UKRIDA

WORKING CAPITAL AND CURRENT ASETS MANAGEMENT

WORKING CAPITAL CIRCLE

Account Receivable

Cash

Raw Material

Inventory

WORKING CAPITAL MANAGEMENT

The goal of working capital management:
to manage each of the firm's **current assets** and **current liabilities** to achieve a balance between **profitability** and **risk** that contributes positively to the firm's value.

LONG & SHORT TERM ASSETS & LIABILITIES

Current Assets:

- Cash
- Marketable Securities
- Accounts Receivable
- Inventory

Fixed Assets:

- Investments
- Plant & Machinery
- Land and Buildings

Current Liabilities:

- Accounts Payable
- Accruals
- Short-Term Debt
- notes Payable

Long-Term Financing:

- Debt
- Equity

Net Working Capital Fundamentals: Working Capital Management

Working capital (or short-term financial) management is the management of current assets and current liabilities.

- Current assets include inventory, accounts receivable, marketable securities, and cash.
- Current liabilities include notes payable, accruals, and accounts payable.
- Firms are able to reduce financing costs or increase the funds available for expansion by minimizing the amount of funds tied up in working capital.

Net Working Capital Fundamentals: Net Working Capital

- **Working capital** refers to current assets, which represent the portion of investment that circulates from one form to another in the ordinary conduct of business.
- **Net working capital** is the difference between the firm’s current assets and its current liabilities; can be positive or negative.

NET WORKING CAPITAL

Working capital: includes a firm's current assets, which consist of cash and marketable securities in addition to accounts receivable and inventories

It also consists of current liabilities, including accounts payable, notes payable/bank loans, and accrued liabilities

Net Working Capital is defined as total current assets less total current liabilities.

Net Working Capital Fundamentals: Trade-off between Profitability and Risk

- **Profitability** is the relationship between revenues and costs generated by using the firm's assets—both current and fixed—in productive activities.
  - A firm can increase its profits by (1) increasing revenues or (2) decreasing costs.
- **Risk (of insolvency)** is the probability that a firm will be unable to pay its bills as they come due.
- A firm that is **insolvent** is unable to pay its bills as they come due.

THE TRADE OFF BETWEEN PROFITABILITY & RISK

POSITIVE NET WORKING CAPITAL (LOW RETURN AND LOW RISK)

Assets		Liabilities & Equity	
Current Assets	$ 300	Current Liabilities	$ 150
Fixed Assets	$ 500	Long-Term Debt	$ 250
		Equity	$ 400
Total	$ 800	Total	$ 800

Net Working Capital = $ 300 - $ 150 = $ 150

When current assets exceed current

THE TRADE OFF BETWEEN PROFITABILITY & RISK

NEGATIVE NET WORKING CAPITAL (HIGH RETURN AND HIGH RISK)

Assets		Liabilities & Equity	
Current Assets	$ 150	Current Liabilities	$ 300
Fixed Assets	$ 650	Long-Term Debt	$ 100
		Equity	$ 400
Total	$ 800	Total	$ 800

Net Working Capital = $ 150 - $ 300 = ($ 150)

When current assets are less than current liabilities

PT.BISNIS

“PT. Bisnis” mempunyai posisi current Assets dan Current Liabilities sbb:

Current Assets		Current Liabilities	
Cash	$ 250	Accounts Payable	$ 100
Marketable Securities	$ 300	Accruals	$ 250
Accounts Receivable	$ 350	Short-Term Debt	$ 350
Inventory	$ 300	Bank Loans	$ 300
Total	$ 1.200	Total	$ 1.000

Current Ratio = $ 1.200 : $ 1.000 = 1.2

Quick Ratio = ($ 1.200 - $ 300) : $ 1.000 = 0.9

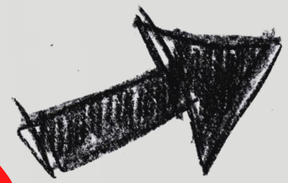
PT.BISNIS (CONT)

Mampukah perusahaan membayar kewajiban yang akan jatuh tempo pada akhir periode?

PT.BISNIS (CONT)

Total kewajiban yang segera jatuh tempo

Current Liabilities		
Accounts Payable	$	100
Accruals	$	250
Short-Term Debt	$	350
Bank Loans	$	300
Total	$	1.000



Current Assets		
Cash	$	250
Marketable Securities	$	300
Accounts Receivable	$	350
Inventory	$	300
Total	$	1.200

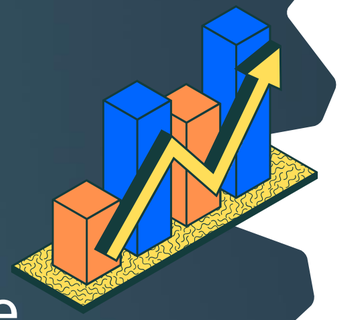
Perusahaan membayar dengan Cash sebesar $ 250
Marketable securities sebesar $ 300
 Receivable sebesar $ 350
sisanya sebesar $ 100 dapat lunasi dari menjual Inventoy

EFFECTS OF CHANGING RATIOS ON PROFITS AND RISK

Ratio	Change in Ratio	Effect on Profit	Effect on Risk
$\frac{\text{Current assets}}{\text{Total assets}}$	Increase	Decrease	Decrease
	Decrease	Increase	Increase
$\frac{\text{Current liabilities}}{\text{Total assets}}$	Increase	Increase	Increase
	Decrease	Decrease	Decrease

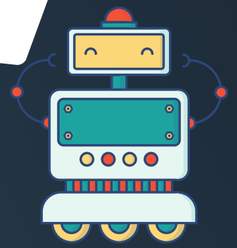
company size

Profitability VS Liquidity



Sales Volume

WORKING CAPITAL



Technology

Activity

CASH AND MARKETABLE SECURITIES MANAGEMENT

CURRENT ASSET MANAGEMENT

ACCOUNT RECEIVABLE MANAGEMENT

INVENTORY MANAGEMENT

CASH & MARKETABLE SECURITIES MANAGEMENT

DEFINITION

Kas terdiri dari saldo kas (uang tunai) dan rekening giro.

Marketable Securities atau surat berharga merupakan instrumen pasar uang yang bersifat jangka pendek, yang memberi hasil dan digunakan perusahaan untuk memperoleh pengembalian atas dana yang menganggur sementara waktu.

investasi ini sifatnya sangat likuid, berjangka pendek dan yang dengan cepat dapat dijadikan kas dalam jumlah tertentu tanpa menghadapi risiko perubahan nilai yang signifikan.

