FN201: Lecture Note 3
Working Capital Management

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Firm’s Capital

- Net Working Capital

  = Current Assets – Current Liabilities

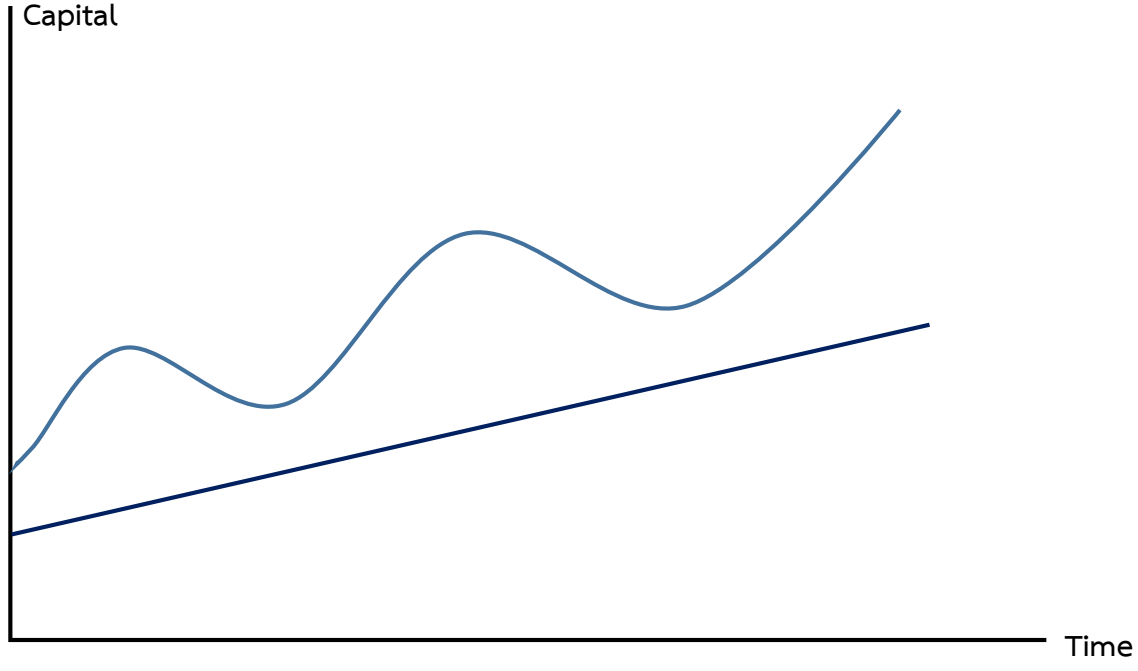
- Net Operating Capital

  = Net Working Capital + Fixed Assets

  = Total Assets – Current Liabilities

Current Asset Management

Current Assets



Current Asset Investment Policy

1. Conservative / Relax policy

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2. Moderate policy

=

3. Aggressive policy

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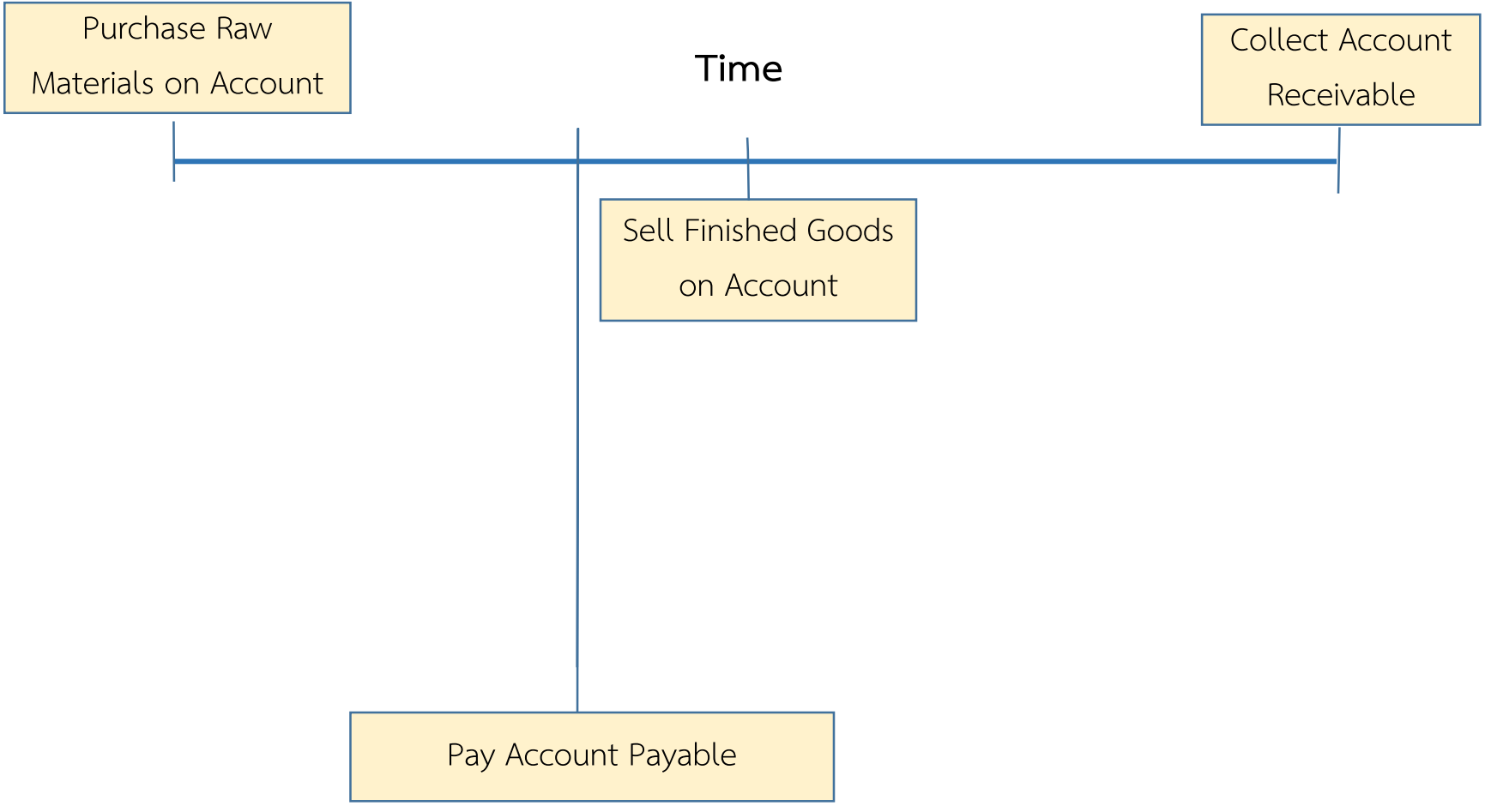
Ratio	Policy	Liquidity	Risk	Profitability (ROA)
	1. Relax	High	Low	Low
	2. Moderate	M	M	M
	3. Aggressive	Low	High	High

Cash Cycle / Cash Conversion Period



Cash Management

Cash tied up in the operation of firm (1)

1	Sales	2,200
2	Cost of goods sold	1,644
3	Other expenses	411
4	Depreciation	20
5	EBIT (1−2−3−4)	125
6	Interest	5
7	Pretax income (5−6)	120
8	Tax at 50%	60
9	Net income (7−8)	60
	Dividend	30
	Earnings retained in the business	30

	2008
Current assets:	
Cash	20
Marketable securities	0
Accounts receivable	125
Inventory	130
Total current assets	275
Fixed assets:	
Gross investment	320
Less depreciation	80
Net fixed assets	240
Total assets	515
Current liabilities:	
Bank loans	25
Accounts payable	110
Total current liabilities	135
Long-term debt	60
Net worth (equity and retained earnings)	320
Total liabilities and net worth	515

Cash Management

Cash tied up in the operation of firm (1)

a. Suppose that each year the company spends total cash for overall operations at $5,475 billion. How much minimum cash does the company need to have?

b. Suppose the company is able to reduce inventory levels to a year average value of $110 billion and average accounts receivable to $100 billion. By how many days will this reduce the cash conversion cycle?

c. Suppose that with the same level of inventories, accounts receivable, and accounts payable, United States manufacturers can increase production and sales by 10 percent. What will be the effect on the cash conversion cycle?

