Project Cashflow

Part 7.3
February 18, 2001

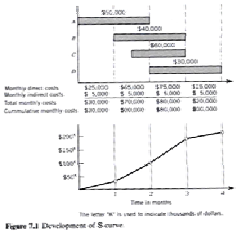
Purpose

- Introduce Students to the concept of working capital and the affect of retainage on cashflow and working capital requirements.

Learning Objectives

- Students should be able to compute a simple cashflow table and determine working capital requirements and interest costs thereof.

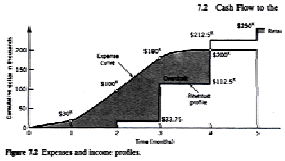
Figure 7.1 Shows a simplified project with 4 Activities over 4 months.



Note: Monthly Construction Cost Calculation.

- All expenses and income that occur during the month are assumed to occur at the end of the month.
- Direct Costs vary with active tasks.
- Indirect are often constant.

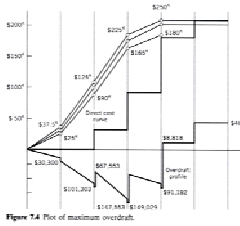
Figure 7.2 Shows the Typical Lag Between Expenses and Revenue



This lag is caused by two things:

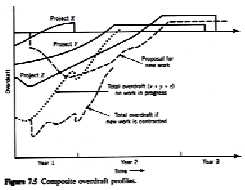
- Retainage – A certain % is withheld from the payment to assure quality of work, etc.
- Payments are usually made the month after they are billed and they are usually billed the month after they occur.

Figure 7.4 Shows the Effect of Payment Lag on Working Capital Requirements.



- The "Overdraft" requirement is the cumulative net of all out-of-pocket expenses less any income.
- Overdraft is another word for Working Capital Requirement
- Interest Cost is charged against any overdraft requirement.
- Interest Cost is usually based on the Overdraft at the first of the month.

Figure 7.5 Shows How Excessive Overdraft May Limit a Firm's Ability to Expand.



- Although every project is assumed to be profitable, overdraft requirements mean that you have to borrow the money to "float" the project.
- This creates a "balance sheet" problem and adds to out-of-pocket expenses.
- Excess Interest Expense may cause you to loose money on a project.

How to Compute the Monthly Cashflow for a Project.

First, Compute the Costs

- Determine the Direct Expenses
- Determine the Indirect Expenses – These may be a fixed amount or some % of Direct Expenses
- The Total Cost is the Sum of these two.

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Second, Compute the Billable Amount

- Compute the Profit as a % of Costs
- Add Profit and Cost
- Compute the Retainage as a % of this Sum.
- Deduct the Retainage to obtain the Billable Amount.

Compute the Overdraft Requirement For The Month

- BOM (Beginning of Month) is the Prior Month's EOM (End of Month) Overdraft.
- Add Construction Cost for the month.
- Add Interest Cost – Watch When
- Subtract any Income – Watch Lag
- EOM is the Net of the Above.

Make Sure that Retainage is Returned in Correct Month

Here's how it works!

Example of Project Cashflow Calculation

		Months						
		1	2	3	4	5	6	Total
Cost		5,000	10,000	10,000				25,000
Mark Up	10%	500	1,000	1,000				2,500
Total		5,500	11,000	11,000				27,500
Retainage	10%	550	1,100	1,100				2,750
Billable		4,950	9,900	9,900				24,750
BOM Overdraft		0	5,000	15,050	20,251	10,553	759	Check Calc
Cost		5,000	10,000	10,000	0	0		(25,000)
Interest (Monthly)	1%	0	50	151	203	106	8	(516)
Less: Income		0	0	4,950	9,900	9,900	2,750	27,500
EOM Overdraft		5,000	15,050	20,251	10,553	759	(1,984)	
						Net Profit --»		1,984

Notes: These rules change from contract to contract (and from exam to exam).
All income and expenses are assumed to occur at the end of the month.
Monthly Interest Cost is calculated on the EOM Overdraft of Prior Month.
Bills covering the month's expenses are submitted by the 10-th of next the month
Payment is received during the month following the month in which the bill was submitted.
Retainage is returned the month after the final payment is made.

Class Assessment

- Please take out a piece of paper, write down the muddiest part of the lecture and turn in the paper.
- Thanks