# FIN2704/X
# Week 11

# Conservative working capital policy

## Example 1: DSO is higher than the industry

- May mean that the firm's receivables remain outstanding longer than the industry
- Allowing customers to have longer trade credit term may be necessary to charge a higher price and hence a higher profit margin

## Example 2: Lower inventory turnover than the industry

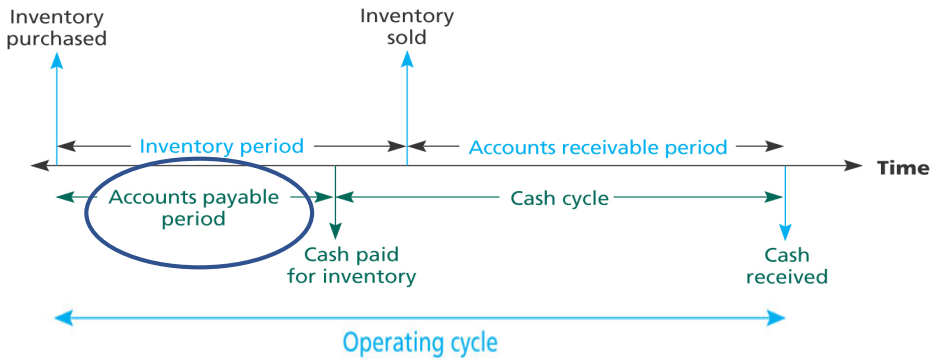
- Having a lot of inventory may also be necessary to charge a higher price since potential customers are less likely to be turned away empty handed

# Negative cash cycle

It is possible! Recall the Dell example:

- If a company can have a very long account payable period, it may be able to use the "trade credit" it receives from the suppliers to cover both the inventory and A/R periods

Cash conversion cycle = Operating cycle – A/P period

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# Cash management - Lockbox

A service offered by banks whereby banks to speed up payments collection and processing

- Making funds accessible to the payment recipient sooner
- Place yourself in the position of the firm that uses lockbox to reduce collection time
  - By receiving the funds X days earlier, the firm can earn X days of extra interest in their bank account

- Is lockbox applicable in online transactions?
  - Credit card payments and electronic funds transfer (EFT) still have delays in processing
  - Remember that many businesses are done internationally
    - International fund transfers (particularly for large amounts) are still quite inefficient

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# Cash management - Float

Net float = disbursement float + collection float

- Disbursement float: the firm writes checks but there is a delay in when the funds are actually taken out of the bank account.
- Collection float: the firm received payment, but there is a delay in the funds showing up in the bank account.

Positive net float

- The firm has "extra" funds in its bank balance that should have been taken out but due to delay it has not.
- This "extra" funds can be useful as short-term capital, reducing the necessary working capital.

> If a firm with 4 days of net float writes and receives $1 million of checks per day, it would be able to operate with $4 million less capital than if it had zero net float.

(Example from Week 11's slide 34)

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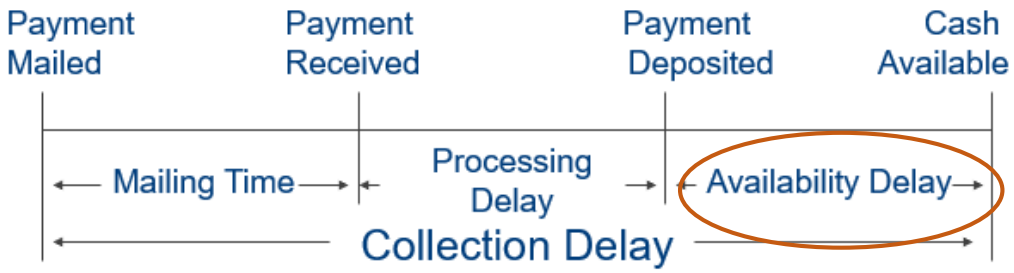
# Cash management – Float (cont.)




Availability delay:

- A (temporary) hold placed by banks on deposited funds
- You can't use the funds that are just deposited to your bank account immediately

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# Cash management – Disbursement control

## Ways to tightly control a firm's cash disbursements

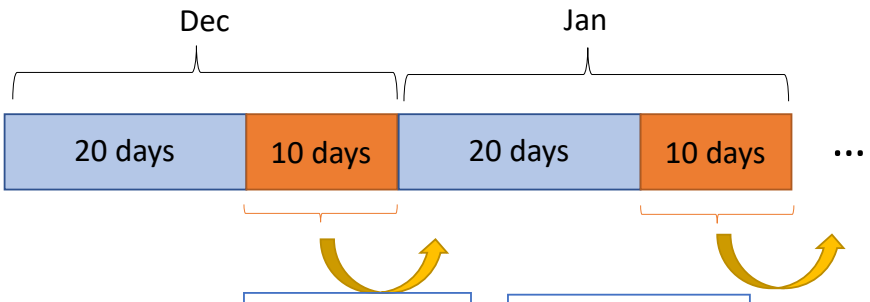
- More than just recording the amount of money in each account
- May affect the total amount of cash needed to finance the firm's operations