MOTIVES

TRANSACTION MOTIVE

PRECAUTIONARY MOTIVE

SPECULATIVE MOTIVE

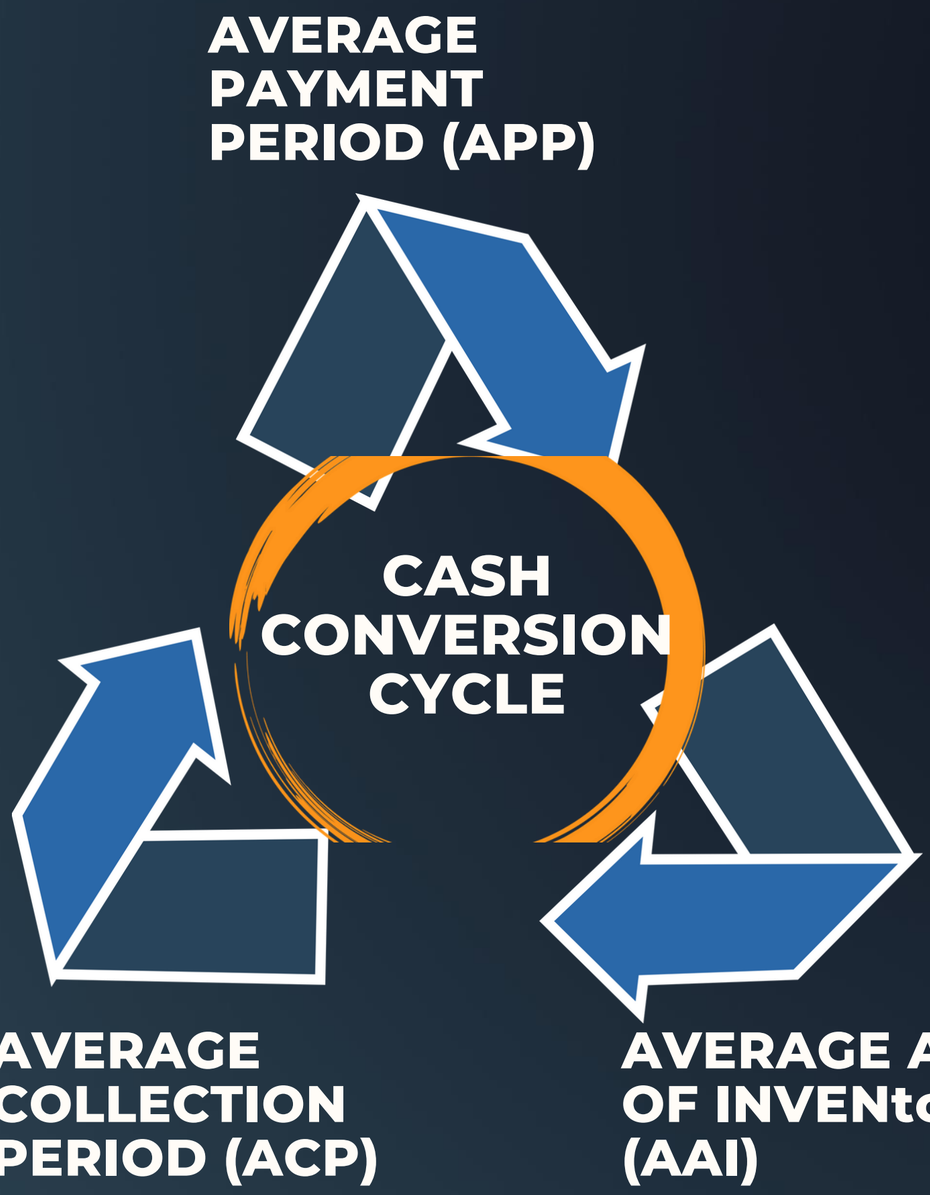
CASH CONVERSION CYCLE

CASH CONVERSION CYCLE (CCC)

$$CCC = OC - APP$$

$$OC = AAI + ACP$$

$$CCC = AAI + ACP - APP$$



(CONT)

The cash conversion cycle (CCC) measures the length of time required for a company to convert cash invested in its operations to cash received as a result of its operations.

Cash Conversion Cycle: Calculating the Cash Conversion Cycle

- A firm's **operating cycle (OC)** is the time from the beginning of the production process to collection of cash from the sale of the finished product.
- It is measured in elapsed time by summing the average age of inventory (AAI) and the average collection period (ACP).

$$OC = AAI + ACP$$

Matter of Fact

Increasing speed lowers working capital

- A firm can lower its working capital if it can speed up its operating cycle.
- For example, if a firm accepts bank credit (like a Visa card), it will receive cash sooner after the sale is transacted than if it has to wait until the customer pays its accounts receivable.

Cash Conversion Cycle:
Calculating the Cash Conversion Cycle

- However, the process of producing and selling a product also includes the purchase of production inputs (raw materials) on account, which results in accounts payable.
- The time it takes to pay the accounts payable, measured in days, is the average payment period (APP). The operating cycle less the average payment period yields the cash conversion cycle. The formula for the cash conversion cycle is:

$$CCC = OC - APP$$

Cash Conversion Cycle:
Calculating the Cash Conversion Cycle

Substituting for OC, we can see that the cash conversion cycle has three main components, as shown in the following equation: (1) average age of the inventory, (2) average collection period, and (3) average payment period.

$$CCC = AAI + ACP - APP$$

Operating cycle (OC)

Operating cycle (OC) is the time from the beginning of the production process to collection of cash from the sale of the finished product.

EXAMPLE

Whirlpool Corporation reported that it had revenues of $18.1 billion, cost of goods sold of $15.2 billion, accounts receivable of 2.0 billion, and inventory of $2.4 billion. From this information (and assuming for simplicity that cost of goods sold equals purchases), we can determine that the company's average age of inventory was 58 days, its average collection period was 40 days, and its average payment period was 89 days.

