

\* Assignment Corporate Finance  
" Summary of chapter # 06 Net  
present value and other investment  
sales "

\* Submitted by:  
Mr. Mustafa Noor

\* ID/ Roll No:  
16914

\* Submitted To:  
Sir, Naveed Azim

\* Programme:  
MBA 1st term

Department of Business Administration

IQRA National University Hayat Abad  
Main Campus Peshawar.

After Studying the Chapter #06

"Net present value and other Investment rules" in corporate finance book 8th Edition I have picked up the following main topics which are further summarized.

- 1) NPV.
- 2) Pay back Period Method
- 3) Discount payback period method.
- 4) Average Accounting Return method.
- 5) Internal Rate of Return.
- 6) Profitability index.
- 7) Practice of Capital budgeting.

(1) Net present value:- Net present value is the difference between the present value of cash inflows and the present value of cash outflows over a period of time.

$$NPV = \sum_{t=1}^n \frac{R_t}{(1+i)^t}$$

A positive net present value indicates that the projected earnings generated by a project or investment in present dollars exceeds the anticipated costs, also in present dollars. It is assumed that an investment with a negative NPV will be result to the loss and investment with positive NPV will be profitable. This concept is the basis for the NPV rule, which dictates that only

Investments with positive NPV should be considered.

⇒ Why NPV is used?

we use NPV because:

- 1) The most important features of the net present value method is that it is based on the idea that dollars received in the future are worth less than dollars in the hand today.
- 2) The NPV method produces a dollar amount that indicates how much value the project will create for the company.
- 3) The calculations of the NPV uses a company's cost of capital as the discount rate.

2) Payback Period Method:-

Payback Period in Capital Budgeting refers to the time required to recover the funds expended in an investment. Payback Period method is usually expressed in years.

There are two ways to calculate payback period.

- (i) Averaging Method:- Divide the annual expected cash inflows into the expected initial expenditure for the asset.

(ii) Subtraction Method: - Subtract each individual annual cash inflows from the initial cash outflow, until the payback period has been achieved.

→ Problems with Payback Period Method: -

(i) The payback period method does not take into account the time value of money.

(ii) Payback period method does not consider the useful life of the assets and inflow of cash after payback period.

$$\text{Payback Period} = \frac{\text{Investment required}}{\text{Net annual cash inflow}}$$

(3) Discount Payback Period Method: -

Discount payback period is the amount of time that it takes (in years) for the initial cost of a project to equal to discounted value of expected cash flows.

Cumulative discounted cash flows will start with a negative value due to the original cost of investments, but as cash is generated each year after the original investment the discounted cash flows will progress in a positive

Directions towards Zero.

DPP = Year before DPP occurs + Cumulative discounted cash flow in year before recovery  $\div$  Discount cash flow in year after recovery.

#### (4) Average Accounting Return Method:-

The average accounting return is the average project earnings after taxes and depreciation, divided by the average book value of the investment during its life.

##### Calculation of AAR:-

First, determine the average net income of each year of the project's life.

Second, determine the average investment, taking depreciation in to account.

Third, determine the AAR, compare by dividing the average net income by the average investment.

#### (5) Internal Rate of Return:-

The internal rate of return is a measure of an investment's rate of return. The term internal refers to the fact that the calculation excludes external factors such as the risk free rate, inflation, the cost of capital or

various financial risks.

Calculation  $\Rightarrow$

$$NPV = \sum_{n=0}^N \frac{C_n}{(1+r)^n} = 0$$

$\Rightarrow$  Problems With Internal Rate of Return approach:-

The problem of using IRR is that the method does not consider important factors like, project duration, future costs, or the size of projects. The IRR simply compares the projects cash flow to the project's existing costs, excluding these factors.

Thus it would not be wise for a business leader to use the IRR to compare projects with different durations or sizes.

$\Rightarrow$  Redeeming Qualities of IRR:-

It is IRR approach which fills a need of a business leader that NPV does not. In analyzing investments, people in general, and financial analysts in particular, seem to prefer talking about rates of return rather than dollars values.

The ability of the IRR approach to capture a complex investment project in a single number and the ease of communicating that number explain

The Survival of the IRR approach.

(b) Profitability Index =  $9 +$  is the another method which is used to evaluate projects. This index is defined as the Present of the future cash flows divided by the initial investment.

$$PI = \frac{\text{PV of cash flows}}{\text{initial investment}}$$

(7) Practice of Capital Budgeting:-

When considering a new project a business must determine whether the project has the ability to return an initial investment and generate profit.

Capital budgeting determines the worthiness of the project and helps a business determine if it will yield a return satisfactory to its managers and investors.