Cash Management

Cash tied up in the operation of firm (2)

The Zocco Corporation has an inventory conversion period of 60 days, an average collection period of 38 days, and a payables deferral period of 30 days. Assume that cost of goods sold is 75% of sales.

- What is the length of the firm's cash conversion cycle?
- If Zocco's annual sales are $10 million and all sales are on credit, what is the firm's investment in accounts receivable?
- How many times per year does Zocco turn over its inventory?

Cash Planning

Cash budget (cash forecast)

= a statement of the firm's planned inflows and outflows of cash that is used to estimate its short-term cash requirements

Sales and expenditure forecast

- cash
- credit collection

Cash Planning

Cash budget preparing

	Jan.		Feb.		...		Nov.		Dec.
Cash receipts	$XXX		$XXG				$XXM		$XXT
Less: Cash disbursements	XXA		XXH		...		XXN		XXU
Net cash flow	$XXB		$XXI				$XXO		$XXV
Add: Beginning cash	XXC	→	XXD	→	XXJ	→	XXP	→	XXQ
Ending cash	$XXD		$XXJ				$XXQ		$XXW
Less: Minimum cash balance	XXE		XXK		...		XXR		XXY
Required total financing			$XXL				$XXS		
Excess cash balance	$XXF								$XXZ

Account Receivable Management

Credit Policy

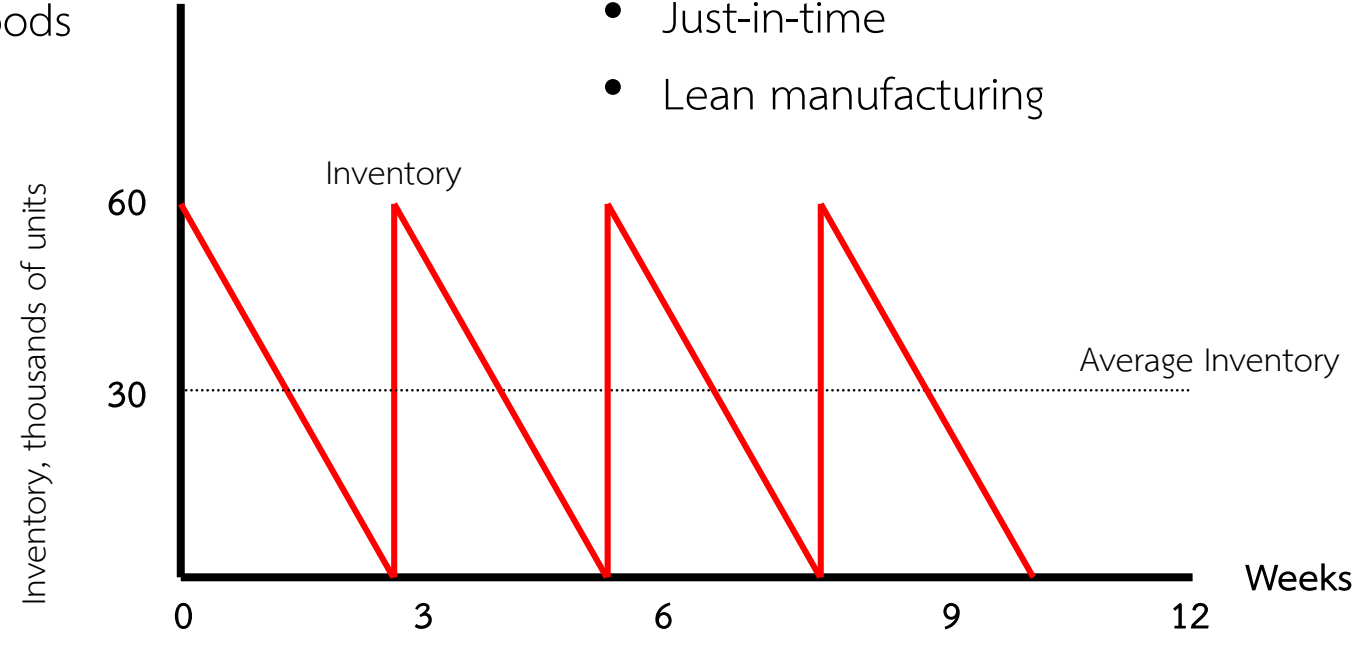
1. Credit standard (5 C’s)

