FINANCIAL MANAGEMENT

Lecture No. 20


بسم الله الرحمن الرحيم

FACUALTY PROFILE

Mr. Muhammad Younis

(Lecturer Commerce)

Several Times Topper in PPSC & FPSC in this field & 6 times Appointed against different positions of Accounts & Audit

Contact Details:

00923001004803

00923001004804

iirsacademy@gmail.com

Capital Budget

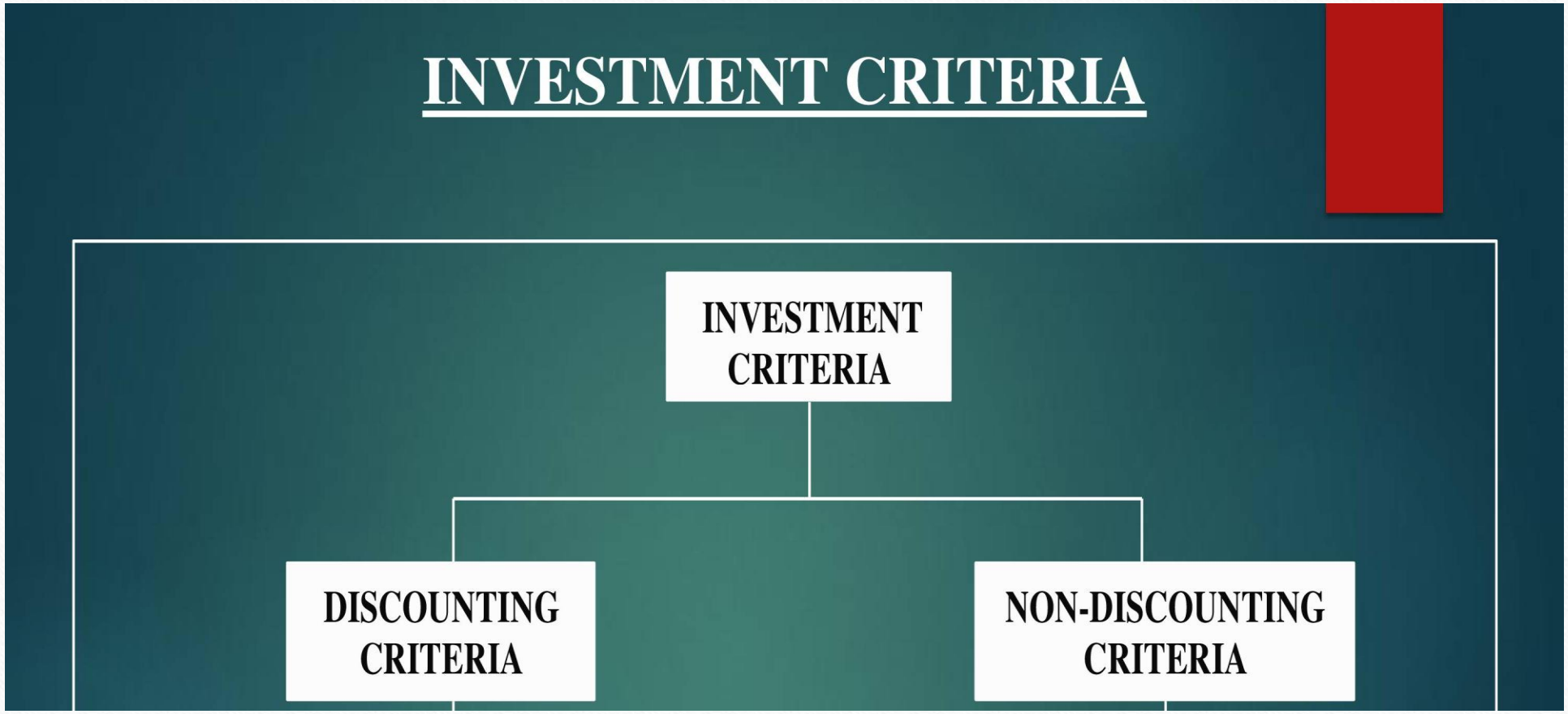
CAPITAL BUDGETING

Capital budgeting is the process by which investors determine/anticipate the value of a investment project.
The three **most common approaches** to project selection are

- **payback period (PB),**
- **internal rate of return (IRR),**
- **and net present value (NPV)**.

