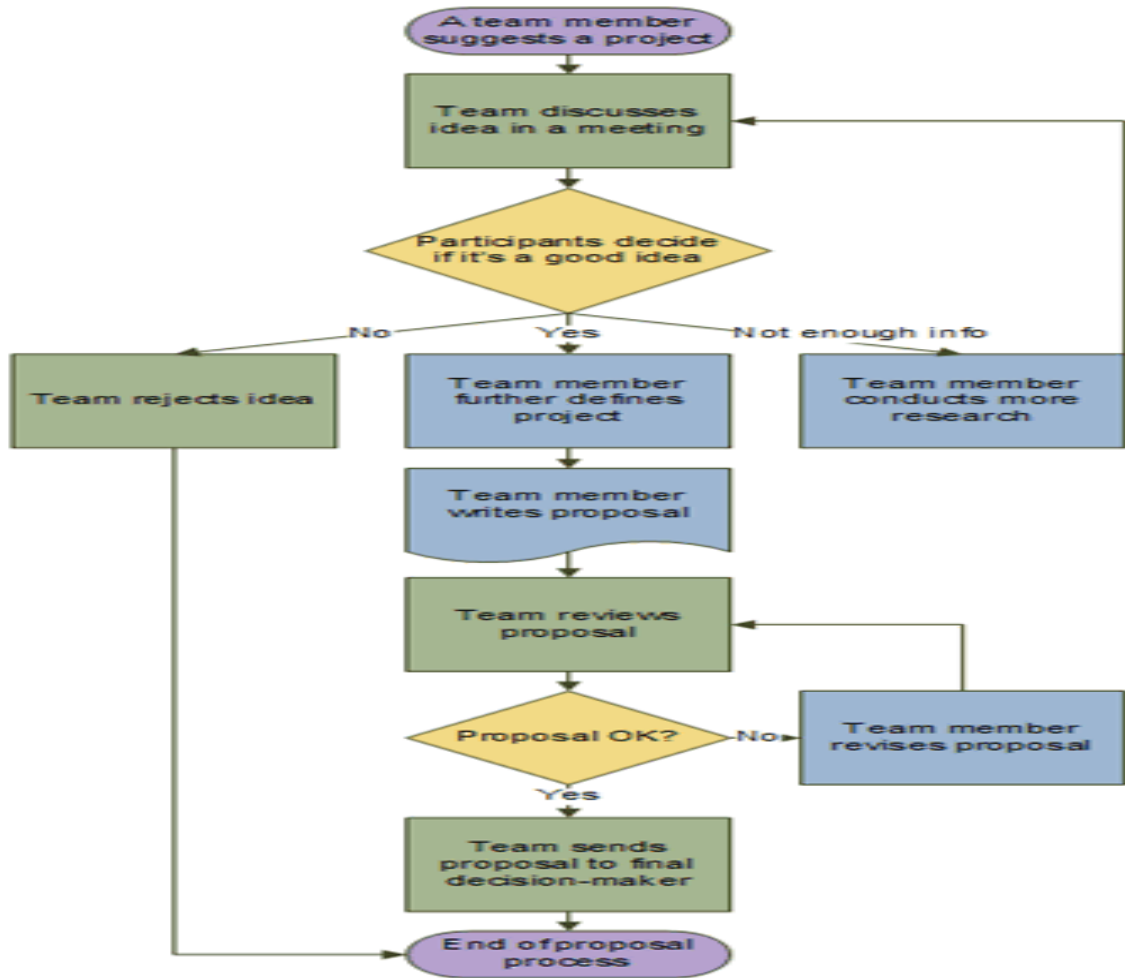


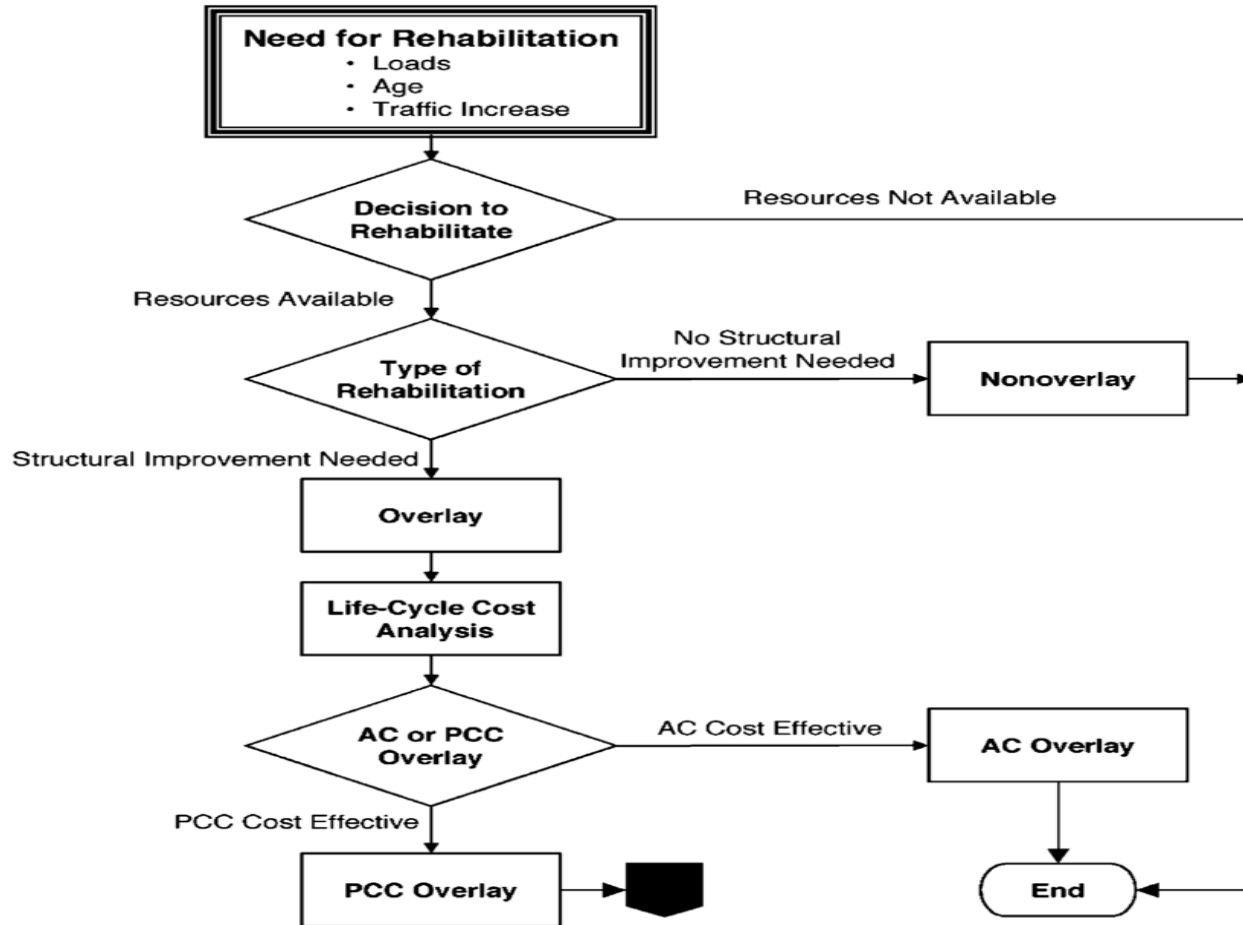
Session 3- Business Model Analysis



Objectives

- Understand flowchart of the project
- Cash Flow
- Concept of Discounting
- Payback Period





Cash Flow - How It Works to Keep Your Business Afloat





What is Cash Flow?

Cash Flow (CF) is the increase or decrease in the amount of money a business, institution, or individual has. In finance, the term is used to describe the amount of cash (currency) that is generated or consumed in a given time period. There are many types of Cash Flow, with various important uses for running a business and performing financial analysis.



Types of Cash Flow

- Cash Flow from Operating Activity
- Cash Flow from Investing Activity
- Cash Flow from Financing Activity

Operating Activities
(activities related to net income)

Cash receipts from the following:

- Sales of goods or services
- Interest received from loans
- Dividends received from investments

Cash payments for the following:

- Merchandise purchased from suppliers
- Materials used to manufacture products
- Employee payroll
- Interest paid to lenders
- Income taxes
- Other operating expenses

Investing Activities
(activities related to noncurrent assets)

Cash receipts from the following:

- Sale of long-term investments (e.g., bonds and stocks of other companies)*