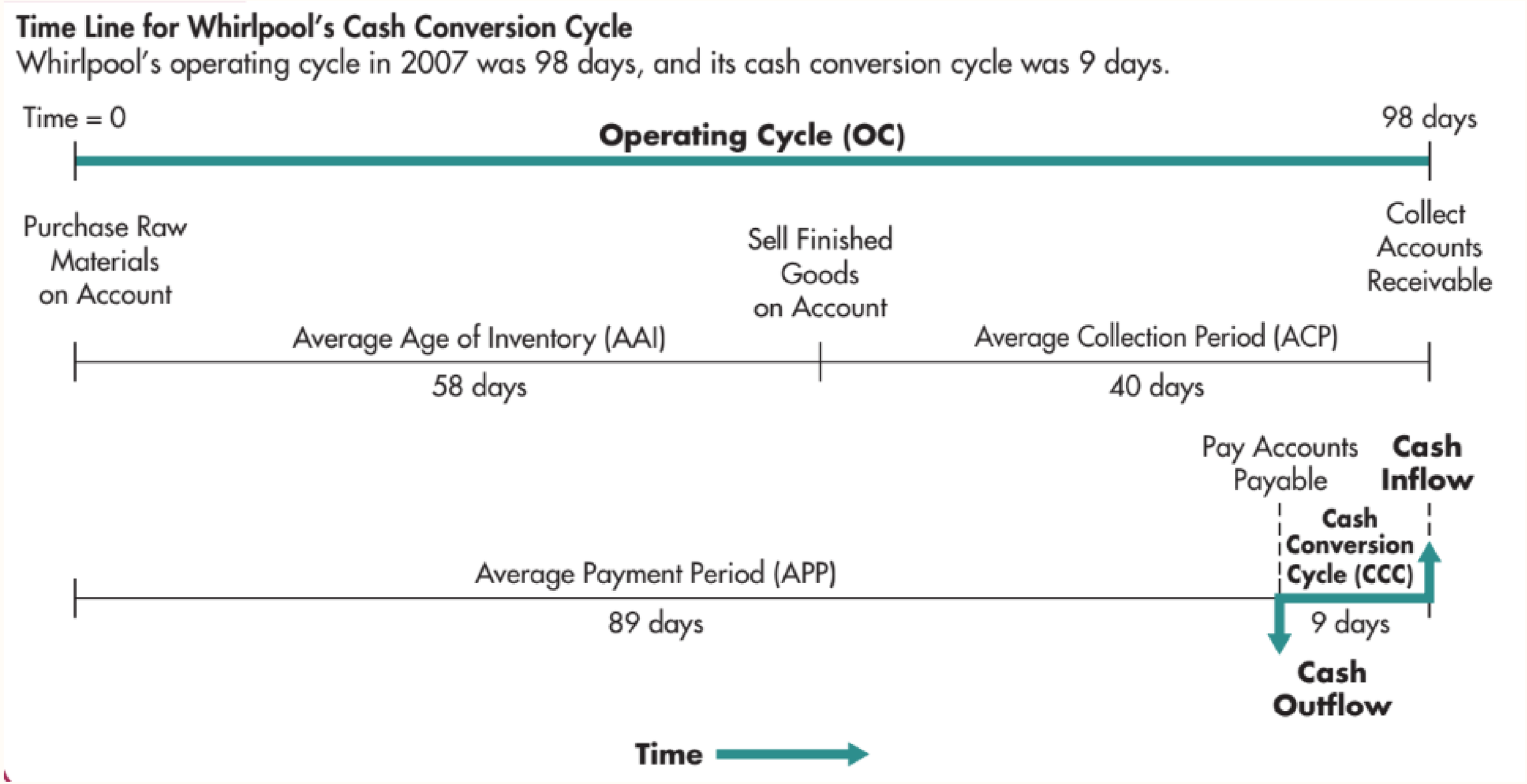


Figure.15.2

Source: Gitman (2015)

The resources Whirlpool had invested in this cash conversion cycle (assuming a 365-day year) were

Inventory	= $15.2 billion × (58 ÷ 365)	=	$2.4
+ Accounts receivable	= 18.1 billion × (40 ÷ 365)	=	2.0
− Accounts payable	= 15.2 billion × (89 ÷ 365)	=	3.7
	= Resources invested	=	$0.7

Reducing AAI or ACP or lengthening APP will reduce the CCC
For example, if Whirlpool could reduce its collection period from 40 days to 20 days, holding all else equal, its working capital requirement would fall. It is clear why companies pay close attention to working capital management.

Operating cycle (OC), ACP 40 days
= AAI+ACP
= 58 + 40
= 98

Operating cycle (OC) in a year = 365 : OC
= 365 : 98
= 3.72 times

cash conversion cycle (CCC) = OC - APP
= 98 - 89
= 9 days

Operating cycle (OC), ACP 20 days
= AAI+ACP
= 58 + 20
= 78

Operating cycle (OC) in a year = 365 : OC
= 365 : 78
= 4.67 times

cash conversion cycle (CCC) = OC - APP
= 78 - 89
= -11 days

Strategies for Managing the Cash Conversion Cycle

- Turn over inventory as quickly as possible without stockouts that result in lost sales.
- Collect accounts receivable as quickly as possible without losing sales from high-pressure collection techniques.
- Manage mail, processing, and clearing time to reduce them when collecting from customers and to increase them when paying suppliers.
- Pay accounts payable as slowly as possible without damaging the firm’s credit rating or its relationships with suppliers.

Strategy 1 -Reducing AAI

AAI berkurang 5 hari: dari 58 hari menjadi 53 hari
CCC berkurang 5 hari: 4 hari = (9 hari - 5 hari)
Pembiayaan dalam CO setahun Rp 182.500.000
Pembiayaan harian Rp 500.000 = (182.500.000 : 365 hari)
CCC berkurang 5 hari, maka
pembiayaan berkurang Rp 2.500.000 = (Rp 500.000 x 5).
Jika perusahaan membayar bunga 10% akan mengurangi biaya dan meningkatkan laba sebesar Rp 250.000 = (0,10 x Rp 2.500.000)

Strategy 2 -Reducing ACP

ACP berkurang 5 hari: dari 89 hari menjadi 94 hari
CCC berkurang 5 hari: 4 hari = (9 hari - 5 hari)
Pembiayaan dalam CO setahun Rp 182.500.000
Pembiayaan harian Rp 500.000 = (182.500.000 : 365 hari)
CCC berkurang 5 hari, maka
pembiayaan berkurang Rp 2.500.000 = (Rp 500.000 x 5).
Jika perusahaan membayar bunga 10% akan mengurangi biaya dan meningkatkan laba sebesar Rp 250.000 = (0,10 x Rp 2.500.000)

Strategy 4 - Lengthening APP

APP bertambah 5 hari: dari 40 hari menjadi 45 hari
CCC berkurang 5 hari: 4 hari = (9 hari - 5 hari)
Pembiayaan dalam CO setahun Rp 182.500.000
Pembiayaan harian Rp 500.000 = (182.500.000 : 365 hari)
CCC berkurang 5 hari, maka
pembiayaan berkurang Rp 2.500.000 = (Rp 500.000 x 5).
Jika perusahaan membayar bunga 10% akan mengurangi biaya dan meningkatkan laba sebesar Rp 250.000 = (0,10 x Rp 2.500.000)

Cash Conversion Cycle: Funding Requirements of the Cash Conversion Cycle

A **permanent funding requirement** is a constant investment in operating assets resulting from constant sales over time.

A **seasonal funding requirement** is an investment in operating assets that varies over time as a result of cyclic sales.

Funding Requirements of the Cash Conversion Cycle

Permanent versus Seasonal Funding Needs

- If the firm’s sales are constant, its investment in operating assets should also be constant, and the firm will have only a permanent funding requirement.

- If the firm’s sales are cyclic, its investment in operating assets will vary over time with its sales cycles, and the firm will have seasonal funding requirements in addition to the permanent funding required for its minimum investment in operating assets.