   “character, capacity, capital, collateral, condition”

2. Credit period
3. Cash discount
4. Collection policy

Inventory Management

- Components of Inventory
  - Raw materials
  - Work in process
  - Finished goods
- Goal = Minimize amount of cash tied up in inventory
- Tools used to minimize inventory
  - Just-in-time
  - Lean manufacturing



Short-Term Financing

Short-Term Financing

1. Accounts Payable (Trade credit)
2. Short-term debt (Bank loan)

Accounts Payable (Trade credit)

Example: 2/25, net 60

1. Cash discount = 2%
2. Discount period = 25 days
3. Credit period = 60 days

Accounts Payable (Trade credit)

Opportunity cost of foregoing a cash discount

Example: 2/25, net 60

Calculation:

Cost = $2 of principal = $98 => cost rate = 2/98 in 35 days = (60 – 25)

How many percentage in a year? => cost rate = ? in 360 days

Accounts Payable (Trade credit)

Example:

SuperCare Company was offered trade credit 5/10, net 20 from its supplier.

- Calculate the opportunity cost of foregoing a cash discount

Accounts Payable (Trade credit)

Opportunity cost vs. Credit term components

Example: 2/25, net 60

$$\textbf{Opportunity Cost} = \frac{2 \times 360}{98 \times 35} \times 100\% = 20.9913\%$$

Short-term debt (Bank loan)

Short-term bank loan

1. Maturity
2. Promissory note – amount, interest, payment agreement, collateral, other commitments
3. Compensating balance
4. Line of credit
5. Revolving line of credit – interest and commitment fee

Cost of Bank Loan

$$\text{Interest payment} = \text{Amount of loan} \times \frac{\text{Annual percentage rate (APR)}}{\text{Number of periods in the year (m)}}$$

** Annual percentage rate (APR) = Quoted Rate*

✓ $$\text{Actual Interest rate} = \frac{\text{Cost of Borrowing}}{\text{Amount of Usable Fund}}$$

✓ $$\text{Effective annual rate (EAR)} = \left(1 + \frac{\textit{Actual Interest rate}}{\textit{Number of periods in the year}}\right)^{m} - 1.00$$

Interest Rate Calculation for Short-Term Financing

1. Simple Interest
2. Discount interest
3. Compensating balance

Interest Rate Calculation for Short-Term Financing

1. Simple Interest

$$\text{Interest rate} = \frac{\text{Cost of Borrowing}}{\text{Amount of Usable Fund}}$$

Example:

If the bank quotes an annual rate of 12 percent on a simple interest loan of $100,000 for (a) 1 month and (b) 12 months, find annual percentage rate (APR) and effective annual rate (EAR)?

Interest Rate Calculation for Short-Term Financing

2. Discount interest

Example:

If the bank quotes an annual rate of 12 percent on a simple interest loan of $100,000 for (a) 1 month and (b) 12 months, find annual percentage rate (APR) and effective annual rate (EAR) when the bank imposes discount interest?

Interest Rate Calculation for Short-Term Financing

3. Compensating balance

Example:

If the bank quotes an annual rate of 12 percent on a simple interest loan of $100,000 for (a) 1 month and (b) 12 months, find annual percentage rate (APR) and effective annual rate (EAR) when the bank imposes compensating balance 20%? What will happen if the bank also imposes discount interest?

Question?