- Sale of property, plant, and equipment
- Collection of principal for loans made to other entities*

Cash payments for the following:

- Purchase of long-term investments (e.g., bonds and stocks of other companies)
- Purchase of property, plant, and equipment
- Loans made to other entities

Financing Activities
(activities related to noncurrent liabilities and owners' equity)

Cash receipts from the following:

- Issuance of notes (e.g., a loan with a bank)
- Issuance of bonds
- Issuance of common stock

Cash payments for the following:

- Principal amount of loans*
- Principal amount of bonds*
- Repurchase of common stock (treasury stock)
- Cash dividends

XYZ Company

Operating, Investing and Financing Cash Flow Statement

Cash Flow from Operating Activities:	Amount in \$
Cash received from customers	\$23,361
Cash paid to suppliers	-9,187
Cash paid operating expenses	-3,972
Cash paid for Income tax	-1,193
Net cash from operating activities	4,329
Cash Flow from Investing Activities:	
Cash received from sale of equipment	750
Cash paid for purchase of equipment	-1287
Net cash used for investing activities	-537
Cash Flows from Financing Activities:	
Cash paid for long term debt	-459
Net cash used in financing activities	-2595
Net increase/(decrease) in cash	1197
Cash balance, 31 December 2017	10,569
Cash balance, 31 December 2018	11,766

Cash Flow



What is Discounting?