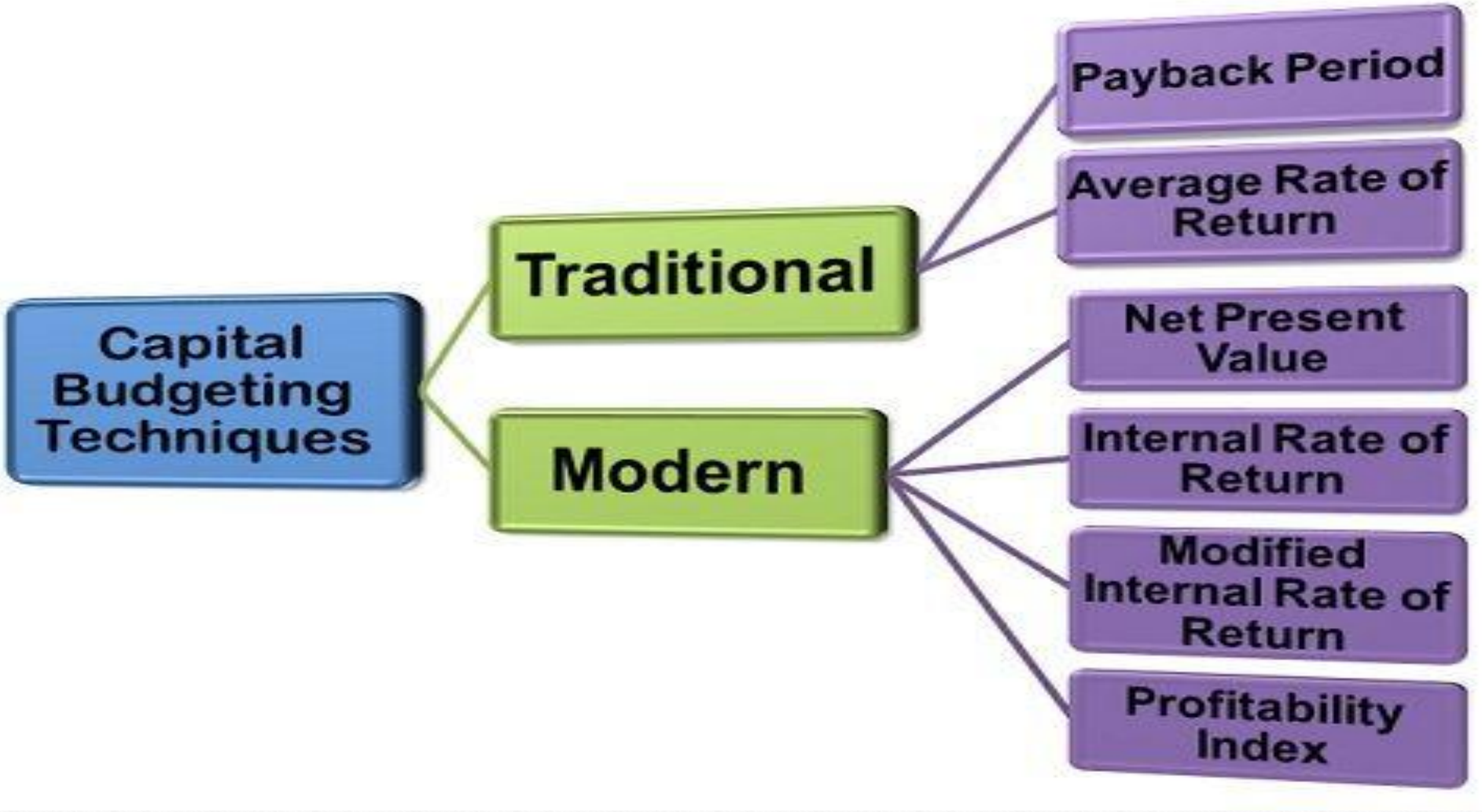
TECHNIQUES OF CAPITAL BUDGETING

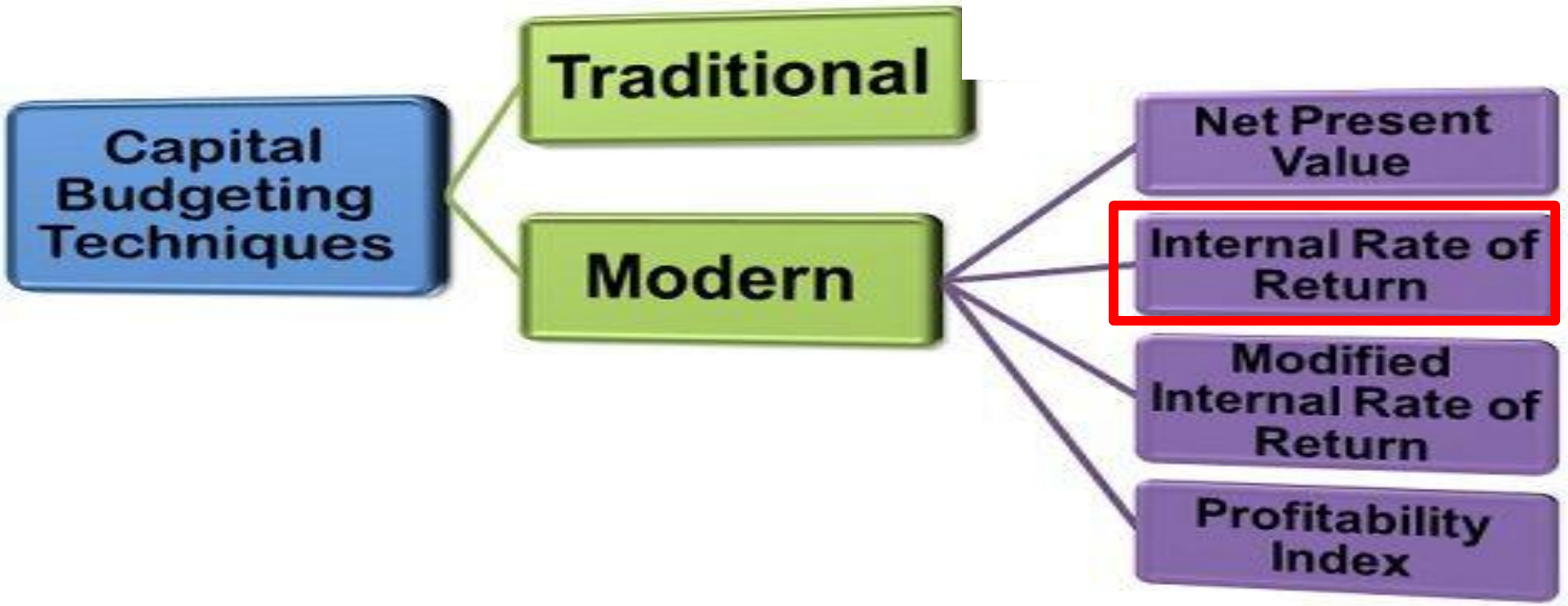
INVESTMENT CRITERIA



Modern capital budgeting

Traditional capital budgeting


Capital Budgeting Techniques
Traditional
Modern
Payback Period
Average Rate of Return
Net Present Value
Internal Rate of Return
Modified Internal Rate of Return
Profitability Index


Capital Budgeting Techniques
Traditional
Modern
Net Present Value
Internal Rate of Return
Modified Internal Rate of Return
Profitability Index

3. Internal Rate of Return

Definition:

The discount rate that equates the present value of the ***project's free cash flows*** *(inflow) with the project's* ***initial cash outlay.***

Means

PV of cash inflow = PV of cash outflow(initial investment)

IIR

Lets suppose

PV of inflow = 100 Million
PV of outflow= 100Million
Then IIR is
100-100=IRR

Mathematically, the internal rate of return is defined as the value *IRR* in the following equation:

IRR = the rate of return that **equates** the present value of the project's free cash flows with the initial outlay

The **Internal Rate of Return or IRR** is a rate that makes the net present value of any project equal to zero.

$$NPV = PV_{\text{benefits}} - PV_{\text{costs}}$$

$$0 = 100 - 100$$

So we can define it

the interest rate that equates the present value of cash inflow with the present value of cash outflow of any project is called as Internal Rate of Return.

Accept/Reject criteria

IRR > firm's required rate of return or cost of capital: accept

IRR < firm's required rate of return or cost of capital: reject

What is the IRR Formula?

