ABG

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→ 360° program → Performance appraisal program that allowed managers to question even his leadership style.

→ The first implication of the case study:- HR must design and redesign effective methods to anticipate the need of the current business (must boost the org: core

→ Baby Culture:- The head of company is always looked to for direction and decisions.

→ The womb-to-tomb policy:- No fixed retirement age. loyalists of the family stayed with the company. If they could not work anymore, they would request the baton to guarantee their child a job in the Am.

→ The kith-and-kin policy

→ Guaranteed job for the family members in the group.

→ The paratha System → was a manual system suited for relatively small Production Systems

CVA = Gross Cash flow − [cost of capital − Gross cash inversal]

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~~Mckenzie~~

Mckenzie Recruitment policy

→ Looks for → exceptional academic perfm
→ diverse experience
→ Leadership qualities
→ problem solving skills
→ Strong analytical mindset

Compounding ~~frequency~~ = $\left[1 + \left(\frac{r}{m}\right)\right]^m$

m = period

r = annual ~~quoted~~ rate

(effective / new interest rate) = $\left[1 + \left(\frac{r}{m}\right)\right]^m - 1$

→ effective interest rate = $e^r - 1$ $\left(\text{if } m \to \infty\right)$

$$PV = \frac{c}{r-g}\left[1 - \left(\frac{1+g}{1+r}\right)^t\right]$$

NPV = PV - investment. NPV > 0 accepted

r = ~~net~~ $\frac{\text{Profit}}{\text{investment}}$ → (r > opportunity cost of capital accepted)

→ depreciation is substracted from book income to get profits.

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interest rate rises → bond prices ↓ falls, vice-versa

Effective annual yeild = $(1 + \text{ytm})^2 - 1$.

→ Why the price 30 year bond is more sensitive than 3 year?

→ The impact of interest rate is only modest on near-term cash flows which is more drastic on distant cash flows.

Maturity duration of a bond

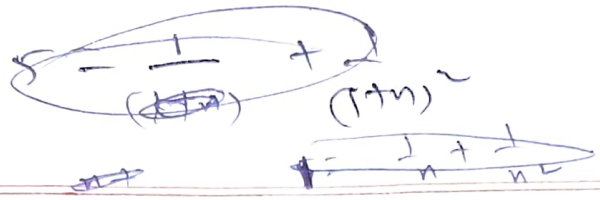
$$\text{Duration of bond} = 1 \times \frac{PV(C_1)}{PV} + 2 \times \frac{PV(C_2)}{PV} + \cdots + T \times \frac{PV(C_T)}{PV}$$

$PV(C_t)$ = present value of cash flow in year t

PV = total present value of all years.

$$\text{Modified duration} = \frac{\text{Duration}}{(1 + \underset{\text{interest rate}}{\text{yeild}})}$$

→ if interest rate is raised and fall by same amount, then the sum of % change in duration of both = modified duration.



$$n^2 - 4n + 4 = 0$$

$$n^2 - 4n = -4$$

$$n^2 + 4 = 4n$$

$$\frac{n^2}{n^2} + \frac{4}{n^2} = \frac{4n}{n^2}$$

$$1 = \frac{4}{n} - \frac{4}{n^2}$$

☆ Term Structure of interest rate (Varying interest rate)

→ $PV = \frac{C_1}{1+r_1} + \frac{C_2}{(1+r_2)^2} + \cdots$

r_1 ↑ one-year spot rate

r_2 ↓ two-year spot rate.

☆ → Expectation theory of term structure

→ extra return = $\frac{(1+r_2)^2}{(1+r_1)} - 1 = n\%$ for year (2)

$= \frac{(1+r_2)^2 - 1}{(1+r_1)}$

☆ Liquidity preference theory → Suggest (invest) in short-term.

Market to book ratio = $\frac{\text{Market value of equity}}{\text{Book value of equity}}$

(PE ratio = $\frac{\text{Share prices}}{\text{Earnings}}$)

ECONOMY and FINANCE

prof. Abhinav Tripathi

* Two Important Financial decisions

(i) Investment decision → Taken to smoothly run the firm operations.