- Discounting is the process of determining the present value of a payment or a stream of payments that is to be received in the future. Given the time value of money, a dollar is worth more today than it would be worth tomorrow.
- Discounting is opposite to compounding

Present Value of Discounted Cash Flows

$$PV = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \frac{CF_3}{(1+r)^3} \dots \frac{CF_n}{(1+r)^n}$$

CF equals cash flow for a period,

r equals the discount rate, and

n equals the number of periods.

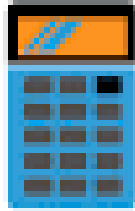
Discounted Cash Flow Analysis

FCFF Calculation

	1	2	3	4	5	6	7
EBIT	\$4,664	\$43,252	\$76,599	\$95,635	\$120,954	\$144,545	\$170,556
Less: Taxes on EBIT	(\$1,399)	(\$12,976)	(\$22,980)	(\$28,691)	(\$36,286)	(\$43,364)	(\$51,167)
EBIT*(1-t)	\$3,265	\$30,276	\$53,619	\$66,945	\$84,668	\$101,182	\$119,389
Less: Depreciation	\$4,414	\$4,414	\$4,414	\$4,414	\$4,414	\$4,414	\$4,414
Less: Amortization	\$6,857	\$6,857	\$6,857	\$6,857	\$6,857	\$6,857	\$6,857
Net income (loss)	(\$8,006)	\$19,005	\$42,348	\$55,674	\$73,397	\$89,911	\$108,118
Plus: Depreciation	\$4,414	\$4,414	\$4,414	\$4,414	\$4,414	\$4,414	\$4,414
Free Cash Flow to the Firm	(\$3,592)	\$23,419	\$46,762	\$60,088	\$77,811	\$94,325	\$112,532
Present Value of FCFF		\$19,314	\$35,023	\$40,869	\$48,063	\$52,911	\$57,326

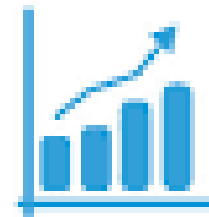
Concept of Payback Period

- The payback period refers to the amount of time it takes to recover the cost of an investment. Simply put, the payback period is the length of time an investment reaches a break-even point. The desirability of an investment is directly related to its payback period. Shorter paybacks mean more attractive investments.
- Example-
For example, a \$1000 investment made at the start of year 1 which returned \$500 at the end of year 1 and year 2 respectively would have a two-year payback period.



**Payback Period
Formula**

$$= \frac{\text{Initial Investment OR
Original Cost of the Asset}}{\text{Cash Inflows}}$$



Types of Payback Period

- **Non-discounted payback period** – This is the general payback period. It does not take into account the time value of money while calculating the time taken to recover the initial cost of investment.
- **Discounted Payback Period** – Discounted payback period is the time taken to recover the initial cost of investment, but it is calculated by discounting all the future cash flows. This method of calculation does take the time value of money into account.

Calculation of Payback Period

Calculation of Net Cash Flow	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Capital Outlay	-800					
Working Capital	-100					
Cash Profit		258	258	258	258	258
Loss of Income		-50	-50	-50	-50	-50
Recovery of Working Capital						100
Net Cash Flow	-900	208	208	208	208	308
Cumulative Cash Flows		208	416	624	832	1140

- Initial cash flow invested (outflow) – total cumulative cash flows (inflow) = $900 - 832 = \text{Rs } 68$
- Now, the time taken to recover the balance amount of Rs 68 i.e. the time taken to generate this amount will be 0.22 years ($68/308$).
- Hence, the total pay-back period will be $4 + 0.22 = 4.22$ years

	Project A	Project B	Project C
Initial Investment	-40000	-50000	-200000
Projected Cash Flow			
Year 1	5000	20000	55000
Year 2	10000	25000	55000
Year 3	15000	15000	55000
Year 4	25000	10000	55000
Year 5	20000	5000	55000
Total Projected Cash Flow	75000	75000	275000
IRR	20%	33%	12%
NPV (at 5% discount)	63028	66826	238121
Payback Period (Years)	3.4	2.33	3.64
Return on Investment (NPV- Initial Investment)	23028	16826	38121

Thank You