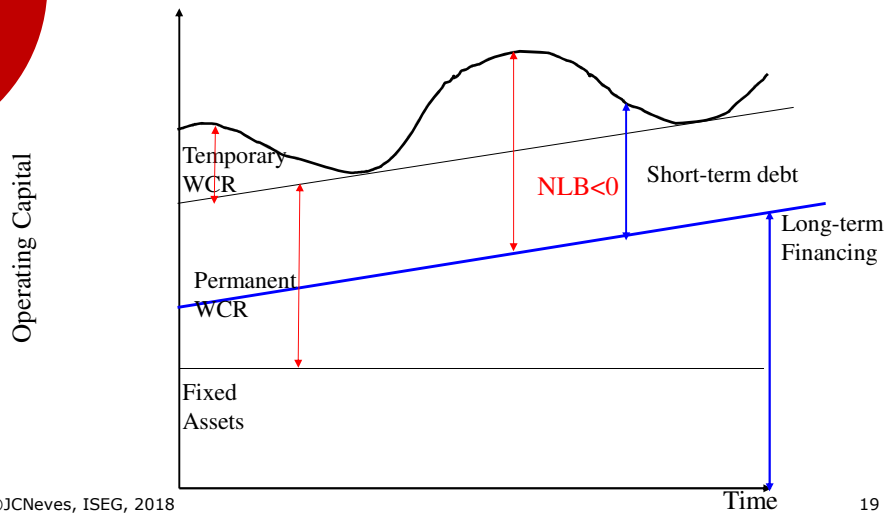
Maturity Matching Financing Strategy



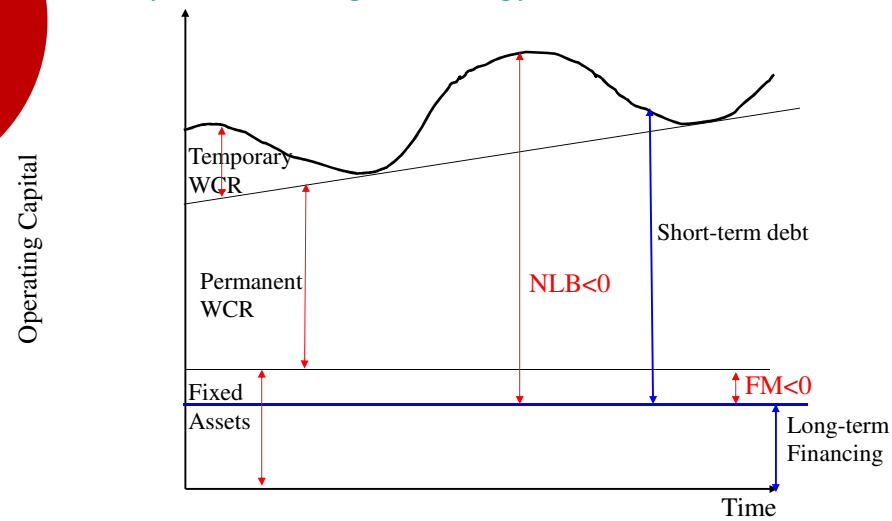
Conservative Financing Strategy



Aggressive Financing Strategy



Risky Financing Strategy



Questions

- How is the liquidity of the company?
- Is the financing policy consistent with the corporate strategy and inherent risk?
- Any suggestion for changing the financing strategy?