Funding Requirements of the CCC (Cont)

Nicholson Company holds, on average, $50,000 in cash and marketable securities, $1,250,000 in inventory, and $750,000 in accounts receivable. Nicholson's business is very stable over time, so its operating assets can be viewed as permanent. In addition, Nicholson's accounts payable of $425,000 are stable over time.

Thus, Nicholson has a permanent investment in operating assets of $1,625,000 ($50,000 + $1,250,0000 + $750,000 - $425,000). That amount would also equal its permanent funding requirement.

Funding Requirements of the CCC (Cont)

In contrast, Semper Pump Company, which produces bicycle pumps, has seasonal funding needs. Semper has seasonal sales, with its peak sales being driven by the summertime purchases of bicycle pumps. Semper holds, at minimum, $25,000 in cash and marketable securities, $100,000 in inventory, and $60,000 in accounts receivable. At peak times, Semper's inventory increases to $750,000, and its accounts receivable increase to $400,000. To capture production efficiencies, Semper produces pumps at a constant rate throughout the year.

Thus, accounts payable remain at $50,000 throughout the year. Accordingly, Semper has a permanent funding requirement for its minimum level of operating assets of $135,000 ($25,000 + $100,000 + $60,000 - $50,000) and peak seasonal funding requirements (in excess of its permanent need) of $990,000 3 ($25,000 + $750,000 + $400,000 - $50,000) - $135,0004 . Semper's total funding requirements for operating assets vary from a minimum of $135,000 (permanent) to a seasonal peak of $1,125,000 ($135,000 + $990,000).

Semper Pump Company's Total Funding Requirements

Semper Pump Company's peak funds need is $1,125,000, and its minimum need is $135,000.

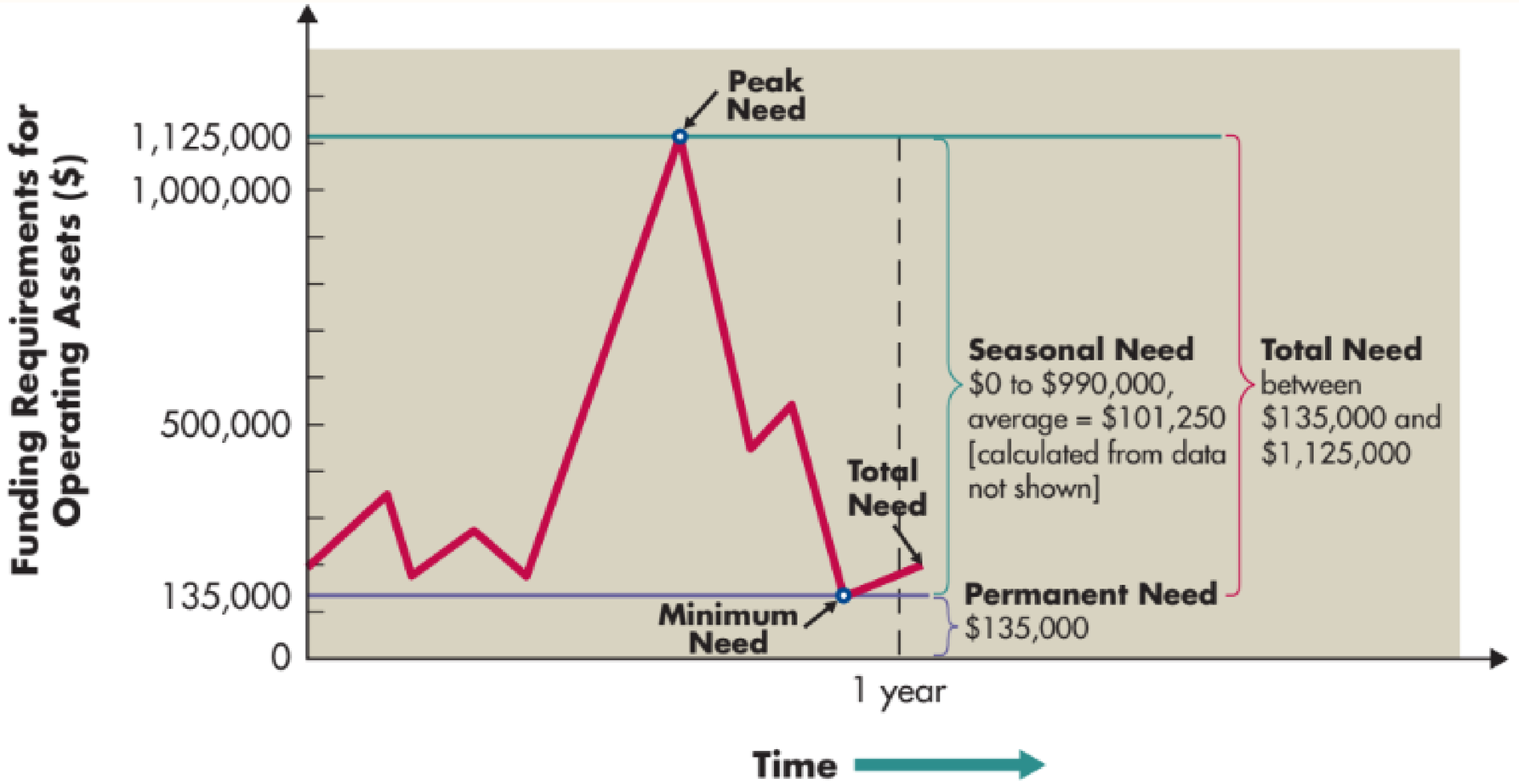


Figure.15.3

Source: Gitman (2015)

Cash Conversion Cycle: Aggressive versus Conservative Seasonal Funding Strategies

An **aggressive funding strategy** is a funding strategy under which the firm funds its seasonal requirements with short-term debt and its permanent requirements with long-term debt.

A **conservative funding strategy** is a funding strategy under which the firm funds both its seasonal and its permanent requirements with long-term debt.

Aggressive versus Conservative Seasonal Funding Strategies

- long-term funds are typically more expensive than short-term funds .
- long-term funds allow the firm to lock in its cost of funds over a period of time and thus avoid the risk of increases in short-term interest rates.
- Under an aggressive funding strategy, the firm funds its seasonal requirements with short-term debt and its permanent requirements with long-term debt.
- Under a conservative funding strategy, the firm funds both its seasonal and its permanent requirements with long-term debt.