- Zero-balance account
- Controlled disbursement account

# Cash management – credit policy

(Example on slide 49)

Account receivable period is 10 days. 30 days in a month




Jan collection = (10/30)$600 + (20/30)$1200 = $1000

- The payments from the last 10 days of sales in December will be received in January
- Only payments from the first 20 days of sales in January will be received in January

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# Receivable management – Cash discount

Offered by sellers to induce early payment

- If the buyer takes advantage of the discount, the seller receives less in sales revenues
- If the buyer forgoes discount, the company receives the full amount in sales (i.e., the same amount received from the buyer if no discount was offered)
  - Example on slide 62: The company essentially earns interest when customers choose to forgo discounts

# Receivable management – Cash discount (cont.)

(Example on slide 62) Credit terms of 2/10 net 45


For a $100 sale

- If paid within 10 days, the amount received is $98
- If not paid within 10 days, it is akin to the seller lending $98 to the buyer
  - When the buyer paid $100, the seller receives $2 interest
  - Period interest rate = 2 / 98 = 2.0408%

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# Receivable management – Evaluating credit policy

(Example on slide 67) Your company is evaluating a switch from a cash only policy to a net 30 policy. The price per unit is $100 and the variable cost per unit is $40. The company currently sells 1,000 units per month. Under the proposed policy, the company will sell 1,050 units per month. The required monthly return is 1.5%.

- Incremental cash inflow (every month)
  - $(P - v)(Q' - Q) = (\$100 - \$40)(1{,}050 - 1{,}000) = \$3{,}000$

**Additional profit**

- ***Present value of incremental monthly cash inflow***
  - $[(P - v)(Q' - Q]/r = \$3{,}000/0.015 = 200{,}000$
- ***Cost of switching***
  - $PQ + v(Q' - Q) = \$100(1{,}000) + \$40(1{,}050 - 1{,}000) = \$102{,}000$
- **NPV of switching**
  - $-[PQ + v(Q' - Q)] + [(P - v)(Q' - Q]/r = -\$102{,}000 + \$200{,}000 = \$98{,}000$

1. You give up the first set of payment
2. You need to pay immediately for the variable cost of producing the extra 50 units now.

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# Receivable management – Compensating balance

The amount of fund that a borrower must deposit at the bank in order to obtain a loan

(Example on slide 69)

The borrower must maintain 15% compensating balance in order to borrow from the $500,000 line of credit it has with this particular bank at an interest rate of 9%

- The 15% compensating balance is calculated from the amount you borrow.
  - Have a line of credit does not mean that you borrow all $500,000
- To get $150,000, the borrower needs to borrow more than 150,000.
- The borrower needs to borrow 150,000/0.85 = $176,471 but can only use $150,000 of the loan.
  - The remainder $26,471 (=15% of the $176,471) sits at the bank.
  - But she/he pays the interest for the $176,471 amount (not just on the 150K)

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# Other notes

- Carrying cost captures opportunity cost
  - You could have used the working capital for something else
- Credit period usually starts on invoice date
  - But can depend on the agreement
- Turnover of cash and securities
  - Revenue divided by cash & cash equivalents
- Are the figures in cash budget after-tax?
  - Not after corporate income tax

# FIN2704/X
# Week 10



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# Sustainable growth rate example
## (Week 10 slide 38) REVISED

Projected Debt ratio
= (5,400+925.46)/(9,500+925.46+702.84) = 0.5684

**Total projected debt =**
**Current level of debt**
**+ Projected new debt**

**Total projected assets**
**= current level of assets + (A*/S0)ΔS**
**= current level of assets**
**+ projected external financing**
**+ projected financing from RE**

Current level of debt = 5400
Projected level of debt = EFN = 925.46

Current level of assets = 9500
Projected external financing = EFN = 925.46
Projected financing from RE = M*S1*RR = 702.84

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# Week 11
# List of topics

**Note:**

You are responsible for all materials covered in the pre-recorded videos posted on LumiNUS, unless they are marked "not examinable". This list only serves to help you in your revisions.



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# Week 11 topics

<u>Working capital</u>

- Gross working capital
- Net working capital
- Net operating working capital
- Working capital management

- Sources and uses of cash

  Cash= equity + long-term debt + current liabilities
  –current assets other than cash –fixed assets

# Week 11 topics (cont.)

Operating cycle

- Inventory period
- Account Receivables period
- Account Payables period

Cash conversion cycle

- Carrying costs
- Shortage costs

# Week 11 topics (cont.)

## Cash management

- Lockbox
- Float
  - Disbursement float
  - Collection float
  - Net float
- Cash budget

## Receivable management

- Credit policy
- Compensating balance

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