The IRR formula is as follows:

$$0 = CF_0 - \frac{CF_1}{(1+IRR)} + \frac{CF_2}{(1+IRR)^2} + \frac{CF_3}{(1+IRR)^3} + \ldots + \frac{CF_n}{(1+IRR)^n}$$

Firm accepted or required rate of return.
Firm desired rate

Where:

CF_0 = Initial Investment / Outlay

$CF_1, CF_2, CF_3 \ldots CF_n$ = Cash flows

n = Each Period

N = Holding Period

NPV = Net Present Value

IRR = Internal Rate of Return

What is the IRR Formula?

The IRR formula is as follows:

$$0 = CF_0 + \frac{CF_1}{(1+IRR)} + \frac{CF_2}{(1+IRR)^2} + \frac{CF_3}{(1+IRR)^3} + \ldots + \frac{CF_n}{(1+IRR)^n}$$

Or

So our final productive formula is

$$0 = \text{NPV} = \sum_{t=1}^{T} \frac{C_t}{(1+IRR)^t} - C_0$$

where:

C_t = Net cash inflow during the period t

C_0 = Total initial investment costs

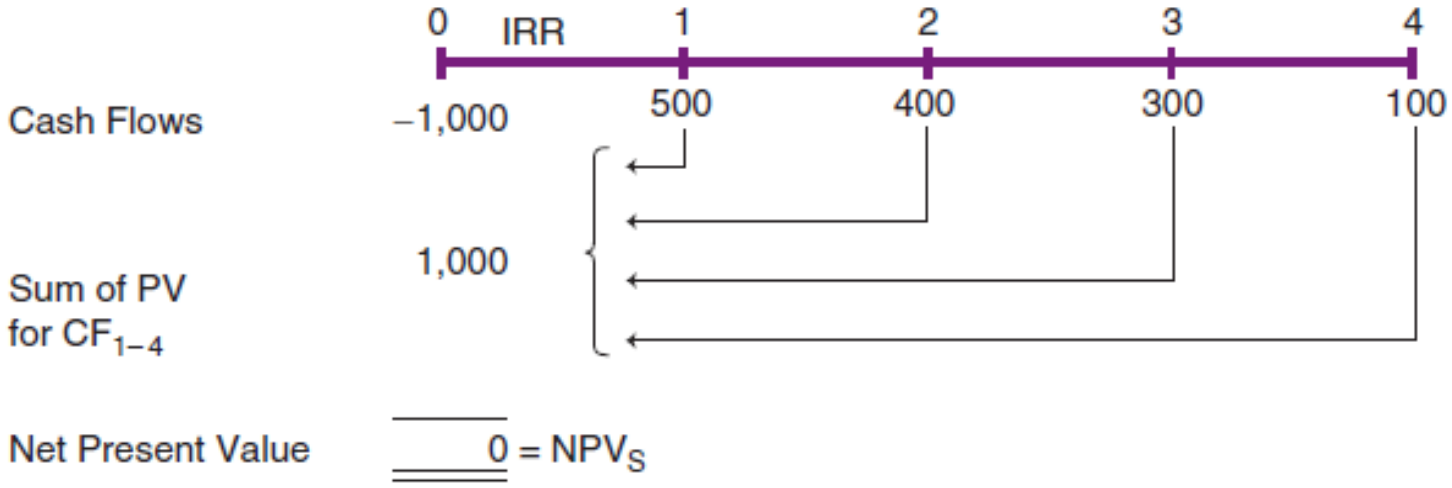
IRR = The internal rate of return

t = The number of time periods

Lakshmi company has a project to invest Rs 1000 which earn to Rs. 1300 in four years with cash flow of 500 in 1st year and 400 in 2nd year 300 in 3rd and 100 in 4th year. If cost of capital is 15%.

we should accept this project or not??

Internal Rate of Return (IRR)



$$0 = \frac{500}{(1 + IRR)^1} + \frac{400}{(1 + IRR)^2} + \frac{300}{(1 + IRR)^3} + \frac{100}{(1 + IRR)^4} - 1000$$

Pros and cons of IIR

Merits

1. It consider the time value of money.
2. It takes into account the total cash inflow and outflow.
3. It does not use the concept of the required rate of return.
4. It gives the approximate/nearest rate of return.

Demerits

1. It involves complicated computational method.
2. It produces multiple rates which may be confusing for taking decisions.


Thank
You


Q&A
You have
Questions
We have
Answers