Cash Conversion Cycle: Aggressive versus Conservative Seasonal Funding Strategies

Semper Pump Company has a permanent funding requirement of $135,000 in operating assets and seasonal funding requirements that vary between $0 and $990,000 and average $101,250. If Semper can borrow short-term funds at 6.25% and long-term funds at 8%, and if it can earn 5% on the investment of any surplus balances, then the annual cost of an aggressive strategy for seasonal funding will be:

	Cost of short-term financing	= 0.0625 ×	$101,250 =	$ 6,328.13
+	Cost of long-term financing	= 0.0800 ×	135,000 =	10,800.00
−	Earnings on surplus balances	= 0.0500 ×	0 =	0
	Total cost of aggressive strategy			$17,128.13

Cash Conversion Cycle: Aggressive versus Conservative Seasonal Funding Strategies

Alternatively, Semper can choose a conservative strategy, under which surplus cash balances are fully invested. (In Figure 15.3, this surplus will be the difference between the peak need of $1,125,000 and the total need, which varies between $135,000 and $1,125,000 during the year.) The cost of the conservative strategy will be

	Cost of short-term financing	= 0.0625 ×	$ 0	=	$ 0
+	Cost of long-term financing	= 0.0800 ×	1,125,000	=	90,000.00
−	Earnings on surplus balances	= 0.0500 ×	888,750	=	44,437.50
	Total cost of conservative strategy				$45,562.50

Aggressive versus Conservative Seasonal Funding Strategies

Clearly, the aggressive strategy's heavy reliance on short-term financing makes it riskier than the conservative strategy because of interest rate swings and possible difficulties in obtaining needed short-term financing quickly when seasonal peaks occur.

The conservative strategy avoids these risks through the locked-in interest rate and long-term financing, but it is more costly because of the negative spread between the earnings rate on surplus funds

Cash Conversion Cycle: Strategies for Managing the Cash Conversion Cycle

The goal is to minimize the length of the cash conversion cycle, which minimizes negotiated liabilities. This goal can be realized through use of the following strategies:

1. Turn over inventory as quickly as possible without stockouts that result in lost sales.
2. Collect accounts receivable as quickly as possible without losing sales from high-pressure collection techniques.
3. Manage mail, processing, and clearing time to reduce them when collecting from customers and to increase them when paying suppliers.
4. Pay accounts payable as slowly as possible without damaging the firm’s credit rating.

UKRIDA

RECEIVABLE MANAGEMENT

ACCOUNTS RECEIVABLE MANAGEMENT

- The first component of the cash conversion cycle is the average collection period.
- the average length of time from a sale on credit until the payment becomes usable funds for the firm.
- The average collection period has two parts.
  - the time from the sale until the customer mails the payment.
  - is the time from when the payment is mailed until the firm has the collected funds in its bank account.

ACCOUNTS RECEIVABLE MANAGEMENT

- The objective for managing accounts receivable is to collect accounts receivable as quickly as possible without losing sales from high-pressure collection techniques. Accomplishing this goal encompasses three topics: (1) credit selection and standards, (2) credit terms, and (3) credit monitoring.

5C dan 7P dalam Kredit

- Character
- Capacity
- Capital
- Collateral
- Condition

- Personality
- Party
- Purpose
- Prospect
- Payment
- Profitability
- Protection

Accounts Receivable Management: Credit Selection and Standards

Credit standards are a firm's minimum requirements for extending credit to a customer.

The five C's of credit are as follows:

1. *Character:* The applicant's record of meeting past obligations.
2. *Capacity:* The applicant's ability to repay the requested credit.
3. *Capital:* The applicant's debt relative to equity.
4. *Collateral:* The amount of assets the applicant has available for use in securing the credit.
5. *Conditions:* Current general and industry-specific economic conditions, and any unique conditions surrounding a specific transaction.

Accounts Receivable Management: Credit Selection and Standards (cont.)

The firm sometimes will contemplate changing its credit standards in an effort to improve its returns and create greater value for its owners. To demonstrate, consider the following changes and effects on profits expected to result from the relaxation of credit standards.

Effects of Relaxation of Credit Standards

Variable	Direction of change	Effect on profits
Sales volume	Increase	Positive
Investment in accounts receivable	Increase	Negative
Bad-debt expenses	Increase	Negative

Accounts Receivable Management: Credit Selection and Standards (cont.)

Dodd Tool is currently selling a product for $10 per unit. Sales (all on credit) for last year were 60,000 units. The variable cost per unit is $6. The firm's total fixed costs are $120,000.The firm is currently contemplating a relaxation of credit standards that is expected to result in the following:

- a 5% increase in unit sales to 63,000 units;
- an increase in the average collection period from 30 days (the current level) to 45 days;
- an increase in bad-debt expenses from 1% of sales (the current level) to 2%.

The firm's required return on equal-risk investments, which is the opportunity cost of tying up funds in accounts receivable, is 15%.

Accounts Receivable Management: Credit Selection and Standards (cont.)

Because fixed costs are “sunk” and therefore are unaffected by a change in the sales level, the only cost relevant to a change in sales is variable costs. Sales are expected to increase by 5%, or 3,000 units. The profit contribution per unit will equal the difference between the sale price per unit ($10) and the variable cost per unit ($6). The profit contribution per unit therefore will be $4. The total additional profit contribution from sales will be $12,000 (3,000 units × $4 per unit).

Accounts Receivable Management: Credit Selection and Standards (cont.)

To determine the cost of the marginal investment in accounts receivable, Dodd must find the difference between the cost of carrying receivables under the two credit standards. Because its concern is only with the out-of-pocket costs, the relevant cost is the variable cost. The average investment in accounts receivable can be calculated by using the following formula:

$$\text{Average investment in accounts receivable} = \frac{\text{Total variable cost of annual sales}}{\text{Turnover of accounts receivable}}$$

$$\text{Turnover of accounts receivable} = \frac{365}{\text{Average collection period}}$$

Accounts Receivable Management: Credit Selection and Standards (cont.)

Total variable cost of annual sales

- Under present plan: ($6 × 60,000 units) = $360,000
- Under proposed plan: ($6 × 63,000 units) = $378,000

The turnover of accounts receivable is the number of times each year that the firm's accounts receivable are actually turned into cash. It is found by dividing the average collection period into 365 (the number of days assumed in a year).

Accounts Receivable Management: Credit Selection and Standards (cont.)

Turnover of accounts receivable

- Under present plan: (365/30) = 12.2
- Under proposed plan: (365/45) = 8.1

By substituting the cost and turnover data just calculated into the average investment in accounts receivable equation for each case, we get the following average investments in accounts receivable:

- Under present plan: ($360,000/12.2) = $29,508
- Under proposed plan: ($378,000/8.1) = $46,667

Accounts Receivable Management: Credit Selection and Standards (cont.)

Cost of marginal investment in accounts receivable

Average investment under proposed plan	$46,667
– Average investment under present plan	29,508
Marginal investment in accounts receivable	$17,159
× Required return on investment	0.15
Cost of marginal investment in A/R	$ 2,574

The resulting value of $2,574 is considered a cost because it represents the maximum amount that could have been earned on the $17,159 had it been placed in the best equal-risk investment alternative available at the firm's required return on investment of 15%.

Accounts Receivable Management: Credit Selection and Standards (cont.)