Example includes :- (a) investment in plant and machinary
(b) Aquisition of mines
(c) investment in research & development of products.
(d) into firm's infrastructure.

(ii) Financing decision:- (a) issuance of debt and equity securities.
(b) Repayment of interest and principal obligations.

→ financing decision help organisations in raising money from lenders and shareholder.

→ Choice between debt and equity is termed as capital structure decision.
↓
long-term source of financing.

→ investment side (Asset side) — in the balancesheet — Financing side (Liability side)

→ Current market value of the asset = Valuation of a firm

→ Divident decrease equity.

→ If the rate of return on the project investment is higher than that available in financial market then shareholders would want to invest in the project.

Simple.

→ Opportunity cost of capital (hurdle rate)
→ Return that is available in the financial market on similar risk.

→ Value Maximization as the ultimate objective of managers. bez it include many factors (time value) but profit maxi... does not.

* Separation of ownership and control.

→ It refers to a situation where owners (shareholders) appoint managers to run the company/firm on their behalf

→ this separation can lead to the conflict b/w the managers and shareholders - is called Agency problem.

* Principal agent problem.

Situation where principal (shareholder) and agent (manager) have different interest and priorities hence they conflict each other

* Good system of Corporate governance:

→ Agency costs incurred when managers do not aim to maximize the firm value.

(i) compensation scheme design.
(ii) Consistency and transparency being ensure by legal requirements.
(iii) Shareholders can buy and sell the stocks.
(iv) Market decipline through threat & takeover.
~~(v)~~

These mechanism help align the interest of managers to those shareholders.

(PV) Present Value $= \frac{CF}{(1+r)^t}$

r = interest rate
t = time period.

PV of zero-growth perpetuity $= \frac{\text{Cash flow}}{\text{interest rate}} = \frac{CF}{r}$

PV of perpetuity $= \frac{D}{r}$ (dividend)

Perpetuity of growing $= \frac{C}{r-g}$

Net present Value (NPV) = PV − initial investment

$\frac{C}{r} - \frac{C}{r(1+r)^t}$ for t years − initial invest.

→ Negative NPV means project will not create value, hence, will get rejected.

→ Positive NPV means project will create value and get accepted.

→ opportunity cost depend on the risk of project.

PV for growing firm $= \frac{C}{r-g}\left[1-\left(\frac{1+g}{1+r}\right)^{t}\right]$ + year period

$$N.P.V = \frac{C}{r}\left[1-\frac{1}{(1+r)^{t}}\right] - \text{initial investment}$$

* Key aspects of NPV rule. (heavily relies on the forecasting cash flows of hurdle

→ NPV rule recognizes that a dollar today is worth more than a dollar.

→ any decision that is affected by managers's taste, choice of accounting method, the profitability of existing buisness, or that of other project — will lead to an inefficient deision.

→ $NPV(A+B) = NPV(A) + NPV(B)$

→ Companies report their book incomes frequently

→ Book income are not necessarily the same as cash flows

→ Depreciation is a non-cash expense, it substracted from book income to arrive at profit.

→ Book rate of returns, heavily depend on the classification of various items as capital investment and their rate of depreciation.

→ Book rate of returns are not consider as robust.

→ Projects selection or rejection should not depend on accountants choices

→

Project	C_0	C_1	C_2	C_3	Payback period (years)	NPV@ at 10%
A	-2000	500	500	5000	3	+ 2,624
B	-2000	500	1800	0	2	-58
C	-2000	1800	500	0	1	+ 50

→ NPV rule suggest that A, C would be accepted, not B.

→ If a 2-year cut-off period is selected, then as per payback rule B, C would be accepted, not A.

Payback period = $\frac{\text{(initial investment)}}{\text{Annual cash flow}}$ = n years

if cut-off period $\geq$ n (accepted)

if cut-off period $<$ n (rejected)

A/c to payback rule

* Payback period misleading results reasons:-

→ it ignores cash flows after cut-off period.
→ It does not consider the time value of money.
→ gives equal weight to all the cash-flows.
→ NPV rule is superior than payback rule.

* Discounted payback period method.

improved payback method.