Cost of marginal bad debts

Under proposed plan: (0.02 × $10/unit × 63,000 units) = $12,600
Under present plan: (0.01 × $10/unit × 60,000 units) = 6,000
Cost of marginal bad debts $ 6,600

CREDIT SCORING

is a procedure resulting in a score that measure an applicant's overall credit strength,derived of weighted-average of score of various characteristic

The procedure results in a score that measures the applicant's overall credit strength, and the score is used to make the accept/reject decision for granting the applicant credit.

The purpose of credit scoring is to make a relatively informed credit decision quickly and inexpensively,

CONTOH MENGGUNAKAN CREDIT SCORING

Perhitungan Credit Score

Karakteristik	Angka	Bobot	Angka X bobot
Tingkat pendapatan	80	40%	32
Riwayat pembayaran	70	30%	21
Referensi kredit	60	10%	6
Lama usaha/bekerja	70	20%	14
	Total	100	73

CONTOH MENGGUNAKAN CREDIT SCORING

Standar Kredit

Angka Kredit	Tindakan
>= 70	Dapat diberi kredit
61 - 69	Dapat diberi kredit tetapi terbatas; Evaluasi setelah 1 tahun jika pelaksanaannya baik dapat diberikan kredit sesuai standar kredit.
< 60	ditolak

CHANGING CREDIT STANDARDS

The firm sometimes will contemplate changing its credit standards in an effort to improve its returns and create greater value for its owners.

Effects of Relaxation of Credit Standards

Variable	Direction of change	Effect on profits
Sales volume	Increase	Positive
Investment in accounts receivable	Increase	Negative
Bad-debt expenses	Increase	Negative

Table 15.2 Effects on Dodd Tool of a Relaxation in Credit Standards

The net addition to total profits resulting from relaxing credit standards would be $2,826 per year. Therefore, Dodd Tool should relax its credit standards.

Additional profit contribution from sales [3,000 units × ($10 − $6)]		$12,000
Cost of marginal investment in A/R[a]		
Average investment under proposed plan: $\frac{\$6 \times 63{,}000}{8.1} = \frac{\$378{,}000}{8.1}$	$46,667	
− Average investment under present plan: $\frac{\$6 \times 60{,}000}{12.2} = \frac{\$360{,}000}{12.2}$	29,508	
Marginal investment in A/R	$17,159	
Cost of marginal investment in A/R (0.15 × $17,159)		(2,574)
Cost of marginal bad debts		
Bad debts under proposed plan (0.02 × $10 × 63,000)	$12,600	
− Bad debts under present plan (0.01 × $10 × 60,000)	6,000	
Cost of marginal bad debts		(6,600)
Net profit from implementation of proposed plan		$ 2,826

[a]The denominators 8.1 and 12.2 in the calculation of the average investment in accounts receivable under the proposed and present plans are the accounts receivable turnovers for each of these plans (365 ÷ 45 = 8.1 and 365 ÷ 30 = 12.2).

Accounts Receivable Management: Credit Selection and Standards

Credit management is difficult enough for managers of purely domestic companies, and these tasks become much more complex for companies that operate internationally.

- This is partly because international operations typically expose a firm to exchange rate risk.
- It is also due to the dangers and delays involved in shipping goods long distances and in having to cross at least two international borders.

PT.Mitra merupakan produsen alat kesehatan, saat ini menjual produk seharga $10 per unit. Penjualan secara kredit sebanyak 60.000 unit. Biaya variabel per satuannya adalah $6. Total biaya tetap perusahaan adalah $120.000.Perusahaan saat ini sedang mempertimbangkan relaksasi/pelonggaran standar kredit yang diharapkan menghasilkan sebagai berikut: peningkatan 5% dalam penjualan menjadi 63.000 unit; peningkatan rata-rata periode penagihan dari 30 hari (tingkat saat ini) menjadi 45 hari;peningkatan beban piutang tak tertagih dari 1% penjualan (tingkat saat ini) menjadi 2%. Perusahaan menentukan bahwa biaya kesempatan/opportunity cost adalah 15% .

Haruskah PT.Mitra melakukan pelonggaran/relaksasi standar kredit?
Asumsi 1 th = 365 hari

Relevant Data

Penjualan/sales saat ini sebanyak 60.000 unit

Penjualan yang akan datang sebanyak 63.000 unit

Harga $10 per unit

Biaya Variabel $6

CM - contribution margin/unit $4

ACP saat ini 30 hari

ACP baru 45 hari

AR turnover saat ini 365/30 = 12.2

AR turnover baru 365/45 = 8.1

beban piutang tak tertagih = 1% dari sales (saat ini)

beban piutang tak tertagih = 2% dari sales (baru)

Opportunity cost =15%

Additional Profit Contribution from Sales

Tingkat penjualan sebelum relaksasi	60.000	Harga/unit = $10
Tingkat penjualan setelah relaksasi	63.000	VC/unit = $6
Peningkatan penjualan	3.000	CM/unit = $4

Additional Profit Contribution from Sales = $12.000 (3.000 X $4)

Cost of the Marginal Investment in Accounts Receivable

$$\text{Average investment in accounts receivable} = \frac{\text{Total variable cost of annual sales}}{\text{Turnover of accounts receivable}}$$

$$\text{Turnover of accounts receivable} = \frac{365}{\text{Average collection period}}$$

Total variable cost of annual sales

Under present plan: ($6 × 60,000 units) = $360,000

Under proposed plan: ($6 × 63,000 units) = $378,000

Cost of the Marginal Investment in Accounts Receivable

Turnover of accounts receivable

$$\text{Under present plan: } \frac{365}{30} = 12.2$$

$$\text{Under proposed plan: } \frac{365}{45} = 8.1$$

Average investment in accounts receivable

$$\text{Under present plan: } \frac{\$360{,}000}{12.2} = \$29{,}508$$

$$\text{Under proposed plan: } \frac{\$378{,}000}{8.1} = \$46{,}667$$

Cost of the Marginal Investment in Accounts Receivable

the marginal investment in accounts receivable and its cost

Cost of marginal investment in accounts receivable

Average investment under proposed plan	$46,667
− Average investment under present plan	29,508
Marginal investment in accounts receivable	$17,159
× Cost of funds tied up in receivables	0.15
Cost of marginal investment in A/R	$ 2,574

Cost of Marginal Bad Debts = Bad Debt % X Total Sales

Cost of marginal bad debts

Under proposed plan: (0.02 × $10/unit × 63,000 units) =	$12,600
– Under present plan: (0.01 × $10/unit × 60,000 units) =	6,000
Cost of marginal bad debts	$ 6,600

Analysis of Relaxing Credit Standards
Making the credit standard decision

Additional Profit Contribution from Sales	$12.000
Cost of the Marginal Investment in Accounts Receivable	($2.574)
Cost of Marginal Bad Debts	($6.600)
N**et Profit from implementation**	**$2.826**

Accounts Receivable Management: Credit Terms

Credit terms are the terms of sale for customers who have been extended credit by the firm.

A **cash discount** is a percentage deduction from the purchase price; available to the credit customer who pays its account within a specified time.

- For example, terms of 2/10 net 30 mean the customer can take a 2 percent discount from the invoice amount if the payment is made within 10 days of the beginning of the credit period or can pay the full amount of the invoice within 30 days.

Accounts Receivable Management: Credit Terms

A **cash discount period** is the number of days after the beginning of the credit period during which the cash discount is available.

The net effect of changes in this period is difficult to analyze because of the nature of the forces involved.

- For example, if a firm were to increase its cash discount period by 10 days (for example, changing its credit terms from 2/10 net 30 to 2/20 net 30), the following changes would be expected to occur: (1) Sales would increase, positively affecting profit. (2) Bad-debt expenses would decrease, positively affecting profit. (3) The profit per unit would decrease as a result of more people taking the discount, negatively affecting profit.

CREDIT TERMS

Credit terms are the terms of sale for customers who have been extended credit by the firm.

Example:
Terms of net 30

mean the customer has 30 days from the beginning of the credit period (typically end of month or date of invoice) to pay the full invoice amount.

CREDIT TERMS

Credit terms are composed of three parts:

- cash discounts,
- Cash Discount Period
- Credit Period

For example"
terms of 2/10 net 30

mean the customer can take a 2 percent discount from the invoice amount ifthe payment is made within 10 days of the beginning of the credit period or can pay the full amount of the invoice within 30 days.

EXAMPLE

MAX Company has annual sales of $10 million and an average collection period of 40 days (turnover = 365 , 40 = 9.1). In accordance with the firm's credit terms of net 30, this period is divided into 32 days until the customers place their payments in the mail (not everyone pays within 30 days) and 8 days to receive, process, and collect payments once they are mailed.

MAX is considering initiating a cash discount by changing its credit terms from net 30 to 2/10 net 30. The firm expects this change to reduce the amount of time until the payments are placed in the mail, resulting in an average collection period of 25 days (turnover = 365 , 25 = 14.6).

ANALYSIS OF INITIATING A CASH DISCOUNT FOR MAX COMPANY

Additional profit contribution from sales [50 units × ($3,000 − $2,300)]		$35,000
Cost of marginal investment in A/R[a]		
Average investment presently (without discount): $\frac{\$2,300 \times 1,100 \text{ units}}{9.1} = \frac{\$2,530,000}{9.1}$	$278,022	
− Average investment with proposed cash discount:[b] $\frac{\$2,300 \times 1,150 \text{ units}}{14.6} = \frac{\$2,645,000}{14.6}$	181,164	
Reduction in accounts receivable investment	$ 96,858	
Cost savings from reduced investment in accounts receivable (0.14 × $96,858)[c]		13,560
Cost of cash discount (0.02 × 0.80 × 1,150 × $3,000)		(55,200)
Net profit from initiation of proposed cash discount		($ 6,640)

[a]In analyzing the investment in accounts receivable, we use the variable cost of the product sold ($1,500 raw materials cost + $800 production cost = $2,300 per unit variable cost) instead of the sale price because the variable cost is a better indicator of the firm's investment.

[b]The average investment in accounts receivable with the proposed cash discount is estimated to be tied up for an average of 25 days instead of the 40 days under the original terms.

[c]MAX's opportunity cost of funds is 14%.

The **credit period** is the number of days after the beginning of the credit period until full payment of the account is due.

Changes in the **credit period,** the number of days after the beginning of the credit period until full payment of the account is due, also affect a firm's profitability.

- For example, increasing a firm's credit period from net 30 days to net 45 days should increase sales, positively affecting profit. But both the investment in accounts receivable and bad-debt expenses would also increase, negatively affecting profit.

CREDIT MONITORING

- Credit monitoring is an ongoing review of the firm's accounts receivable to determine whether customers are paying according to the stated credit terms.
- Slow payments are costly to a firm because they lengthen the average collection period and thus increase the firm's investment in accounts receivable.
- Two frequently used techniques for credit monitoring are average collection period and aging of accounts receivable. In addition, a number of popular collection techniques are used by firms.

AVERAGE COLLECTION PERIOD

- The average collection period is the average number of days that credit sales are outstanding

The average collection period has two components:
(1) the time from sale until the customer places the payment in the mail and
(2) the time to receive, process, and collect the payment

$$\text{Average collection period} = \frac{\text{Accounts receivable}}{\text{Average sales per day}}$$

AGING OF ACCOUNTS RECEIVABLE

Age of account	Balance outstanding	Percentage of total balance outstanding
0–30 days	$ 80,000	40%
31–60 days	36,000	18
61–90 days	52,000	26
91–120 days	26,000	13
Over 120 days	6,000	3
Totals at 12/31/15	$200,000	100%

COLLECTION TECHNIQUES

Technique[a]	Brief description
Letters	After a certain number of days, the firm sends a polite letter reminding the customer of the overdue account. If the account is not paid within a certain period after this letter has been sent, a second, more demanding letter is sent.
Telephone calls	If letters prove unsuccessful, a telephone call may be made to the customer to request immediate payment. If the customer has a reasonable excuse, arrangements may be made to extend the payment period. A call from the seller's attorney may be used.
Personal visits	This technique is much more common at the consumer credit level, but it may also be effectively employed by industrial suppliers. Sending a local salesperson or a collection person to confront the customer can be very effective. Payment may be made on the spot.
Collection agencies	A firm can turn uncollectible accounts over to a collection agency or an attorney for collection. The fees for this service are typically quite high; the firm may receive less than 50 cents on the dollar from accounts collected in this way.
Legal action	Legal action is the most stringent step, an alternative to the use of a collection agency. Not only is direct legal action expensive, but it may force the debtor into bankruptcy without guaranteeing the ultimate receipt of the overdue amount.

[a]The techniques are listed in the order in which they are typically followed in the collection process.

MANAGEMENT OF RECEIPTS AND DISBURSEMENTS

The average payment period (APP) has two parts:

- Collection Float
- Disbursement Float

MANAGEMENT OF RECEIPTS AND DISBURSEMENTS

FLOAT

Float refers to funds that have been sent by the payer but are not yet usable funds to the payee.

Float is important in the cash conversion cycle because its presence lengthens both the firm's average collection period and its average payment period.

MANAGEMENT OF RECEIPTS AND DISBURSEMENTS

Float has three component parts:

- **Mail float** is the time delay between when payment is placed in the mail and when it is received.
- **Processing floa**t is the time between receipt of the payment and its deposit into the firm's account.
- **Clearing float** is the time between deposit of the payment and when spendable funds become available to the firm. This component of float is attribut- able to the time required for a check to clear the banking system.