$C_{1\,old} = \frac{C_1}{1+r}$ → to become NPV positive

$C_{2\,old} = \frac{C_2}{(1+r)^2}$

✱ IIR (Internal rate of return) method.

→ discount rate at which NPV is equal to zero.

$$\text{Project Return} = \frac{\text{Profit}}{\text{investment}}$$

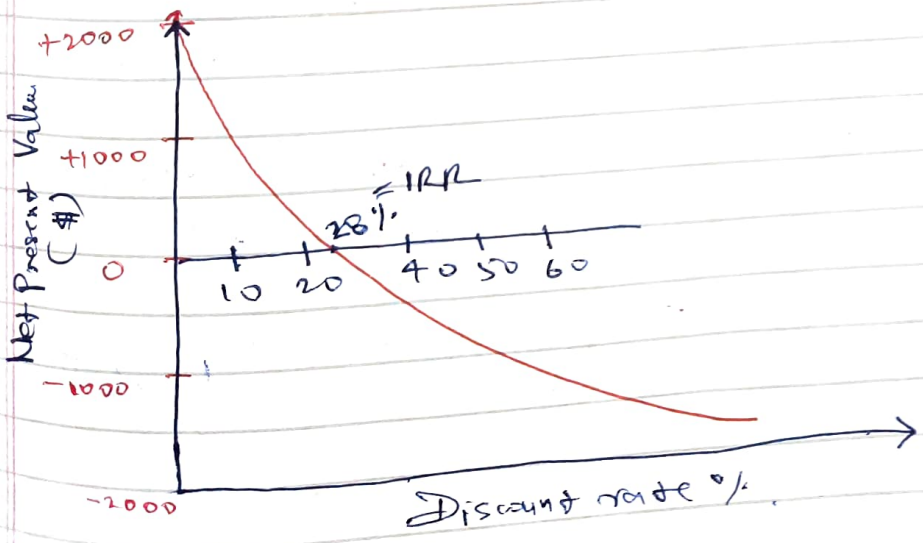
$$NPV = 0 = -(\text{investment}) + \frac{C_1}{1+IRR} + \frac{C_2}{(1+IRR)^2} + \cdots$$

→ If IRR > r, project would be accepted.

→ ( ) opportunity cost of capital > IRR (-ve NPV)
opportunity cost of capital = IRR (0 NPV)
opportunity cost of capital < IRR (+ve NPV)
↓
of project

✱. at opportunity cost of capital.
project's NPV can be (+ve), (-ve) or zero.

→ IRR is intrinsic to the project, and depend on cash flow only.



Pitfalls of IRR.

→ when you lend money, you want a higher return, and when you borrow money, you want a lower return.

~~Pitfalls of IRR.~~

→ In case of borrowing NPV increase on increasing the discount rate.

→ Select those opportunities of borrowing where IRR < opportunity cost of capital (r)

→ Always consider the decline part for IRR analysis. (graph of NPV and ~~[illegible]~~ discount rate

→

Projects	C_0	C_1	IRR (%)	NPV at 10%
D	-20000	+35000	75	11818
E	-10000	+20000	100	8182

(1st) find IRR of D-E (invest (-ve)) and if IRR of this difference, is more than cost of capital (10%) then select more NPV project.

Capital is a ~~scar~~ scarce source

→ limited investment

→ Since capital is limited → select highest ~~dollar~~ NPV value project.

→

Profitability Index = $\frac{NPV}{\text{initial investment}}$

→ 1st select the project having highest ~~NPV~~ (PI).
then ~~—~~ another.

* Important functions

① Swap.

```
temp = a;
a = b;
b = temp
```

{ if a = 5, b = 7
become a = 7, b = 5. after using the function.

② Upper case converter. function

```
void upper( char str[]) {
    while (str[i] != \0){
        if ( str[i] >='a' && str[i] <='z" ) {
            str[i] -= 32;
        }
        i++
    }
```

{ use it where u want to convert.

③ if you wanna take input as Sentance / string

use :— fgets(str, n, stdin)

④ for returning char use (char*) pointer.
" " int use int*.

⑤ you can't return local variable but static int/char from the function.