SPEEDING UP COLLECTIONS

- A lock box system : works as follows: Instead of mailing payments to the company, customers mail payments to a post office box.
- concentration bank.
- ACH (automated clearinghouse) transfer
- wire transfer
- Direct send

SLOWING DOWN PAYMENTS

controlled disbursing involves use of mailing points and bank accounts to lengthen mail float and clearing float, respectively.

Firms must use this approach carefully, though, because longer payment periods may strain supplier relations.

INVESTING IN MARKETABLE SECURITIES

The motives for owning marketable securities are:

- **a substitute for cash**
- **a temporary investment,**

Popular Marketable Securities

- Commercial paper
- Money market mutual funds

INVENTORY MANAGEMENT

INVENTORY MANAGEMENT

- The second component of the cash conversion cycle is the average age of inventory.
- The objective for managing inventory is to turn over inventory as quickly as possible without losing sales from stockouts.
- Differing viewpoints about appropriate inventory levels commonly exist among a firm's finance, marketing, manufacturing, and purchasing managers.
  - financial manager's woould like to keep inventory levels low, to ensure that funds are wisely invested
  - marketing manager would like to keep inventory level high to ensure that all orders could be filled quickly
  - manufacturing manager would like to keep raw materials levels high to avoid production delays and to make larger, more economical production runs
  - purchasing manager is concerned solely with the raw materials inventories

TECHNIQUES FOR MANAGING INVENTORY

- ABC System: The **ABC inventory system** is an inventory management technique that divides inventory into three groups—A, B, and C, in descending order of importance and level of monitoring, on the basis of the dollar investment in each.

divides its inventory into three groups: A, B, and C.

- The A group : the most intense monitoring because of the high and the largest dollar investment. A group consists of 20 percent of the firm's inventory items but 80 percent of its investment in inventory.
- The B group consists of items that account for the next largest investment in inventory.
- The C group consists of a large number of items that require a relatively small investment.

Inventory Management: Common Techniques for Managing Inventory (cont.)

The inventory group of each item determines the item's level of monitoring.

- The A group items receive the most intense monitoring because of the high dollar investment. Typically, A group items are tracked on a perpetual inventory system that allows daily verification of each item's inventory level.
- B group items are frequently controlled through periodic, perhaps weekly, checking of their levels.
- C group items are monitored with unsophisticated techniques, such as the **two-bin method**; an unsophisticated inventory-monitoring technique that involves reordering inventory when one of two bins is empty.

TECHNIQUES FOR MANAGING INVENTORY

2. Economic Order Quantity (EOQ) Model

- The EOQ model considers various costs of inventory and then determines what order size minimizes total inventory cost.
- EOQ assumes that the relevant costs of inventory can be divided into order costs and carrying costs.
- The EOQ model analyzes the trade-off between order costs and carrying costs to determine the order quantity that minimizes the total inventory cost.
- **The EOQ model is an appropriate model for the management of A and B group items.**

TECHNIQUES FOR MANAGING INVENTORY

EOQ assumes that the relevant costs of inventory can be divided into order costs and carrying costs.

- **Order costs** are the fixed clerical costs of placing and receiving an inventory order.
- **Carrying costs** are the variable costs per unit of holding an item in inventory for a specific period of time.

The EOQ model analyzes the tradeoff between order costs and carrying costs to determine the order quantity that minimizes the total inventory cost.

TECHNIQUES FOR MANAGING INVENTORY

EOQ Model

$$EOQ = \sqrt{\frac{2 \times S \times O}{C}}$$

Where:

S = usage in units per period

O = order cost per order

C = carrying cost per unit per period

Q = order quantity in units

TECHNIQUES FOR MANAGING INVENTORY

EOQ Model

$$\text{Order cost} = O \times (S \div Q)$$

$$\text{Carrying cost} = C \times (Q \div 2)$$

$$\text{Total cost} = [O \times (S \div Q)] + [C \times (Q \div 2)]$$

$$\text{Reorder point} = \text{Days of lead time} \times \text{Daily usage}$$

TECHNIQUES FOR MANAGING INVENTORY

The **reorder point** is the point at which to reorder inventory, expressed as days of lead time × daily usage.

$$\text{Reorder point} = \text{Days of lead time} \times \text{Daily usage}$$

Because lead times and usage rates are not precise, most firms hold **safety stock**—extra inventory that is held to prevent stockouts of important items.

TECHNIQUES FOR MANAGING INVENTORY

- MAX Company, a producer of dinnerware, has an A group inventory item that is vital to the production process. This item costs $1,500, and MAX uses 1,100 units of the item per year. MAX wants to determine its optimal order strategy for the item. To calculate the EOQ, we need the following inputs:
  - Order cost per order = $150
  - Carrying cost per unit per year = $200
  - Thus,

$$\text{EOQ} = \sqrt{\frac{2 \times 1{,}100 \times \$150}{\$200}} \approx \underline{\underline{41}} \text{ units}$$

TECHNIQUES FOR MANAGING INVENTORY

The reorder point for MAX depends on the number of days MAX operates per year.

- Assuming that MAX operates 250 days per year and uses 1,100 units of this item, its daily usage is 4.4 units (1,100 ÷ 250).
- If its lead time is 2 days and MAX wants to maintain a safety stock of 4 units, the reorder point for this item is 12.8 units [(2 × 4.4) + 4].
- However, orders are made only in whole units, so the order is placed when the inventory falls to 13 units.

TECHNIQUES FOR MANAGING INVENTORY

3. Just-in-Time (JIT) System

A **just-in-time (JIT) system** is an inventory management technique that minimizes inventory investment by having materials arrive at exactly the time they are needed for production.

- Because its objective is to minimize inventory investment, a JIT system uses no (or very little) safety stock.
- Extensive coordination among the firm's employees, its suppliers, and shipping companies must exist to ensure that material inputs arrive on time.
- Failure of materials to arrive on time results in a shutdown of the production line until the materials arrive.
- Likewise, a JIT system requires high-quality parts from suppliers.

TECHNIQUES FOR MANAGING INVENTORY

3. Just-in-Time (JIT) System

- used to minimize inventory investment by having inputs materials arrive at exactly the time they are needed for production.
- The goal of the JIT system is manufacturing efficiency.
- JIT system uses no (or very little) safety stock.
- Extensive coordination among the firm's employees, its suppliers, and shipping companies must exist to ensure that material inputs arrive on time.
- JIT system requires high-quality

TECHNIQUES FOR MANAGING INVENTORY

4. Computerized Systems for Resource Control

- used to determine what materials to order and when to order and what priorities to assign to ordering material
- MRP applies EOQ concepts to determine how much to order.
- Using a computer, MRP simulates each product's bill of materials, inventory status, and manufacturing process.
- The objective of this system is to lower the firm's inventory investment without impairing production.
- manufacturing resource planning II (MRP II), which integrates data from numerous areas such as finance, accounting, marketing, engineering, and manufacturing using a sophisticated computer system.
- This system generates production plans as well as numerous financial and management reports.

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